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CHICAGO, ILLINOIS, APRIL 7, 1900.

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Original Articles.

DIAGNOSTIC VALUE OF THE DEEP REFLEXES OF THE LOWER EXTREMITIES.*

BY D. S. FAIRCHILD, M.D.

Division Surgeon C. & N.-W. Ry. Co.; Special Examining Surgeon
C. & St. P. Ry.; Local Surgeon B. C. R. & N. Ry.
CLINTON, IOWA.

The diagnostic ability of railway surgeons is not infrequently taxed to its utmost in determining the real facts in cases of alleged organic disease of the spinal cord in which paralysis is presented as a symptom. The forms of paralysis complained of are either motor or sensory, or both. Spastic forms, with or without trophic conditions, may be left out of consideration for the present at least, as they present features which make them easy of recognition.

In a case of motor or sensory paralysis, or both combined, the questions which will enter the mind of the examiner are three in number: 1. Is the paralysis due to an organic change in the anterior or motor side of the spinal cord, or both in anterior and posterior sides, or are the lines of communication impaired or destroyed by injury to, or disease of, the afferent or efferent nerve-fibers, or both? 2. Is the paralysis hysterical in character? 3. Is the paralysis feigned?

These questions can be correctly answered if the examiner is familiar with neurophysiology and neuropathology, and makes the examination with the care which such cases demand. Without entering into details we may observe that there is, physiologically considered, a continuous line between the sensory nerve ends on the one side to the motor end plates in the muscles on the other, which constitutes what is known as the reflex arc, and consists of the sensory or afferent nerve-fiber, the gray cells of the spinal cord and the motor or efferent nerve-fiber. If any part of this arc is broken, the reflex is interrupted.

This paper was suggested by a patient who recently came under my observation, and by an article from the pen of Dr. Charles K. Mills,¹ on "Some Points of Special Interest in the Study of the Deep Reflexes of the Lower Extremities." The patient referred to was a young, married, Polish woman, who received an injury from being thrown out of a buggy while attempting to cross a railroad track. The horse took fright and backed off an embankment. The woman walked a short distance to a house, merely with a little assistance, rode nineteen miles more that day, twenty the next, and seven the third day. She then went to bed and remained there four months. After that time she was able to sit up a few moments at a time for three months more, when she came up for special examination. There was but little

variation in the symptoms, except that the physician in attendance noted an occasional rise of temperature and a considerable variation of pulse, which in general was rapid.

At the time of examination, the temperature was 99.6, pulse 116. The next day the temperature was 98.5 and the pulse 80. She alleged complete motor and sensory paralysis in the left leg, also great pain in the paralyzed one. The area of alleged anesthesia extended from a point over the second lumbar vertebra directly in a line to a point above the superior spinous process of the ilium, then down along the pelvic brim to the symphysis pubis; all points below this line were anesthetic. The tendon reflexes were normal, and also the ankle-clonus on both sides. Measurements showed no difference in the size of the legs, and the electric reactions were the same in both. The muscles were also equally firm in both. As monoplegias the result of trauma are practically unknown, it became interesting to determine, if possible, the pathologic condition. The paralysis was alleged to be complete, including both motion and sensation. If it was due to organic disease, it was assumed that the deep reflexes would have been abolished and certain trophic changes found in the nerves and muscles of the paralyzed limb, which was proved not to be true. It was claimed, by one of the examining physicians, that the injury did not involve the spinal cord, but was a pressure lesion involving the lumbar nerves. Had this been true, and all communication cut off with the spinal cord through this plexus, the tendon reflexes would have been destroyed on account of the involvement of the crural nerves, while the ankle-clonus would have remained present on account of the communication with the spinal cord through the sciatic nerve derived from the sacral plexus. Furthermore, the anesthetic areas and motor losses would have corresponded to the distribution of the nerve-supply derived from the lumbar plexus—the anterior crural nerve—but as the paralysis was equal and complete on the anterior and posterior surfaces of the thigh and the leg, the theory was inconsistent and could not be considered. In addition, on walking, the paralyzed leg did not drag, but was lifted with slow deliberation. We were left to conclude from the facts that the paralysis was hysterical or feigned. We sought for irregular areas of anesthesia and other evidences of hysteria, but these were absent.

The value of the deep reflexes in the diagnosis of organic spinal cord disease is based on the proposition that if the anterior horns of gray matter are involved in a destructive lesion the motor response to stimuli is impaired or abolished, although it is observed in neuropathic muscular atrophy that the reflexes often remain until the disease has reached an advanced stage, although they have become greatly reduced and finally disappear. This is true of any form of anterior myelitis.

In locomotor ataxia the deep reflexes disappear early, and as a rule the continuance of the reflexes may be

*Read before the American Academy of Railway Surgeons, Omaha, Neb., Oct. 12-13, 1899.
1. Journal of Nervous and Mental Diseases, March, 1899.

taken as evidence that the disease is not this affection, although in rare cases the reflexes may be present after other evidences of ataxia have appeared, as the Romberg symptom. I have recently had an opportunity of examining a case in which the Romberg symptom was present, and also the patellar tendon reflex; there had never been any lightning pains, and the pupil reflexes were active. In these cases it may be assumed that the lesion occurs very low in the cord and does not early involve the lumbar region.

It must be assumed that, both on a physiologic and pathologic basis, if the disease is of an inflammatory or degenerative character, and is confined to the anterior or posterior horns, the deep reflexes will slowly or abruptly disappear; the same would be true if the nerve-fiber communication with the cord were cut off. In general terms it may be contended that a disease of an inflammatory or degenerative character confined to the spinal cord alone and of sufficient extent to involve a complete motor and sensory paralysis, will lead to an abolishment of the deep reflexes of the lower extremities.

It is true that a mixed degenerative change may for a considerable time involve exaggerated deep reflexes which may suddenly or gradually disappear when the gray cells in the anterior or posterior horns become extensively involved or, again, a degenerative spinal cord disease characterized by exaggerated reflexes may present the phenomena of abolishment of these reflexes by a later involvement of the motor or sensory side of the cord. This is illustrated in a case with which I was connected. A patient suffering from spastic spinal paralysis manifested the special symptoms of this disease for several years, but was able to walk about, however, with some difficulty. She was abruptly seized with a chill followed by a temperature varying from 102 to 104 F., and became helpless so far as the lower extremities were concerned. The exaggerated reflexes disappeared; in fact no ankle-clonus nor patellar tendon reflexes could be excited. The fever continued about ten days, and she improved somewhat in general health, but she could not walk, although she could move her legs in bed by an exercise of the will; yet motion was weak. I saw her three weeks after the attack above referred to. It was our opinion that an anterior myelitis had occurred in the lumbar cord, cutting off the response to reflex stimuli. We may admit in this case the influence of toxins developed in the course of the disease and exercising a paralyzing influence on the cells of the cord.

In acute myelitis the grouping of symptoms is too well marked to lead to an error of diagnosis, but the deep reflexes are quickly abolished. On the other hand, chronic myelitis is marked by the exaggeration of the reflexes. In this disease the development is slow, and as it involves the lateral tracts as well as the anterior and posterior, and not any of these to a destructive extent, at least for a considerable time, we may have certain mixed symptoms among which will be found the exaggerated deep reflexes. In the progressive muscular atrophy of Aran Duchenne, it has already been observed that while the reflexes are not always at once abolished they soon become weakened and generally disappear; on the other hand, in the mixed or amyotrophic forms, the reflexes are greatly increased, due to the involvement of the lateral tracts; hence the reflexes are of great value in distinguishing between the two diseases. It may be contended that the deep reflexes are of great value in distinguishing between primary lesions occurring in the anterior or posterior horns, as in the anterior myelitis, and locomotor ataxia from mixed lesions, as in spastic spinal paralysis or multiple sclerosis.

It may be said, however, that there are alleged forms of degenerative or inflammatory lesions of the cord, which are of an indeterminate character without symptoms, which I have only seen or heard of except in litigation cases where serious lesions of an organic nature are said to exist, which only learned neurologists can discover, and which have wisely never been put on record. I am persuaded to believe that only minds of peculiar constitution and of great refinement can understand or appreciate this class of lesions. Whether these lesions ever occur except in spinal cords injured by corporations I am at a loss to know. I have recently been informed, in considering a case, that quite extensive lesions of an inflammatory character, occurring in patches, gave rise to no symptoms whatever during life, and that they might exist, and did exist in the particular case, and not affect the deep reflexes. I was advised that these observations had not been published.

Some interesting observations have been made by Dr. Mills in relation to localized lesions affecting the patellar tendon reflex and not the ankle-clonus. These cases are extremely rare; only eleven have been reported of the persistence of ankle-clonus after the patellar reflexes had disappeared. To account for this condition we may consider the fact that the cord center for the patellar reflex lies in the lumbar segments from the second to the fourth, inclusive, corresponding to the origin of the crural nerve. This region of the cord, together with the afferent and efferent nerves, constitutes the reflex arc for the patellar reflex; therefore a focal lesion in this part of the cord will abolish the reflex. The persistence of the ankle-clonus after the patellar reflex is abolished is explained on several hypotheses. The most probable one is given by Dr. Mills, as follows: "On theoretical grounds it seems probable that the syndrome might be due to a focal lesion in the cerebral cortex or in the cortical spinal tract, or to arrested development of the tract associated with disease—inflammatory or degenerative—limited to the crural nerves and their muscles."

The importance of the deep reflexes in the diagnosis of organic spinal cord disease is of limited value and chiefly confined to focal lesions which affect the spinal centers included in the reflex arc, or in the tracts of the cord which have undergone more or less extensive degenerative changes. In locomotor ataxia they are generally abolished, although in some cases where the lesion is confined to the lower segments of the cord, the patellar tendon reflex may persist. In anterior myelitis involving extensive lesions, they are abolished. In localized myelitis there will be considerable variation in this respect, depending on the location of the lesion with reference to the particular reflex arc and the extent of involvement of the cord structures. In neuritis of the crural nerve the knee-jerk is lost, except in the earlier stages of the disease, and this will depend on the intensity of the inflammation. In multiple neuritis the same is true, except that it involves a wider range of reflexes.

In spastic spinal paralysis, amyotrophic lateral and multiple spinal sclerosis, the reflexes are exaggerated. In syringomyelia, the reflexes are abolished if the focal lesion is in the anterior horn or in the posterior columns; if in the crossed pyramidal tract, the reflexes will be exaggerated.

In functional nervous diseases or morbid states of the nervous system the reflexes are changed in character. In hysterical paraplegia, according to Gowers and Mills, the ankle-clonus is abolished. The majority of neurologists, however, hold to a different view, contending that in about 20 per cent. of the cases the ankle-clonus is pres-

ent. Mills is of the opinion that in these cases an organic disease exists obscured by the hysterical symptoms. Mills also contends, from recent observations, that the patellar clonus is absent in hysteria, but admits that "it is not improbable that patellar clonus will be found in those cases of hysteria in which hypertonicity and the diathesis of contracture are present—some cases of spastic and convulsive hysteria; cases of tetany and some cases with choreic and athetoid phenomena."

In pure neurasthenic cases my observation is that in a considerable number the knee-jerk is increased; not exaggerated as in the spastic condition, but merely increased. I have made many observations on this point, both in traumatic neurasthenia and in that not due to trauma, and while there was some modification of the reflexes, I have never found them absent.

The real diagnostic value of the deep reflexes can only be determined by a very careful consideration of the facts in the case, and by a careful study of the reflex itself. There is no certain and absolute guide as to the intensity of a normal reflex. I have examined about 500 presumably healthy men who were applicants for service with a railroad company, and found a great variation in the extent of movement of the leg when the patellar tendon was struck. In about one in a hundred there was no response. In a somewhat larger proportion the reflex could be obtained on reinforcement. In about 4 per cent. the reflex was large and would appear to be exaggerated; indeed, I have heard physicians declare in examining medico-legal cases, that reflexes of the same range were exaggerated, and the reflex was offered as an evidence of spinal cord disease. But on comparing this increased reflex with the exaggerated one of spastic spinal paralysis the difference would at once be seen. Hence, the experience derived from the observation of the reflexes in healthy persons will be an important factor in correcting certain misconceptions which may arise from examinations confined to individuals who are supposed or alleged to be suffering from some spinal cord lesions.

It will be seen that a consideration of the reflexes alone will be misleading in determining the nature of a spinal cord disease, or in distinguishing absolutely between an organic or functional affection of the nervous system, but when taken in connection with the other symptoms will be of considerable value in reaching a conclusion. But, on account of the considerable variation in the normal reflex, they must be studied with great care or the examiner will be led into error regarding the value which may legitimately be attached to them.

DISCUSSION.

DR. J. T. ESKRIDGE, DENVER, COLO.—There are many symptoms on which a diagnosis depends in almost every case, and we are rarely justified in making one on one symptom alone. This is a mistake which is made by too many men. They often rely on one symptom as indicative or symptomatic of an organic lesion. On the other hand, mistakes are made when we have multiple symptoms of hysteria present. A diagnosis of hysteria may be made when there is organic trouble present. Did I understand Dr. Fairchild to say that one leg was paralyzed and the other anesthetic?

DR. FAIRCHILD—There was sensory and motor paralysis in the same leg.

DR. ESKRIDGE—I have yet to see the first case in which persistent ankle-clonus has been present in hysteria. Gowers lays stress on this and says that he has never met a typical case of ankle-clonus. Sachs, of New York, brings forward examples in which he claims typical ankle-clonus was present in cases of hysteria. We not infrequently get pseudo-ankle-clonus in this affection, but it is distinctly different from that of organic lesion. If you take distinct ankle-clonus of organic lesion and bend the front of the foot up, the ankle-clonus will persist, and

if you increase the pressure you will increase the ankle-clonus. In hysteria, on the other hand, not infrequently, if you take hold of the foot, two or three wave-like motions which are irregular and comparatively voluntary in character will be made, but will not persist, and if you press firmly on the foot, will disappear. To repeat, I have never seen a typical ankle-clonus present in hysteria, notwithstanding the fact that such an eminent man as Sachs reports that he has.

In regard to the paper of Dr. Fairchild, he spoke of persistent ankle-clonus and the knee-jerk being abolished. So far as I know, I was one of the first to make this observation in a clinical lecture, delivered at the Arapahoe County Hospital in Denver, eight or nine years ago. I was a little nonplussed at the time, to explain it; there was positive evidence of inflammation of the lower end of the cord, and the only explanation I could make of it was that we had focal lesion between the lumbar and sacral portions of the cord. In the sacral portion we have the innervation of the muscles that give rise to ankle-clonus, and those that give rise to the plantar reflexes; in the lumbar region we have the innervating center of the muscles that give rise to ankle-clonus. After I had made the diagnosis of a focal lesion between the lumbar and sacral centers, I wrote to Dr. Mills and he replied that he knew of no such case on record, but could not conceive of any other explanation. The patient died from other causes, and at the autopsy we found a focal lesion in the upper sacral portion of the cord. The lumbar region, under microscopic examination, showed the cord was perfect.*

In regard to the knee-jerk, in all lesions above the lumbar region which involve the pyramidal tract, it is always increased. If the lower dorsal region is involved and we have a chronic condition which extends to the lumbar region, the knee-jerk will also be abolished. We may have an acute myelitis in the cervical or dorsal region in which the reflexes are abolished, but this is during the period of shock; after a period varying from a few hours to a few days the knee-jerks are increased. In cases of hemorrhage into the brain we will find the limb of the opposite side absolutely flaccid, but as soon as the shock passes away the reflexes return, and temperature goes up on the paralyzed side. When shock is over, in acute myelitis, the reflexes will return. Whenever the lumbar region is involved by any organic lesion, the knee-jerks are absolutely abolished, and it does not take much of a lesion in this reflex arc to produce abolition of the reflexes. If one branch of a nerve is involved in this arc, the knee-jerks may be absent, as, in injury to certain branches of the anterior crural nerve. These will result in complete abolition of the knee-jerk. In this connection we have another condition, i. e., the knee-jerk in healthy persons is not infrequently absent. I have found in a record of several hundred cases of apparently normal persons, that the knee-jerks were abolished in 1 or 2 per cent. of the cases. This does not agree with Erb, who has found it absent in a greater number of persons. Take the knee-jerk of all persons, and we find it absent in at least 1 per cent. In hysteria, the knee-jerks may be normal or increased, just as we find them in neurasthenic patients. Infrequently the jerks may be temporarily lessened or possibly absent in hysteria. I have occasionally found them temporarily absent in neurasthenia, and then again, in subsequent examinations, I have found them present. The innervation of the nerves, or centers in the spinal cord, will modify the knee-jerks, so that I think the observations of Dr. Fairchild in this respect, that no one symptom is to be absolutely relied on in making a diagnosis, are correct. It is only a combination of symptoms that relate to one another that enables us to make a positive diagnosis. The physician who makes a diagnosis on one symptom and regards it as positive evidence of organic lesion is going to make mistakes frequently. There has been one symptom brought forward which may in the future prove of great value to us. The first investigations were made some years ago, by Babinsky, and later the matter was investigated by Collier, of London. I did not mention it in my paper, simply because I wish to have more experience in regard to it. If Babinsky's observations should be confirmed by others, we have a valuable guide in several of those cases under consideration in which the knee-jerk is absent. The symptom is this: When you strike the plantar surface of the foot, if the pyramidal tracts from the cortical to the terminal portions of the nerve are involved, you will

have an upward contraction of the foot, most marked in the great toe. This same condition exists in children. If you strike the plantar surface of the foot, when the child is only 3 or 4 years of age, the foot will turn up (illustrating). If you strike the side of the foot of a healthy subject it will almost invariably go down (plantar flexion). I have tried to elicit this symptom in several cases, and it is present in organic disease. It is present in certain cases of insanity, in some cases of neurasthenia, and I do not believe in reporting on it until my observations have been sufficiently extensive to enable me to confirm or differ from conclusions of others. Collier made his observations in the Hospital for the Paralyzed and Epileptics, in London, and gives a report of 300 cases in which he confirms the observations of Babinsky. Some of my friends, who have been making similar observations, have not been able to entirely confirm the views held by these gentlemen.

I have a word or two to say in regard to the subject of syringomyelia. The knee-jerks depend largely on where the syringomyelia begins. If it starts in the upper portion of the cord, which seems to be a favorite seat, the knee-jerks are increased. I have a patient under observation in whom there is incontinence of the bladder and of the bowel. The knee-jerks are absolutely abolished, although in the beginning they were increased. Evidently we have, in this case, the lower portion of the spinal canal distended, and the pyramidal tracts in the lumbar region involved, hence the abolition of the knee-jerks. So much depends on accurate observation in these cases, taking into account other relative symptoms that present themselves, that one is hardly justified in making a diagnosis on one or two symptoms alone. It shows with what care we should investigate all cases before making a diagnosis.

Dr. FAIRCHILD, closing the discussion—I regret that my paper did not elicit more discussion on the part of other members of the Academy. We are presumably all railway surgeons, and all of us have examined the class of cases under discussion and have given our opinions to the claim department in order for it to form a basis for litigation in case that should happen to occur. These nerve lesions constitute the largest number of cases that the surgeon has to give an opinion on, so far as the claim department is concerned.

I quite agree with all that Dr. Estridge has said, except in one particular. In regard to the indeterminate forms of spinal cord lesion, the Doctor must have misunderstood me a little in some respects, in one particular especially, and that was that these lesions could occur in the cord without giving rise to any symptoms whatever.

DIFFERENTIATION BETWEEN THE BULLOUS, VESICULAR AND PUSTULAR ERUPTIONS OF EARLY LIFE.*

BY CHARLES WARRENNE ALLEN, M.D.

Member of the American Dermatological Association; the New York Dermatological Society; Consulting Surgeon to the Randall's Island and other hospitals; Consulting Genito-Urinary Surgeon to the City Hospital, etc.

NEW YORK CITY.

Although dermatologists can not invariably make satisfactory distinction between rare forms of bullous affection, or classify them in an acceptable manner, it is usually no difficult matter to distinguish the non-specific from the specific. To this general rule there are a few exceptions. The distinction between syphilitic and non-syphilitic lesions of this character is not so much a matter of form, size, color, and course as it is a question of location, time of appearance and the coincident or antecedent occurrence of other manifestations, often in the nature of unmistakable stigmata. In other words, some definite manifestation of syphilis is almost sure to be, or to have been recently, present to confirm the diagnosis. So far as the chances are concerned of any given bullous, vesicular or pustular eruption in an in-

fant being syphilitic, we must bear in mind that these forms are to be numbered among the rarer manifestations, bullous eruptions occurring as a first manifestation in from 5 to 8 per cent. of cases, while the maculopapular is seen as the primary eruption in about 50 per cent. These figures, like those of all other statistics, vary greatly according to the source from which they are drawn. If the palms and soles are the chief seat of development, the chances are largely in favor of the specific nature of the lesions.

The concomitant signs of syphilis, to which I have referred as of such aid to us in estimating the significance of clear or purulent bullæ and clear or purulent vesicles, include a peculiar cachectic appearance or dirty-yellowish anemic aspect; an earthy colored tint about the mouth, at times spreading over much of the face. The features are not always pinched or drawn, and it is an error which is at times committed, to teach that the "specific" infant is a thin, shrivelled up marasmic individual with the classic "old woman" appearance.

The majority of hereditary syphilitics are in their early infancy fairly well-nourished, and even plump, while possibly showing marked and at times severe eruptive signs. This necessarily does not apply to the large class born before time, who have a natural difficulty in catching up in their weight to that to which their apparent age entitles them.

There is also an almost never-absent coryza or catarrhal condition of the nasal mucous membranes; a crustiness and oftentimes fissured state of the lips; and a marked tendency to condylomatous formation about the mouth and anus. In older children certain peculiar erosive features of the permanent upper central incisors, deafness, and keratitis are stigmata of inherited syphilis on which we can not now dwell.

The subject, even restricted as I have indicated, remains a very broad one, and, to cover the ground I will attempt to take up the various bullous, vesicular and pustular affections of the skin and point out, as I go along, what are some of the points of differentiation between them and syphilitic manifestations as I have encountered them in practice. In this way I may throw out suggestions which should form the basis for an interesting discussion. In being confronted with an infant presenting vesicular, bullous and pustular lesions, we can often arrive at the decision that it is *not* syphilis, by paying strict attention to those points which will enable us to determine what the affection really is, and avoid the highly undesirable position of treating the patient for a syphilis which does not exist. It is questionable whether it is a greater offense to overlook syphilis or to treat a patient for it who has not the disease. Unfortunately there is an abundance of the real article if it is diligently sought. Having decided that a given eruption is not specific, I do not think specialists in the diseases of children can always tell what the disease really is. I say this because I know that skin specialists can not, although much painstaking investigation is being constantly carried out by them.

A great desideratum in the study of this class of affections is to simplify the classification and nomenclature. I would therefore urge the elimination of all such confusing terms as "syphilitic cezema," "syphilitic pemphigus," "varicella syphilitica," "variola syphilitica," all of which have to do with the subject before us, as well as the use of "syphilitic psoriasis," "syphilitic lichen," "syphilitic acne," and the like. These designations can best be dropped once and for all.

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THE VESICULAR SYPHILIDE.

This is among the rarest of the eruptive forms. It is to be distinguished from eczema, which is the disease it most closely resembles, by its slow course and the fact that it persists under the employment of remedies usually efficacious in eczema. There is also an absence of itching, which is in itself one of the most valuable of signs. There is likewise little or no "weeping," the lesions drying and remaining on infiltrated plaques in themselves dry and perhaps shiny or having a glazed appearance and often a waxy look. After the redness has subsided, and no traces of vesiculation are longer present, a dull discoloration and often a pigmentation is left behind, giving a dirty aspect to the skin.

An eczema in the vesicular stage, occurring in a syphilitic infant, may cause confusion for a time, but the individual vesicle of syphilis is much more deeply seated in the skin and retains its integrity as a vesicle much longer than that of eczema. In any event the rarity of vesicular syphilis makes the great preponderance of chance in favor of any given vesicular eruption being non-specific.

THE BULLOUS SYPHILIDES.

Good instances of bullous syphilis, like good Indians, are mostly to be found among the dead. Almost if not quite 80 per cent. of hereditary syphilitic infants, if not born dead, die before completing their third month of life. This number includes most of those showing the bullous or pemphigoid form of eruption. The latter is usually of the congenital variety, occurring at, if not before birth, though I have notes of a case in which it first appeared on the nineteenth day. It is of ephemeral duration, perhaps not lasting more than a few days, presenting from a few to a hundred or more lesions. The color is dull, opaline, yellowish or of somewhat greenish hue, and some bullæ may be hemorrhagic.

In the later stages the contents dry into thick crusts or, in malignant forms, an ulceration (ecthyma) takes place at the seat of the bulla. The location on the palms and soles is characteristic, and it is often there that bullæ first become noticeable. In some instances there is a tendency to confluence, and concomitant peri-anal and labial lesions are apt to occur.

Aside from stigmata of lues, which may be present, the history may give aid. If the mother has aborted once or several times previously, the presumptive evidence of syphilis is strong. In one instance, among my notes, there had been five miscarriages occurring between the fourth and eighth months; the child presenting the bullous eruption was born and lived for two months, and after this three other children were born at term.

PUSTULAR SYPHILIDES.

Here the lesions are either pustular from the beginning or bullæ and vesicles primarily of clear contents rapidly become turbid and purulent. When present at birth, a pustular eruption may be said to be always specific unless perchance it be variola. Pustules enter largely into the bullous syphilide, which rarely remains of a pure type for any great length of time. In one form yellowish flattened pustules occur in groups about the buttocks, the lesions being of lentil size, but tend to run into confluent forms. In a later form pre-existing papules and tubercles develop purulent foci at the most prominent and central point, and these subsequently dry into very dark colored crusts. Such lesions occur not only about the buttock and lower extremities but also frequently on the face. Marked pustulation indicates a cachectic state in which there is usually found

restlessness, rapid pulse and other unfavorable symptoms, and early death may be anticipated. If papules, vesicles and pustules coexist we have practically only variella to exclude, though eczema and scabies may occasionally present somewhat the same polymorphous appearances.

We will now take up the cutaneous affections characterized by vesicles, bullæ and pustules, or presenting these lesions in such a way as occasionally to raise the question of possible syphilis.

PEMPHIGUS.

The various affections which have been described under this general term have included septic bullous processes, impetigo contagiosa bullosa, erythema bullosum, epidermolysis bullosa hereditaria, traumatic bullous dermatitis, and possibly at times the effects of drugs as well as bullæ due to other causes. Infants and children are more prone to water-blister formation than adults, though vesicular and bullous eruptions decrease in frequency after the first year of life. While less confusion exists to-day than formerly, the whole subject is still surrounded with difficulties. The pemphigus group has become disintegrated and is now passing through a process of reconstruction. The term should be reserved for grave systemic disease with well-marked bullous features.

PEMPHIGUS ACUTUS (FEBRILIS).

Acute febrile pemphigus is very rare, either in the adult or infant, though more frequent in the latter, confusion arising from impetigo, erythema bullosum or other bullous affections. The epidemic form in institutions and in the practice of certain midwives to which I will presently refer is probably impetigo contagiosa or some still ill understood infectious process.

PEMPHIGUS NEONATORUM.

Of the many forms of bullous disease which have been called pemphigus, that usually designated as pemphigus neonatorum interests us chiefly in this connection. It is characterized by an eruption of rounded or hemispheric bullæ seated on a very slightly reddened base, or springing from the normal colored skin, occurring not earlier than the second week as a rule. The fluid within the bullæ is a clear or yellowish serum becoming opaline or cloudy, and sometimes hemorrhagic, though rarely pustular. The soles and palms are not involved, and the number of separate lesions is usually limited but of general distribution. In young infants it is usually apyretic and ends in resolution after a seven to nine days' course. This form is rarely seen. The general health is not greatly disturbed. The first lesions may occur on the face or chest. They vary in size from that of a pin's head to a silver dollar. The statistics of the American Dermatological Association for twenty years show its rarity, giving but eleven cases out of 309,000 skin affections reported. We must, however, remember that dermatologists are not so likely to see these cases as are the family physician and specialists in children's diseases.

Septic forms undoubtedly exist, especially in the offspring of mothers who are septic, probably by way of the milk. Peter¹ describes a bullous eruption in a nursing infant 11 days old, whose blood as well as the mother's milk showed cultures of the staphylococcus pyogenes aureus, a diplococcus, and in separate colonies staphylococcus pyogenes albus.

Pemphigus of the new-born is distinguished from syphilis by freedom of palms and soles, the little tendency to suppuration, to confluence of pustules or to the

¹ Berliner Klin. Woch., 1896, No. 6.

production of ulcerative lesions (ecthyma), and by the absence of history and other signs of syphilis. The general health is fairly good, and no marked evidence of cachexia is present. It is also to be distinguished from the hereditary predisposition to bullous formation from slight injury—epidermolysis—and from the effects of too hot bathing, hot-water bottles, etc.

PEMPHIGUS CHRONICUS.

In this form older children are affected. The bullæ have a more symmetric distribution, the onset is more insidious, and the course is, as the name indicates, a chronic one, there being a tendency to recurrences or to successive crops of similar nature, or to pass into the form of pemphigus foliaceus, and its ending is lethal.

PEMPHIGUS EPIDEMICUS.

While the writer has for a number of years believed that most so-called pemphigus of the new-born, occurring in epidemics in lying-in institutions, or in the practice of certain midwives, was not pemphigus at all, but the bullous form of contagious impetigo, he is prepared to admit that septic forms may occur which are transmissible and often end fatally. Otherwise it is difficult to account for the great mortality, since, in older children at least, impetigo contagiosa is not a fatal disease. There are probably two forms of bullous affection which might be designated as epidemic. That in which the mother, the nurse, and the physician run a risk of infection, and which occurs among older children in institutions, will usually be found to be impetigo. In instances like that related by Dohrn, an infection of different nature would have to be suspected. He relates that of the children of 65 women attended during a period of four months, by a certain midwife, 28 developed acute pemphigus, and 8 died. After a vacation of a month she resumed practice and delivered 9 women within a period of twenty days. Three of these children had pemphigus. After another interval of three weeks she delivered 6 children, 3 of whom had pemphigus and 1 died. The midwife then gave up practice. Lofenstamm mentions twenty cases in a year, with 2 deaths. Lechmeister² mentions 28 cases in 76 births in the practice of one midwife.

PEMPHIGUS FOLIACEUS.

This form may succeed the form of pemphigus vulgaris, or it may attack an infant in a state of apparent health. The bullæ, instead of being distended hemispheres, are rather flaccid lesions giving rise to those which resemble a burn whose bullæ have ruptured, causing denuded areas covered or encircled with shreds of epidermis. The diagnosis rests between this affection and burns on the one hand and pemphigoid syphilis on the other. I have more than once had presented to me in institutions infants in much the same condition as above described, with the suggestion that the nurse has been culpable in administering too hot a bath or has applied hot-water bags injudiciously. Knowing as well as I do the dangers of the hot-water bag, I believe one must bear these cases in mind and be on one's guard not to do unintentional harm to the innocent by a too speedy judgment.

EPIDERMOLYSIS HEREDITARIA BULLOSA.

We will next take up what has been designated as "family pemphigus," because it has in the past almost always been classed as a form of pemphigus. It is that peculiar hereditary predisposition to the formation of bullæ on surfaces exposed to friction and other forms of slight traumatism; the lesions being observed chiefly on the feet, hands, buttocks, or over some joint where pres-

sure of clothing, etc., is made. It is a congenital affection in the sense that an infant may be born with one or more bullæ on the surface, and only in after-life, when the pressure of a shoe or some slight irritant has called forth similar lesions, is the true nature of the affection manifest. The lesions are of short duration, and, although the bullæ are at times quite large, no scarring results. Pinatelle³ has reported an instance in which seven brothers and sisters of one parent were affected; the bullæ began to form at about the age of 3 years, and occurred every eight to fifteen days. There may be slight pruritus, but as a rule no general symptoms are recorded. The palms are not affected, though the mucous membranes are at times. The nails may fissure and be shed, and vitiligo or hyperpigmentation have been recorded as secondary effects.

DERMATITIS HERPETIFORMIS.

Dühring's disease, as it is most appropriately called, instead of adding to the confused state of our knowledge by adding a new name, has simplified matters by giving us a place in which to put a certain number of cases not otherwise readily classified. This being pre-eminently a vesicular, pustular and bullous affection, occurring in a variety of combinations, characterized chiefly by herpetiformity and tendency to relapse and recur, it seems almost to meet the requirements of the syphilitic eruptions. We will not dwell on the affection, however, as it is rarely seen in early life, Arning's case at the age of 6 years being looked on as exceptional. It has, however, a bearing on the question of vaccination eruptions, which we will consider further on.

IMPETIGO.

There seems to be no very good reason for retaining the qualitative "contagiosa." When we speak of impetigo to-day it is understood that we mean the contagious variety and the only one about which there is likely to be much to say. We may accept a simple impetigo occurring as a few pustular lesions with thicker walls than those of the contagious variety, without much evidence of inflammation, and desiccating without leaving staining or scars, but it is so extremely rare and, since all pustular lesions are probably contagious in the sense that they are inoculable, the matter would be simplified by accepting one impetigo which is sometimes pustular and sometimes vesicular or bullous from the beginning, remembering that there are serpiginous, gyrate or circinate forms of the same process. Some instances strongly suggest ringworm by the circinate outline of the patches, the center having cleared up as in trichophytosis. Syphilis might here, too, enter into question, and possibly instances of reported vesicular and vesiculo-pustular syphilide on the face in infancy have been only instances of this affection. There is this chief distinction to be made, that in syphilis the base tends to become ulcerated. I have observed several instances of the gyrate form of bullous impetigo extending over the greater part of the body and lasting a long time. I have reported one instance and Elliot another, both of which are referred to in a recent article by Corlett.⁴

ECTHYMA.

This follows naturally at this point, for it too is a pustular affection, but here the lesions are on the hips, the back, especially its lower part, the thighs and legs; the face escaping. I am inclined to regard it as a form of impetigo in which the pustules begin in the deeper sub-epidermic rather than in the subcorneal structures. In

³ Jour. des Mal. Cut., April, 1889.

⁴ Cleveland Jour. of Med., December, 1888.

those debilitated by preceding disease or other cause, or in whom the lesions have become reinfected with other organisms, deep ulceration or even gangrene may occur. Klotz includes the lesions in a class of "infected scratch" affection. There is a syphilitic ulceration closely allied to ecthyma which has led some authors to assert that ecthyma is always specific; this view can not be accepted. The chief point of differentiation is that simple ecthyma lesions are limited to the lower back, hips, buttocks, and thighs, while pustular syphilitic going on to the formation of rounded ulcers occupies any region of the body.

HYDROA.

Hydroa is a term which we will not employ by itself in the present discussion, since most affections so designated enter readily into the class of pemphigus, pompholyx, dermatitis hepatoformis or impetigo bullosa. It usually implies a bullous eruption occurring in successive crops attended by marked itching. There is, however, an affection, "hydroa aestivale," which has been at times confounded with syphilis. It begins in the early years of life and recurs annually or with more or less periodic regularity. There are erythematous spots, vesicles and bullae on the face or exposed parts. The blebs rupture without becoming purulent, and the scars left behind are the chief cause of its being mistaken for syphilis. This simulation has even extended to the destruction of an ala nasi. Some of the originally described instances were for a long time looked upon as syphilitic. Crusting begins in the center, where there may be an attempt at umbilication, and extends to the periphery. After the crust falls we may find a depressed cicatrix.

Instances as early as the fourth and eighth month are recorded. It is at this age only that bullous syphilis can enter into question, since in subsequent attacks we have the history of periodic recurrence as a guide.

Other diseases to be distinguished from this summer eruption are variola and vaccinia—generalized bullous. Both of these are found elsewhere than limited to the exposed parts. Still, if we accept localized forms of these affections, in common with varicella, doubt may arise.

Ecthyma multiforme—bullosa—lacks the pronounced periodicity of recurrence and leaves no scars, has a shorter course and not successive crops extending over months.

Pemphigus is more generalized, has no such history, and does not result in such scarring.

Other designations are hydroa vacciniforme, eczema solare, eruptio estivale, summer eruption, etc., all of which, together with the one here employed, are open to objection, since the affection may occur in the winter. Some authors believe that the cases all belong in Dühring's class of dermatitis herpetiformis.

GENERALIZED VACCINIA.

I must pass over varicella, variola, scabies, drug eruptions, and the other conditions whose lesions of fluid contents might simulate those of syphilis, to say a word in closing on generalized vaccinia, which might be regarded as a latent syphilis which the act of vaccination had served to "bring out," or as a syphilis by inoculation in the process of vaccination. An eruption of bullae over the body, coming on after vaccination, is to be distinguished from one due to syphilis, largely by the history. If it comes between the ninth and fifteenth day—usually tenth or twelfth—we naturally may exclude inoculation syphilis, which would produce such manifestations only after a lapse of almost as many weeks.

Then again, if the lesions are bullous and the child is over 4 months of age, everything speaks against syphilis, since we know that bullous syphilis tends to develop earlier than this and is usually fatal, when the infant is vaccinated in the first days of life. The necessity for strict differentiation and the difficulties often attending the matter were emphasized by Jonathan Hutchinson, at last year's British Medical Association, who related an instance of vaccinia which had been pronounced syphilis by all who saw it. I am sure I have seen many cases which would receive this verdict if the fact of vaccination having been done were withheld. During the past two years, out of a total of 10,000 skin cases, I have had over 600 vaccination ulcers, generalized eruptions, sequelæ or complications to treat. Of this number there were over one hundred more or less generalized eruptions, or one in every six. Of these generalized eruptions there were twenty-four of vesiculo-bullous nature, two pustular and two pustulo-bullous. Since few if any of these children had been vaccinated at an extremely early age there occurred no difficulty in excluding pemphigus neonatorum as well as bullous syphilis.

In a doubtful case it would be possible to proceed in the manner of Espine and Jeadin,⁵ who inoculated a calf from the umbilicated vesicles of a generalized eruption which occurred on the fifth day after vaccination, producing vaccine vesicles which on reinoculation gave positive results.

126 East Sixth Street.

UNIFORMITY IN DEFINITION AND APPLICATION OF THE TERMS POSITION AND PRESENTATION.

BY FRANK A. STAHL, M.D.

INSTRUCTOR OF OBSTETRICS, RUSH MEDICAL COLLEGE,
CHICAGO.

Ambiguity in definition and application of terms, more especially of terms of importance, is still a method of expression unfortunately of too frequent recurrence in descriptive obstetrics. Nor are these infelicities of expression of recent date, for, the need of uniformity in definition and nomenclature has long been recognized. Repeatedly, in monograph, in discussion, and in medical congresses, efforts have been made to overcome these and to establish greater clearness in definition and application of term and a more simple, yet accurate nomenclature.

Among the last to treat of this subject was Prof. A. R. Simpson of Edinburgh, with a committee of American obstetric teachers. Preparatory to its consideration, he had sent out the following question to various teachers of obstetrics throughout the world: "Do you consider it desirable to try to attain uniformity in obstetrical nomenclature?" The replies varied from "eminently so" to "certainly, but very difficult." At the meeting of the Ninth International Medical Congress, held in Washington, D. C., in 1887, the association adopted, as suggested by this committee, a nomenclature and application which has since been regarded as the authoritative and most probably is the nomenclature most commonly taught wherever obstetrics is read in the English tongue. The committee cleared up much that needed simplifying, the difficulties being many, but there remained some inequalities.

So far as pertains to uniformity in definition and application of the two terms, "position" and "presentation"

⁵ Gesellshaft für Kinderheilkunde, Dusseldorf, 1898.

even a cursory scanning of standard English and American text-books, and for that matter also those of other tongues, will show that such text-book authority is strikingly unanimous in one respect only, viz., a most characteristically classic non-uniformity in definition and application; naturally a confusion in comprehensive results. It follows as a consequence, that one of the most pleasant duties devolving on the obstetric teacher is to try to convey to the student—with this material authoritative but conflicting—a clear and correct idea of position and presentation. He succeeds thus far; show him a chart, try him on the manikin, or clinically, and the student recognizes correctly; but have him paint a word-picture and his confusion in term and application is just as marked as that found in his text-book.

To assist in following this discussion, since the Transactions of that congress may not be at hand in many cases, I cite the report of the committee, as pertains to position and presentation under Sections 3 and 4. as follows:

SECTION 3.—PRESENTATION OR LIE OF FETUS.

The presenting part is the part which is touched by the finger through the vaginal canal, or, which during labor is bounded by the girdle of resistance. Three groups of presentations are to be recognized, two of which have the long axis of the fetus in correspondence with the long axis of the uterus, etc.

1. Longitudinal: *a*, cephalic, including vertex and its modifications, face and its modifications; *b*, pelvic, including breech and feet.

2. Transverse or trunk, including shoulder, or arm and other rarer presentations.

SECTION 4.—POSITIONS OF THE FETUS.

Vertex Positions:

Left occipito-anterior. occipito-leva-anterior—O.L.A.

Left occipito-posterior. occipito-leva-posterior—O.L.P.

Right occipito-anterior. occipito-dextra-anterior—O.D.A.

Right occipito-posterior. occipito-dextra-posterior—O.D.P.

Face Positions:

Right mento-posterior. mento-dextra-posterior—M.D.P.

Right mento-anterior. mento-dextra-anterior—M.D.A.

Left mento-anterior. mento-leva-anterior—M.L.A.

Left mento-posterior. mento-leva-posterior—M.L.P.

Pelvic Positions:

Left sacro-anterior. sacro-leva-anterior—S.L.A.

Left sacro-posterior. sacro-leva-posterior—S.L.P.

Right sacro-posterior. sacro-dextra-posterior—S.D.P.

Right sacro-anterior. sacro-dextra-anterior—S.D.A.

Shoulder Presentations:

Left scapula-anterior. scapula-leva-anterior—Sc.L.A.

Left scapula-posterior. scapula-leva-posterior—Sc.L.P.

Right scapula-posterior. scapula-dextra-posterior—Sc.D.P.

Right scapula-anterior. scapula-dextra-anterior—Sc.D.A.

When initial letters are employed it is desirable to use the initials of the Latin words.

DISCUSSION.

Under Section 3, "presentation or lie of the fetus" is an anachronism. It is an error to use presentation as the "lie of the fetus," for this latter phrase has reference to the *position* of the fetus as a whole, regardless as to what part presents at the uterine opening. Further, "three groups of presentations are to be recognized," "two of which have the long axis, etc., 1, longitudinal; 2, transverse." This latter double quote again refers to position. This is likewise an error. Position and presentation are not synonyms.

Under Section 4, "positions of the fetus," here position is again incorrectly used synonymously with the term "presentation." The word "position" as used under this section should make way for the word "presentation," for here reference is had to the part found in the uterine opening.

To overcome this embarrassment in class work, I have

deviated somewhat in nomenclature, definition and application from the usual text-book authority, not from the clinical picture, only in word-picture. I find the students readily master the positions and presentations as I give them.

As remarked, position and presentation are not synonyms and therefore should not be used synonymously. Etymologically considered, *position* refers to "aggregate of spatial relation of a body or figure to other bodies or figures; the situation; the place of a thing." *Presentation* refers to "that which is before; in view; appearance."

POSITION.

To recognize *position* with distinction, the relation of the fetus as a whole to the mother as a whole is as essential to artistic and scientific obstetrics as it is to recognize *presentation* with distinction—the relation of the presenting part to the parturient canal. It is the *position* that determines the *presentation*, and also its mechanism of labor. When speaking of the long axis of the fetus, reference is had to the long axis of its trunk.

To avoid confusion and ambiguity, the term position should be limited to the relation of the fetus as a whole to the mother as a whole, whereas, presentation should be limited to the local relation of the presenting part. Position is general; presentation is local.

In determining nomenclature, so far as pertains to position, Nature assists in suggesting one.

Look in any form or expression of Nature, so far as concerns relation of ovisea to fetus or shell to fruit; there we find one principle ever maintained throughout these various gestational expressions, and that is that the long axis of the fruit is always in the long axis of the ovisea and developing organ.

In the viviparous, the human, the lion, the horse, dog, etc., the long axis of the gestation sac is determined by the long axis of the fetus and is, as a rule, in the long axis of the mater, her longitudinal or vertical axis. Throughout Nature this is the normal relation of the fetus to the sac, and mater. In pleural conditions the apparently broken rule still holds true. Given any form of pluriparous gestation, as twins, triplets, quadruplets, etc., in any form of viviparous expression; as each fetus is expelled, often oblique and transverse to the mother before labor, in labor its long axis conforms to the long axis of the mater, for the long axis of her parturient canal is always in the long axis of the trunk. In the single fetus where the normal vertical relation (position) has deviated into the abnormal oblique or transverse position, to be delivered it must return to the vertical relation.

In the oviparous the egg is so conformed that in labor its long axis corresponds to the long axis of the mater. A critical type of this expression is to be seen in the parallelogram form of the gestation sac, containing the embryos, of the common domestic cockroach.

In the vegetable the same rule obtains, and with equal force. Regard the banana, the peanut, the philopental almond, in cell-life the nucleus to the cell. Throughout gestational nature, this same relational principle of long axis of ovisea to long axis of fruit is maintained, seemingly a sympathy of relational fitness of outline best conserving opportunity to develop coincidentally with greatest safety.

Since the long axis of the fetus determines the long axis of its sac and coverings, in determining the position of the fetus the spatial relation should be to the fixed relation, the mother, as a whole, rather than to its un-

fixed relation, its sac and the uterus. In the extrauterine forms of pregnancy, the position must of necessity and correctly so refer to the relation of the fetus as a whole to the mother as a whole. Our definition must be so broad, yet accurate, as to include all forms of pregnancy, the uterine and the extrauterine.

Hence, *position* has reference to the relation of the fetus as a whole to the mother as a whole, and is determined by the relation the long axis of the fetus bears to the long axis of the mother.

The *variety* of position is determined by the relation which the important landmark of the fetus as a whole, the back (in the vertical positions), the head (in the oblique and transverse positions), bears to the important landmarks of the mother as whole, the (her) left side, the right side, anteriorly (to the abdomen), posteriorly (to the back):

the occipital and face presentations. The transverse position is as a rule but a transitory midway relation in the mechanism of a normal vertical position changing into an abnormal oblique position, or an abnormal oblique position changing to a normal vertical position.

These positions are also subdivided, as suggested by their frequency of occurrence, as follows:

1. Vertical¹ positions:

Position.	Presentation—Superior Strait
First Vertical.	a. L.O.A. or L.S.A. or R.M.P.
	b. L.O.P. or L.S.P. or R.M.A.
Second Vertical.	a. R.O.A. or R.S.A. or L.M.P.
	b. R.O.P. or R.S.P. or L.M.A.

First vertical position is where the long axis of the fetus is in the long axis of the mother, with the back of the fetus toward the left side of the mother: *a*, back to the left and rotated anteriorly toward abdomen of mother; *b*, back to the left and rotated posteriorly toward back of mother.

Second vertical position is where the long axis of the

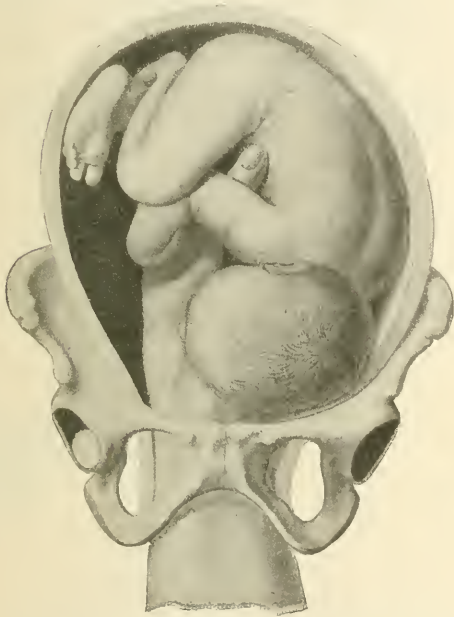


FIG. 1.—Position: First vertical (*a*). Presentation: right or left occipito-posterior.

In making hipolar or podalic version, the non-advisability of passing the hand and forearm over the occiput and back—dorsum—of the fetus is well shown.

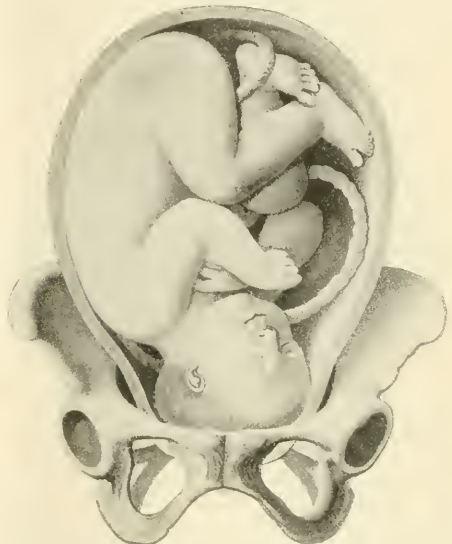


FIG. 2.—Position: Second vertical (*b*). Presentation: right occipito-posterior.

In applying forceps in this case, the low condition of the cord would invite special attention, to avoid its inclusion within the blades.

The positions as suggested by their frequency of occurrence are:

- 1, vertical—normal.
 - 2, oblique—abnormal.
 - 3, transverse—abnormal.
1. Vertical position: where the long axis of the fetus is in the long axis of the mother, the position is longitudinal or, better, vertical. This is the normal position for the fetus.
2. Oblique position: where the long axis of the fetus is in the oblique axis of the mother, the position is oblique. The oblique like the transverse is abnormal.
3. Transverse position: where the long axis of the fetus is in the transverse axis of the mother, the position is transverse. The transverse position is seldom a fixed or determinative position. It bears the same relation to the other positions that the brow presentation does to

fetus is in the long axis of the mother, with the back of the fetus toward the right side of the mother: *a*, back to the right and rotated anteriorly toward abdomen of mother; *b*, back to the right and rotated posteriorly toward back of mother.

In those cases where the back of the fetus is directly to the left of the mother, or to the right, or to the anterior or to the posterior of the mother, it is unnecessary to designate them with a separate term. These positions are exceptional, and but transitory. As it is natural for the long axis of the fetus, its greatest length, to determine and be in the long axis of the uterus, its greatest length, its longitudinal or vertical diameter, so is it natural for the greatest breadth of the fetus, its bisacromial or transverse diameter to be in a favorable greater

¹ Vertical is co-ordinate with oblique and transverse; whereas, longitudinal is co-ordinate with diagonal and horizontal.

breadth of the uterus, one of its oblique diameters. Consequently it is natural, and the rule, for the back to be to the left anteriorly or posteriorly, or to the right anteriorly or posteriorly.

2. Oblique² positions:

Position.	Presentation.			
First Oblique.....	<table border="0"> <tr> <td rowspan="2">}</td> <td>a. right shoulder.</td> </tr> <tr> <td>b. left shoulder.</td> </tr> </table>	}	a. right shoulder.	b. left shoulder.
}	a. right shoulder.			
	b. left shoulder.			
Second Oblique.....	<table border="0"> <tr> <td rowspan="2">}</td> <td>a. left shoulder.</td> </tr> <tr> <td>b. right shoulder.</td> </tr> </table>	}	a. left shoulder.	b. right shoulder.
}	a. left shoulder.			
	b. right shoulder.			

The first oblique position is where the long axis of the fetus is in the oblique axis of the mother, with the head below in the left iliac fossa, the breech above toward the right iliac fossa, the trunk extending obliquely from the left below to the right above: *a*, back of fetus rotated anteriorly toward abdomen of mother—the right shoulder (and arm) presents; *b*, back of fetus rotated posteriorly toward back of mother—left shoulder (and arm) presents.



FIG. 3.—Position: First vertical (*b*). Presentation: complete footling. L. S. P.

In the delivery or the extraction, the cord thus twisted about the back of the head and around under the axilla greatly increases the dangers to the fetus from asphyxia uterinae. Early recognition of this condition is of prime importance.

The second oblique is where the long axis of the fetus is in the oblique axis of the mother with the head below in the right iliac fossa, the breech above, toward the left iliac fossa, the trunk extending obliquely from the right below to the left above: *a*, back of the fetus rotated anteriorly toward abdomen of mother—the left shoulder (and arm) presents; *b*, back of fetus rotated posteriorly toward back of mother—right shoulder (and arm) presents.

3. Transverse positions:

Position.	Presentation.			
First transverse.....	<table border="0"> <tr> <td rowspan="2">}</td> <td>a. trunk back anteriorly.</td> </tr> <tr> <td>b. trunk back posteriorly.</td> </tr> </table>	}	a. trunk back anteriorly.	b. trunk back posteriorly.
}	a. trunk back anteriorly.			
	b. trunk back posteriorly.			
Second transverse.....	<table border="0"> <tr> <td rowspan="2">}</td> <td>a. trunk back anteriorly.</td> </tr> <tr> <td>b. trunk back posteriorly.</td> </tr> </table>	}	a. trunk back anteriorly.	b. trunk back posteriorly.
}	a. trunk back anteriorly.			
	b. trunk back posteriorly.			

In division, nomenclature, and relation these follow those of the oblique positions; their presentations are *not* like the oblique. The shoulder, with or without an arm, presents in an oblique position, but not in a transverse one. Here the presentation is some part of the trunk—thorax or abdomen—between the shoulders proper and the breech, excepting where the abdomen of the fetus is directly to the abdomen of the mother, when the small extremities lying on and along the trunk may present with the latter. Nor is it correct to speak of a "transverse presentation," including thereunder oblique and transverse positions with shoulder, arm, and trunk

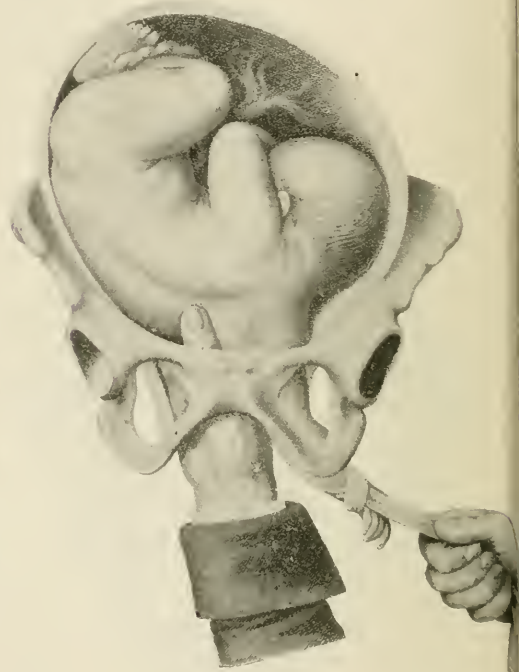


FIG. 4.—Position: First oblique (*a*). Presentation: right shoulder.

The contracting tape passed about the wrist is held here by the right hand of an assistant to turn; the operator enters the uterine cavity with his right hand. The effect conveyed by the assistant's hand is to hold the tape quite taut, as though to prevent slipping up of the arm and trunk. In the lying-in room, of course, this effect is lost; on the contrary, the tape is held quite loosely to encourage ease of rotation, especially in those cases where the fetus is large-sized.

presentations. It is not only incorrect but very indefinite.

To assist the student in fixing the detail of these various positions, it will be convenient for him to associate:

1. First with left: as first vertical, back to left; first oblique, head in the left iliac fossa; the first transverse, head higher in left iliac fossa; the first blade of the forceps to be inserted is usually the left one—as taught; the first in frequency is the left occipito-anterior presentation.
2. Second with right: as second vertical, back to the right, etc.
3. *a*, with abdomen of mother; first and second vertical

presentations.

Subsequently Winckel, from personal investigation, was led to adopt and recommend the classification of Hohlf as the best, because, etiologically, it can be best vindicated.—Winckel, Edgarr: p. 398-400.

² Hohlf suggested this division, accepted by Hacker preferably to that of Mme. Lachapelle:

1. Right shoulder presenting *a*, head to the left; *b*, head to the right
2. Left shoulder presenting *a*, head to the left; *b*, head to the right.

(a) and first and second oblique, (a) all with back of fetus toward abdomen of mother.

4. *b*, with back of mother; first and second vertical (*b*) and first and second oblique, (*b*) all with back of fetus toward back of mother.

5. Back of fetus with back of fetal head: in position, as the back of the trunk is directed, so in presentation is, as a rule, the direction of the back of the head, i. e., if the back is directed to the left and anteriorly, a first vertical (*a*) position, as a rule the occiput or naturally the sacrum, is to the left anteriorly; therefore there is either a left occipito-anterior, a right mento-posterior, or a left sacro-anterior presentation. The exceptions to this rule are those few cases of excessive rotation of the head—these exceptions are so few that they constitute the proof of the rule. It is this rule that enables careful external before internal examination, to forecast the diagnosis of the most probable presentation, so successfully practiced in the hands of the careful diagnostician.

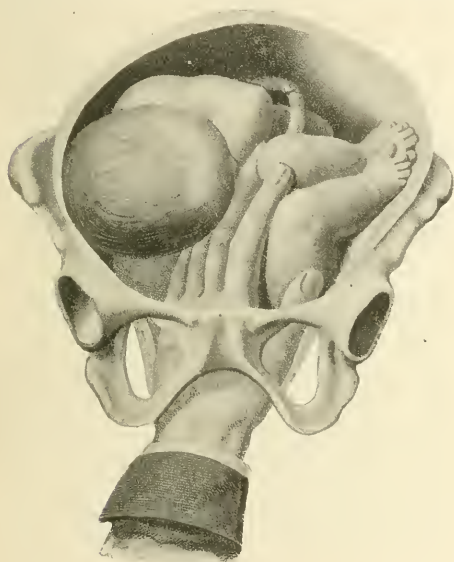


FIG. 5. Position: Second transverse (*b*). Presentation: right side of trunk with right arm and thigh. This condition is easily corrected, as shown, by introducing the left hand, to bring down one or both feet and extract.

PRESENTATION.

In speaking of a presentation the thought applies to the part in touch or before, and not to the relation it bears as a whole to its environment as a whole, i. e., position. To speak of the position of the presenting part is needless and will only lead to continued confusion. If we do so, our nomenclature must retrograde to that useless redundancy of the past, of which the fifth left occipito-transverse, and the sixth right occipito-transverse (Lachapelle); the third occipito-pubic, the sixth, occipito-sacral (Baudeloque); the fifth occipito-anterior, the sixth occipito-posterior presentations of to-day are types. As Professor King says, these are "exceptional" presentations; they are transitory, not determinative, in character. As well invite a special nomenclature for an occipito-anterior presentation where the head in rare cases is so tilted that, comparatively

speaking, the ear can be felt more prominently than the occiput.

In fixing on the four cardinal presentations, left anterior, left posterior, right anterior, and right posterior, as of occiput, breech, etc., the committee most judiciously adopted the suggestions offered by the four cardinal mechanisms of labor, established by Nature for all cases. The advancing part, for example the occiput, however it may start out as a presentation—it may be occipito-directly anterior or posterior, or to the left, or to the right—to be delivered, must pass through one of the four cardinal mechanisms, as a left occipito-anterior or posterior, or a right occipito-anterior or posterior, in its delivery. Again, in defining the term "presentation," it must be so broad, yet accurate, as to meet the requirements of a presentation, often changing from its original form and relation: in the uterus; without the uterus; at the superior strait; in the cavity, or at the vaginal outlet.

Hence, *presentation* has reference to the part of the fetus which presents or is found in the parturient opening. In the normal uterine pregnancy it refers to the part found in the cervical opening; in the Cesarean section or in the extrauterine section, to the fetal part found in the artificial parturient opening.

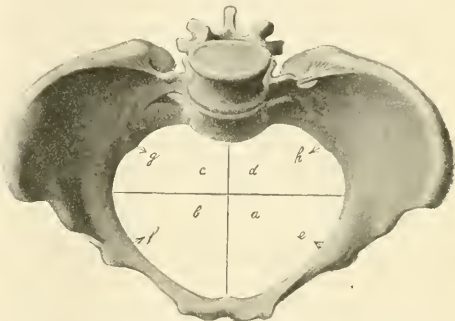


FIG. 6.—a, left anterior compartment; b, right anterior compartment; c, right posterior compartment; d, left posterior compartment; e, f, g, h, the cardinal points of the pelvic compass.

The *variety* of presentation is determined by the relation which the important landmark of the presenting part bears to the important landmarks of the parturient canal. In the fetus the occiput, the brow, the chin, the sacrum, shoulder, and in transverse positions, the trunk are the important fetal landmarks.

In the normal uteropelvic canal the four points of Capuron, the four cardinal points of the pelvic compass, the left and right iliopectineal prominences, and the right and left sacro-iliac synchondroses have been fixed as the maternal landmarks; or, again, another method which I have noticed, so far as the students are concerned, seems easy to grasp, is to divide the parturient canal by an antero-posterior plane, and at right angles to this, by a transverse plane; this will divide the canal into four compartments, as above:

About the center of the circumference of each are will be found one of the four cardinal points of Capuron.

If the fetal part presents so that its most prominent landmark, for example, the occiput, is in the left anterior compartment, it is also toward the plane of the left ilio-pectineal prominence; naturally the brow would be in the right posterior compartment toward the right sacro-iliac synchondrosis; therefore, the variety of presentation is a left occipito-anterior. Again, in a breech

presentation, the important fetal landmark is the sacrum if this is in the left posterior compartment, it is also toward the left sacro-iliac synchondrosis; the variety of presentation is therefore left sacro-posterior.

It is here, in the obtaining of a clear and distinct outline of definition and application, and in mastering the method of how to determine the positions and presentations, and their varieties, that the beginner experiences his greatest trials. These successfully overcome, his subsequent labor with the various mechanisms becomes much simplified, for then he has a clear and accurate basis to work on; it is hardly necessary to add that with increased accuracy in conception, there is increased power in creation, for obstetrics is primarily an art.

In an article containing suggestions for teaching purposes, detail in explanation is required and prolongs the article, creating the impression that the method is a long one; but not so, for instructional purposes a brief résumé only is necessary, which I have found is of ready comprehension and fixation to the students; these are important qualities.

RÉSUMÉ.

Position has reference to the relation of the fetus as a whole to the mother as a whole, and is determined by the relation the long axis of the fetus bears to the long axis of the mother.

POSITIONS.

Vertical. Long axis of fetus in long axis of mother (normal).	1. Back of fetus to left side of mother with	(a) Back rotated anteriorly. (b) Back rotated posteriorly.
	2. Back of fetus to right side of mother with	(a) Back rotated anteriorly. (b) Back rotated posteriorly.
Oblique. Long axis of fetus in oblique axis of mother (abnormal).	1. Head in left iliac fossa, breech higher above in right iliac fossa.	(a) Back rotated anteriorly toward abdomen of mother. (b) Back rotated posteriorly toward back of mother.
	2. Head in right iliac fossa, breech higher above, in left iliac fossa.	(a) Back rotated anteriorly. (b) Back rotated posteriorly.
Transverse. Long axis of fetus in transverse axis of mother.	1. Head in left iliac fossa, breech lower in right iliac fossa, trunk directly transverse.	Presentation, some part of the trunk.
	2. Head in right iliac fossa, breech lower in left iliac fossa, trunk directly transverse.	Ditto.

Presentation has reference to the part of the fetus which presents or is found in the parturient opening, and is determined by the relation the important landmark of the presenting part bears to the important landmark of the parturient canal.

PRESENTATIONS.

General Divisions:	Superior pole.	Cephalic.	Occiput. Face. Brow.
Inferior pole (or pelvic).	Breech.	Incomplete. Complete.	Rare.
	Kneeling.	Incomplete. Complete.	
	Footling.	Incomplete. Complete.	

VARIETIES OF PRESENTATION (as adopted by the committee):

<i>Occipital Presentations—Normal:</i>	
Left occipito-anterior	L.O.A.
Right occipito-anterior	R.O.A.
<i>Occipital Presentations—Abnormal:</i>	
Right occipito-posterior	R.O.P.
Left occipito-posterior	L.O.P.
<i>Face Presentations—Abnormal:</i>	
Right mento-posterior	R.M.P.

Right mento-anterior	R.M.A.
Left mento-anterior	L.M.A.
Left mento-posterior	L.M.P.
<i>Pelvic Presentations—Abnormal:</i>	
Left sacro-anterior	L.S.A.
Left sacro-posterior	L.S.P.
Right sacro-anterior	R.S.A.
Right sacro-posterior	R.S.P.
Right scapulo-anterior	R.S.A.
<i>Shoulder Presentations—Abnormal:</i>	
Left scapula-anterior	L.Sc.A.
Left scapula-posterior	L.Sc.P.
Right scapula-anterior	R.Sc.A.
Right scapula-posterior	R.Sc.P.

The committee recommended: "Where initial letters are employed it is desirable to use the initials of the Latin words." In English-speaking countries would it not be well to retain in instruction and later in description, the English left and right? *Lava* and *dextra* can not add perspicuity, but rather create a barbarism, and always more or less confusion. The German and French retain purity in style; for their *links* and *rechts*, *sinistre* et *droit* are never as a rule evidenced by *lava* or *dextra*. Will not these foreignisms in description mar the purity in style without adding any to its force? After all, are we not already in the age where English is cosmopolitan? Columbus Memorial Building.

A CASE OF RHIZOMELIC SPONDYLOSIS.

BY AUGUSTUS A. ESHNER, M.D.
Professor of Clinical Medicine in the Philadelphia Polyclinic;
Physician to the Philadelphia Hospital, etc.
PHILADELPHIA.

The literature of the last few months abounds with the reports of a morbid condition that has been variously designated stiffness of the spinal column, chronic, progressive rigidity of the spinal column with ankylosis, ankylotic rigidity of the spinal column, ankylosing inflammation of the spinal column and of the large joints of the extremities, chronic ankylosing spondylitis, deforming spondylitis, spinal arthritis deformans, and rhizomelic spondylitis.

The disorder is characterized essentially by increased posterior curvature, with lessened mobility, of the spinal column, often without, but sometimes with nerve-root symptoms, and involvement also of other joints, particularly the large ones of the trunk. The fundamental lesion in the majority of cases is believed to consist in a proliferative and rarefying inflammatory process involving the vertebra, the discs between, and the ligaments uniting, them. In some instances there is probably also meningitis, sometimes primary and sometimes associated or secondary. It appears that the disorder has been known for a long time, particularly to surgeons, but unusual attention has been directed to it of late, and reports of cases have been made from various parts of the world. To the not inconsiderable number of these I beg to add another:

C. U., a laborer, 21 years old, born in Russia, was admitted to the Philadelphia Hospital on July 5, 1899, complaining of pain in the back and chest, and loss of power in the extremities, especially in the left arm. Eighteen months previously pain developed in the left side, extending to the back, then to the left shoulder, finally involving the entire body. The pain was increased on movement, and the back was tender to touch. After six months loss of power appeared in the legs, and gradually increased until at the time of admission the man was unable to walk without supporting himself with his hands upon his knees. Nine months previously power was lost in the left arm, and a month later in the right arm also. At the time of admission the patient was unable to raise the left arm above the head, while

the right arm was raised with difficulty. Also the legs could be raised from the bed with difficulty, and the patient stated that they felt heavy. The grasp of the left hand was stronger than that of the right. The patient lay with the head retracted. Some hyperesthetic areas were found on either side of the spine in the middorsal and lumbar regions, but no anesthesia. When the soles of the feet were irritated the patient complained of pain in the sides, and irritation of either foot caused clonic movements of the entire lower extremity. The knee-jerks were greatly increased, and patellar clonus could be elicited. The biceps-jerks were present. Pressure over the exit of the sciatic nerve induced clonic movement in the entire leg; and pressure over the ulnar nerve at the elbow caused twitching of the fingers. The dorsal spine presented marked convexity. The sphincters were under control. Heart, lungs, liver, and spleen exhibited no abnormality. The family history was negative, except that a brother had been paralyzed. The patient had suffered an attack of rheumatism five years before coming under observation, with painful enlarge-

and attempts at movement induce pain. With the leg extended, the left lower extremity can be flexed only to an angle of about 30 degrees, when the patient complains of pain referred to the inner aspect of the knee. Abduction, which can be effected to an angle of about 25 degrees, is also attended with pain referred to the same situation. The leg can, however, be readily flexed on the thigh without discomfort. When, in addition, the thigh is flexed on the pelvis pain is again complained of at the inner aspect of the knee, and when the flexion is persisted in there is also pain at the hip-joint. With the thigh flexed, extension of the leg becomes difficult beyond a right angle, and pain is referred to the knee and the hip. Rotation of the femur is attended with pain, and is accompanied by a sense of resistance. The conditions of mobility are much the same in character on the right, but less in degree, and they are attended with scarcely any pain. Voluntary movement is fairly active in the lower extremities. The knee-jerks are greatly exaggerated, and abortive ankle-clonus is present on the left, but absent on the right. Percussion over the neighborhood of the sciatic notch excites clonic spasm of adjacent muscles, with imparted movement in the thigh, and to a less extent also in the leg. This phenomenon is present on both sides. The movements of the head are free and unrestrained. The posterior superior iliac spines are conspicuously prominent. While the spinal column shows a slight deflection to the right in the upper dorsal region, the ninth, tenth, eleventh, and twelfth dorsal vertebræ project conspicuously backward, and with the first three lumbar, also slightly to the left. When the patient sits erect, there is marked rounding and throwing forward of the shoulders, with convexity of the back. The grasp is deficient. The plantar reflexes are greatly exaggerated, vigorous irritation inducing active and at first clonic contractions, and slight irritation contraction of the tensor vagina femoris. Notably on the right the cremasteric reflex is especially active, as are all of the cutaneous reflexes. The patient complains most of generalized pain.

The accompanying illustrations convey a good idea of the patient's attitude.

It would appear, from the symptoms and the physical signs, that we are dealing here with disease not only of the vertebra and its appendages, but also of the spinal cord. The want of mobility both in the vertebral column and at the shoulder and hip joints would suggest the existence of some chronic hyperplastic disease in these situations. Such wasting as is present is universal, and may be attributed to the general impairment of nutrition, while the pains exhibit no localizing distribution. The irritability of the reflexes must be ascribed to involvement of the lateral columns of the cord, whether in inflammation or degeneration or secondarily to meningitis or to pressure it is difficult to state. The history of rheumatism may not be without significance from an etiologic point of view, as it has been thought to play such a rôle in other cases of the kind.

224 South Sixteenth Street.



Case of Rhizomelic Spondylitis.

ment of the joints. He denied venereal infection. He had used alcohol steadily, though not excessively, and tobacco moderately. He had also had an attack of dysentery 12 years previously. Examination of the eyes disclosed slight ptosis of the right upper lid, but no impairment of muscular movement. The pupils were equal and reacted promptly. No gross lesion of the fundi was found. There was high hyperopia.

On examination, Sept. 17, 1899, the following note was made: The patient is a tall, spare man, whose stature is reduced by his stooping attitude. The malar processes are prominent and the cheeks are somewhat sunken. The right palpebral fissure is narrower than the left; the right upper lid seems to droop slightly, and is somewhat deficient in motility. The irides appear to be equally active, although the pupils are not perfectly circular. The facial movements are active and symmetric. Mobility at both shoulder-joints is greatly impaired. The arms can not be raised to the horizontal,

VENESECTION IN PELLAGRA.—The withdrawal of two to four hundred grams of blood in acute exacerbations of pellagra has proved wonderfully effective in restoring the subjects to comparative health (*Sem. Méd.*). In two cases reported by Peracchia the subjects were on the point of being sent to an asylum on account of the rebellious psychic disturbances when venesection banished them instantaneously and completely.

URIC ACID AND THE SERIOUS RESULTS WHEN NOT ELIMINATED.*

BY M. S. MARCY, M.D.

PEORIA, ILL.

It is well that physicians are human, and subject to all the ills and pains that other mortals have to endure, in life. Pain not only excites our sympathy, but makes all nature akin. Were this not true, this subject as well as many others might have received but slight attention from the medical profession for years yet to come.

When a medical man or his own family are suffering with some mysterious disease, he will give the subject his closest attention and continue to investigate until his efforts are rewarded by success. Alexander Haig, London, to whom we are indebted for an investigation of the subject of this paper, states that he was a sufferer from migraine, and not until the year 1882, after years of suffering and investigation, did he succeed in finding relief. Through his experience and his publishing of "Uric Acid as a Factor in the Causation of Disease," others have been relieved and many more will be when this matter has been more fully brought to the notice of the profession.

The subject presents such a vast field for investigation that one is almost bewildered as to where to begin. In glancing back over past years of experience, many diseases that were mysterious and perplexing are now made clear to our understanding—if the theories of Haig, Garrod, Bishop and others are true, and we believe they are, judging from cases that have come under our own supervision during recent years.

The subject of uricacidemia is by no means a new one, but when I first read the theory that uric acid or urates are introduced into the system in such large quantities in so many of the foods and drinks used daily, it was a startling revelation to me, and I at once began to investigate with the intention of satisfying myself as to the truth of the theories. Many physicians are to-day unfamiliar with these uncontradicted theories, evidenced by the fact that they still continue to prescribe a diet which contains the largest amount of urates of any food known, namely, extract of beef, tea, coffee and cocoa, of which I shall speak later.

Uric acid and urea are so closely related that I shall speak of urea in this paper. Both are nitrogenous products, and yet each is distinct and separate from the other. However, in the healthy body they maintain a marked proportion to each other, and when this regular proportion is interfered with, something has gone wrong in the human economy.

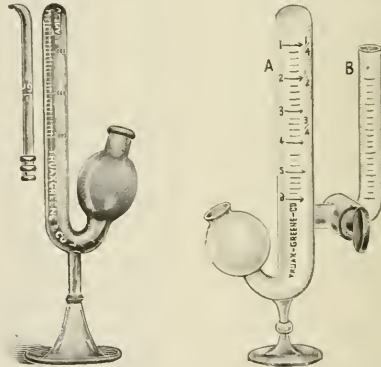
On decomposition, uric acid yields about 33 per cent. of its weight in nitrogen; it is feebly soluble, requiring 15,000 parts of cold or 1900 of boiling water to dissolve it. It is therefore rarely found in the urine in the free state; more often in the form of crystalline deposit—reddish sand; most often, however, it exists in combination as urates. We learn, from Purdy, that uric acid is dibasic, that it contains two atoms of hydrogen, which may be substituted by two atoms of a monad metal.

Urates containing but one atom of potassium, sodium or ammonium are acid urates, those containing two are neutral salts. The neutral salts of uric acid are readily soluble in water, while the acid ones are but feebly so. Therefore nearly all urate deposits consist of acid urate salts.

Uric acid crystallizes in the urine in rhombic, rectangular prisms, wedge and whetstone shape, of yellowish-red color, constituting, with its salts, the only sediments of the urine thus colored.

Urea or carbamid is a white, pearly, brilliant substance, and was first prepared synthetically from ammonium cyanate, by Wohler in 1828. It crystallizes in colorless, quadrilateral or six-sided silk-like prisms, with oblique ends, or when rapidly crystallized, in delicate, white needles which melt at 248 F.; they contain no water of crystallization, are permanent in the air, and soluble in cold water, the solution being neutral in reaction. With nitric acid urea unites to form nitrate of urea, which crystallizes out in octohedral, lozenge-shaped or hexagonal plates, which are less soluble in water than are urea crystals.

Uric acid corresponds to urea in its protein origin in the organism, but the seat of its formation has given rise to much discussion. Two different views are held on this subject, some writers claiming that it is formed in the spleen and liver, and excreted by the kidneys. This opinion is based on the fact that, in the normal condition, but a small amount of uric acid is found in the blood, while in gout, where excretion of the uric acid is diminished, it accumulates in the blood and tissues;



also after extirpation of the kidneys it continues to be formed and the secretion of uric acid is most abundant at the time of digestion when the liver and spleen are the most active. Other writers hold that the kidneys not only constitute the seat of excretion but also that of formation of uric acid. The experiments, however, of Schroeder and Minkowski, on birds and geese, tend to disprove this theory. They found, after removing the liver, that the urine only contained 2 or 3 per cent. of uric acid instead of the normal amount of 60 or 70 per cent. Ammonia was also increased to 50 or 60 per cent. instead of 9 to 18, the normal amount; hence, according to our present knowledge, it is fair to conclude that uric acid is formed chiefly in the liver. It is formed by the synthesis of ammonia and lactic acid, which, after the removal of the liver, appear in the urine in equivalent quantities, and the remnant of uric acid in the urine after the extirpation of the liver originates from xanthin and similar products. It is now a well-established fact that urea like uric acid is formed principally in the liver—with perhaps a little help from the spleen.

It was formerly supposed by some that urea also was formed in the kidneys, but the same experimenters, after removing these organs, found it was also formed just as rapidly and accumulated in the blood the same

*Read before the Tri-State Medical Society at Quincy, Ill., April 4, 1899.

as when the kidneys were in their normal condition.

In degenerative changes in the liver, such as yellow atrophy thereof, the urea in the urine is greatly diminished and sometimes absent. Noel Payton, in writing on the relation of degenerative changes in the liver to urea formation, says that two functions of the liver exist, the formation of bile and urea, and that they bear a direct relationship to each other.

Urea owes its origin in the economy partly to retrograde tissue metamorphosis, including the blood, and partly to splitting up of unassimilated nitrogenous principles of the food. Of the intermediate steps in this transformation but little is definitely known.

Thus the greater portion of nitrogen taken into the system in the way of food should be excreted by the kidneys in the form of urea. It is the most bulky single constituent of the urine, ranging in quantity, according to circumstances, from 300 to 600 grains in the twenty-four hours, in the healthy adult. Purdy tells us that the excretion of urea reaches its maximum quantity on an exclusive meat diet, much less on a mixed, and least of all on a vegetable one.

Variations in the quantity of urea excreted, in a measure constitute an expression of the changes in nitrogenous tissue metabolism, and as such possess definite clinical value. Thus, in acute fevers and inflammations, until the crisis of the disease is reached there is greatly increased elimination of urea. On the other hand, in chronic diseases, when tissue metamorphosis is retarded through malnutrition, the excretion of urea is diminished. Similar results follow in diseases involving the integrity of the liver. In Bright's disease, urea excretion is diminished in consequence of impairment of the structure of the kidneys, preceding, usually for some time, and during uremic attacks the excretion is markedly diminished, forming a valuable indication of the approach of this dangerous complication.

Mental and muscular activity hasten urea excretion by accelerating tissue waste, and hence this excretion is more active during waking than sleeping hours. The variations in the amount of exercise, the quantity and quality of food taken, atmospheric vicissitudes, the degree of activity of the other excretory organs render the relative and absolute amount of urea excreted almost as variable as the amount of water.

The amount of urea excreted by a healthy male, during twenty-four hours, is about 3.5 gr. per pound. A man weighing 160 pounds would excrete about 560 grains of urea, and as uric acid should be in relative proportion to urea as 1 to 33, the same man normally should excrete about 17 grains of uric acid.

The excess of urates excreted or retained not only attracts our attention to the patient's condition, but taxes our skill to restore the proper proportions and the normal excretions of these urates. The first thing then for the physician to do when called to see a case in which he suspects the urates are the disturbing cause, is to proenre the whole of the urine passed in the twenty-four hours, before medicine has been taken, and ascertain the amount of uric acid and urea being excreted by the kidneys, and approximate the amount of urates that have been taken with foods and drinks, by making close inquiry as to the kind and amounts taken daily. Then and not until then can the physician prescribe intelligently.

A great many processes have been proposed for determining the amount of uric acid and urea excreted by the kidneys. Heintz's method is perhaps as accurate and simple as any, for uric acid: Take 200 c.c. of

urine, and add to it 10 c.c. of hydrochloric acid, and let it stand for twenty-four hours in a cool room, then collect the precipitated uric acid crystals on a previously weighed filter and wash with cold distilled water. Dry the filter and uric acid crystals in a desiccator and weigh. By subtracting the weight of the filter, the result will be the weight of the uric acid in 200 c.c. of urine. If albumin be present, it should first be removed and the urine should always be filtered before applying the test, otherwise subsequent filtration is very difficult.

Urea may be separated from the urine as follows: evaporate, then add strong nitric acid in excess, keeping the mixture cool during acidulation; pour off the excess of fluid from the crystals of urea nitrate formed; strain through muslin and press between heavy filter paper, add to the dry product barium carbonate in excess, and add sufficient alcohol to form a pasty consistence; dry on a water-bath and extract with alcohol and filter; evaporate and filter on a water-bath, and set aside to crystallize. The result is nearly pure urea, plus the coloring matter of the urine.

The busy practitioner has but little time for extensive laboratory work, hence, for quickly determining the amount of urea in the urine, I have been well pleased with a little instrument devised by Dr. Doremus, of New York, which gives very satisfactory, approximate results. First have Knop's hypobromite of sodium solution prepared, by dissolving in 250 c.c. of distilled water 100 grams of sodium hydrate, then adding, after cooling, 25 c.c. of bromin. This solution may be kept on hand for a few weeks, in a dark-colored bottle. When it is desired to test a specimen of urine for urea, fill the bulb of the instrument with the solution, and by inclining the tube the long arm is filled to the bend at the bulb. By the pipette, 1 c.c.—ten drops—of the urine to be tested is slowly discharged up the long arm into the hypobromite solution. A rapid decomposition of urea takes place, the bubbles of nitrogen rising in the long arm, while the displaced liquid flows into the bulb, which serves as a reservoir for the overflow. In about fifteen minutes the decomposition of urea is complete, and the graduation on the long arm will indicate the quantity of urea in the volume of urine tested, the instrument being graduated. One c.c. of urine would represent about ten grains of urea to the ounce of urine. If the amount of urea is less than 10 grains to the ounce we understand that the patient is not excreting a sufficient quantity, and knowing that the relative proportion of uric acid to urea, that should be excreted by the normal healthy man, is 1 part of uric acid to 33 of urea, we can easily determine whether or not the patient is excreting the normal amount of uric acid, without resorting to the tedious process of testing for the latter.

As to the many disturbing manifestations of the human system by the retention of the urates, as noted above, a healthy man in middle life, whose weight is 160 pounds, should excrete about 16 to 17 grains of uric acid and about 525 to 550 of urea, during the twenty-four hours, and maintain the ratio of 1 grain of uric acid to 33 or 35 of urea. Just so long as he is careful with his diet, eating nothing to produce an excess of urates in the system, and continues to excrete the above quantity of urates, just so long may he expect to enjoy good health, barring contagious diseases and accidents. But, on the other hand, let this man begin to eat large quantities of meat, game, poultry, drink wine, beer, strong cider, tea and coffee, take his ease, and insufficient exercise to produce perspiration, and he will be in condition to develop disease which may take any one

of many different forms. Suppose he is exposed to a shower, his clothing becomes wet through, and he is seized with a violent chill followed by a high fever, severe headache, terrible pains in the muscles, and the different joints of the body; you will at once pronounce it rheumatism. This man has been eating and drinking foods and liquids containing a large amount of urates and acids, without taking exercise sufficient to produce perspiration. Nature has been busy excreting all that she possibly could, but has been unable to get rid of a large quantity of this, and hence has been compelled to store the greater portion of it in the liver, spleen, muscles, capillaries and, in fact, anywhere that a convenient dumping-ground could be found. Getting the clothing wet, the capillaries, already filled with urates, can not then resist the cold clothing, the surface of the body becomes cold, all perspiration is checked, acidity of the blood is raised, and as a result he is seized with a chill, followed by a high fever. The latter diminishes what little alkalinity there may be in the blood and, as we have just seen, the checking of the secretions of the skin has stopped the excretion of acid by this route, and forced it back into the circulation; then when we remember that the man's system is full of acid from the wine and beer, it is no wonder that this strong tide of acid sweeping into the blood overpowers the slight tide of alkalinity and drives the urates into any tissues that may have the least alkalinity—usually to the joints. As this foreign substance encroaches on the lining membrane of the joints and forces its way in until every space is occupied, the membrane becomes irritated, inflamed and congested, circulation becomes obstructed, and the tissues swollen until the word "torture" entirely fails to express the agony the patient is called on to endure. And, as if Nature was not yet avenged for the outrage heaped upon her, headache, suppression of urine, and deposits of urates in the muscles of the body, including those of the heart, follow, each and all of these adding their share of torture.

A severe headache usually accompanies the outset of this disease, while the blood is loaded with uric acid which causes a slow, high-tension pulse, but as soon, however, as the acid drives the uric acid from the blood to the joints and other tissues, the headache subsides, the urine may be suppressed by the capillaries of the kidneys being full of urates, thus preventing the escape of the fluids. As already stated, there are other fibrous tissues in the body where the urates are prone to take up their abode; when in the lumbar fascia, lumbago results; when in the fascia that forms the sheaths of great nerve trunks, sciatica; and when in those parts that support the various coats of the intestinal walls, the name is colic. The fibrous tissues in the pelvic organs, especially of women, may be attacked.

But there are still other fibrous tissues that are favorite seats of these urates, and in parts where perhaps they can do more damage than in any other part of the body, namely, those of the heart. Foster, in his work on physiology, claims that muscles become acid as the result of contraction, and if in some region of the cardiac muscles in proximity to the heart's fibrous investment, the products of functional activity and contraction are not quickly removed, the muscles and the adjacent fascia may have their alkalinity so far reduced as to form foci in which the uric acid circulating in the blood becomes less soluble and more easily retained. Such retention gives rise to local irritation, which still further reduces the local alkalinity, more uric acid is deposited, and so on until a considerable area of inflam-

mation going on to proliferation of fibrous tissue and scar formation is the result. When this occurs in the fibrous tissues of the heart, we have endocarditis and pericarditis resulting. But this is not all, as in the joints we find that the heat and friction of exercise determine which ones shall be the least alkaline, and hence get the largest share of uric acid, so with the heart—the fibrous tissues of the valves may and generally do suffer from friction and percussion and are rendered the least alkaline of all the fibrous tissues of the heart at a time when there is a general fall of alkalinity. When the heart is in this condition, and extra exertion or strain on it—e. g., the patient rising up in bed, or getting up, or sitting up—will give rise to local irritation on the opposing surface of the mitral or aortic valves, may diminish the local alkalinity, and cause a local precipitation of uric acid and consequent irritation; this irritation may be repeated again and again, until what were at first scarcely visible points of irritated connective tissue, come to form well-marked nodules and scars. Such a small, local irritation in the mitral valve is carried on and on by a frequently recurring uric acid irritation until the whole valve is reduced to the condition of a thickened scar, and we have mitral constriction.

It has been stated above that uric acid in the blood obstructs all the capillaries and raises blood-pressure. If this be true, then it follows that this pressure must throw increased work on the left side of the heart, first on the aortic valves, and thus during systole on the mitral valves also, owing to the increased resistance to be overcome, so that the valves of the left side are most exposed to injury by friction and percussion, just at the very time when there is an excess of the irritant uric acid in the blood, ready to be precipitated on them should the heat of action cause them to for a time lose their normal alkalinity; once a spot has thus become invaded by uric acid, the irritation is always liable to be kept up and repeated until a serious and extensive lesion has been produced.

In acute rheumatism, the liability of the endocardium to friction, percussion and strain accounts for the greater frequency of endocarditis as compared with pericarditis. As the result of thickened, scarred valves of the heart, the latter becomes enlarged, weak, and unable to force the blood to the extremities or to the kidneys; the extremities become cold, and perhaps gangrenous: the watery portion of the blood accumulates in the tissues instead of being excreted by the kidneys, general anasarca ensues and death closes the scene.

I have endeavored to portray one of the serious results of taking into the system and retaining an excess of urates. I can not refrain from raising my voice against introducing urates into the system in large quantities by taking into the stomach meat, especially extracts—which many physicians prescribe—containing 63 grains of urates to the pound; tea, 175; coffee, 50, and cocoa, 59 grains to the pound, as well as many other foods and drinks containing a less amount.

It can be readily demonstrated that man was not intended for a carnivora. He can not form ammonia to neutralize the acid in the system, neither is his blood so strongly alkaline as that of the dog and other carnivorous animals. Therefore, if we would be happy, cheerful, and enjoy the best of health, we should leave out of our diet all foods and drinks containing a large amount of urates, and live on a vegetable, cereal, fruit and milk diet.

One word in regard to treatment of rheumatism and

we close. When a case is seen early, before the urates have attacked the joints and all fibrous tissues so acutely, salicylate of soda, salicylic acid from *ol. gaultheriæ* and various salicylic compounds, have all proved more useful in my hands than any other remedies. But after the urates have entered the joints and fibrous tissues of the muscles, no medicine that I have ever found as yet will remove them in less than four to six weeks or until the acute inflammation subsides by limitation.

CURIOUS FACTS YOU FIND IN GENERAL SURGERY.

BY LUCIEN LOFTON, A.B., M.D.

PRESIDENT SEABOARD MEDICAL ASSOCIATION OF VIRGINIA
AND NORTH CAROLINA.
NORFOLK, VA.

INJURY TO NEGRO'S HEAD.

Not many months ago I was called into the country to see a negro who had been chopped in the head with an ax "during a friendly" bout. I found a seemingly inanimate form, lying prone on the ground, and oozing leisurely from a long wound on the side of the head and face were several streams of blood. The man had received the cut three hours before and nothing had been done to check the flow of blood. Negroes are a peculiar people. Under no circumstances would one have helped this poor fellow, from the fear of getting "mixed" up with the courts, although they were perfectly willing to look on and speculate on the final outcome of everything connected with the case. Upon a closer examination I found that the external temporal and the transverse facial arteries had been entirely severed, besides a number of peripheral arterial twigs. The outer and inner tables of the skull had been crushed, ranging from the upper portion of the temporal bone in an oblong direction, barely grazing the curvature of the malar bone, and covering altogether a gash measuring about $4\frac{3}{4}$ inches. Internally the middle meningeal artery was severed. While the meninges suffered greatly. I suppose I removed one or two ounces of brain matter, which, owing to compression and laceration that existed, oozed quite freely. The inner table of the skull had been badly shattered and I removed several spicula of bone. The middle meningeal gave me a little concern at first, but was finally controlled by "plugging." How the lateral sinus was lost I suppose applies to a general distinction I make on occasions of this kind, i. e., that there is a special Providence who looks after babies, fools and drunkards. I used plain boiled water while preparing the toilet. A No. 1 fiddle-string was the ligature chosen for suturing the brain covering, while the skin flaps were closed by an uninterrupted suture, with a No. 2 catgut. At the extreme lower portion of the wound, which, when measured after having been closed, fell a fraction short of five inches, I inserted a few strands of gut. I did not even shave the parts surrounded by hair. The man's skin certainly appeared dirty and greasy enough, while the blood-matted hair bore every evidence of being otherwise than aseptic. I applied over the wound a piece of sterilized gauze moistened with a phenol-camphor preparation I use, comprising by weight equal parts of gum camphor, and crystallized phenol, the same being reduced to a liquid by trituration. Over this a bushy piece of plain sterilized gauze was placed, and an external bleached-cotton bandage. The man was put to bed in somewhat of a weakened condition. The next twenty-four hours was passed pleasantly, without a rise

of temperature, and practically no soreness. In forty-eight hours he was on his feet, and in twelve days he had resumed his position as a saw-mill hand. On the fourth day I gave the wound the second dressing. It was clean and free from edema, and had no odor. I dismissed him with the third toilet, and his recovery was without the slightest interruption. During the process of the initial dressing I administered, hypodermically, $\frac{1}{4}$ gr. of morphin sulphate, in connection with $\frac{1}{60}$ gr. of strychnin nitrate, besides a little brandy, which was most graciously received.

I watched the man carefully for seven months and, seeing him only about a fortnight ago, he said he had never had the slightest impediment of any description, not even a headache or a twitching eye. Owing to the destroyed bone-tissue the full internal relationship existing between the layers of skull have never been replaced, and on palpation a well-marked indentation is felt.

This is a remarkable instance in general surgery, and while the final result is peculiar indeed, it also in a degree demonstrates what a lack of unnecessary probing and non-meddling will accomplish. If this had been a white man, no doubt he would have died. Just why such recoveries take place in negroes is a psychologic study.

There is one thing I wish to call to the attention of the medical profession, and that is, where you have a lowered vitality resulting from shock and especially hemorrhage, and where it is inconvenient or impossible to administer a saline injection, use small doses of strychnin. I have seen many lives sacrificed by giving large doses of this.

BROKEN RADIUS AND UNCONSCIOUS OF IT.

A negro laborer came to my office and, exhibiting his forearm, said that he believed he had "caught cold" in it and it had resulted in rheumatism. On examination I found the radius entirely separated and got a distinct crepitus. I called his attention to the characteristic click. "Well," said he, "I believe I do remember while sawing wood about ten days ago that my arm gave way." From that time until he came to consult me, he had steadily held his position as "sawyer," working twelve hours a day with little or no inconvenience. Continual usage had made it sore and that is why he came. His parents had died with pulmonary consumption, also a sister and brother. His personal history might have been syphilitic, but owing to his disconnected story I left the question open. His long bones elsewhere were normal, as also were the short and flat ones. No specific history of syphilis was noted. There seems to have been a transverse fracture which was complete. He denied any fight, fall, wrench, or trauma. I tried in vain the suspected friability of other bones, but found in every one evidence of perfect soundness. His general condition was good, and to all appearances he was a fine specimen of manhood. No valvular trouble existed, and no lingering diseases of any kind were elicited. On manipulation little if any pain was evinced. I adjusted the parts, and immediately applied three 1-inch strips of adhesive plaster around the forearm. This held the bones firmly in place. Next I applied a snugly-fitting veneer roller splint, and throwing around this additional strips of plaster, I ultimately made the splint more secure by an outer, spiral cotton bandage. I purposely avoid a "pistol-handle" splint for cases of this kind. It may be warranted in some rare instances, but Nature has to do a great deal after you remove it. I speak from practical experience, for I have personally helped to

swell the list of reported Colles' fractures. Many use plaster-of-Paris dressing, which I admit is a very nice way to put up a fracture of this kind, but it has its defects by being hard to regulate flexion and extension of the fingers, while the thumb fares better than its neighbors. Then again it is quite difficult to remove, in case of accident or for a change. All fractures should be kept in sight of the surgeon if possible. Sometimes nothing can be substituted for the plaster-of-Paris splint, and here they are useful. Any one trying a simple splint on Colles' fracture will be surprised at the result.

I dismissed the patient in twenty days. In five thereafter he again began the task of sawing down trees, and he reports his right arm as good as it ever was. The only internal treatment I gave was a U. S. P. lime-water to be drunk in place of all other water for thirty days. There was no "silver fork" deformity, no pain at the seat of injury, or no perceptible displacement of the bones. All in all, this was very interesting and unusual, and up to this writing, which covers a period of months, no recurrence of the trouble has been noted.

CORNU CUTANEUM.

In the early part of 1897, a man of about 70 years, came to me, presenting rather a peculiar growth on the upper portion of his face, immediately in front of the right auricle. He stated he had had it on the face for nearly a half decade, but by an occasional paring the growth was kept in abeyance. No trouble or pain had arisen as a result of the excrescence, and its being unsightly was the cardinal excuse for wanting it removed. I removed it under cocain anesthesia, curetted the core, and brought the flaps in approximate relation. The base was in close proximity to the temporal artery. The wound healed kindly within a week, but I saw my patient some three months afterward, and springing from the original core was another horn. This was removed together with all horny cells, which resulted in a complete enucleation.

Sailors are especially prone to cutaneous horns, although this man had never followed a seafaring life. The less pigment you find in people, the more susceptible they are to all manner of cutaneous affections. This applies to verruce, various dermal tumors and hypertrophies generally. Unless you thoroughly remove every vestige from which cutaneous horns grow, they will return and often multiply, much to your and the patient's chagrin.

Practically very little is written regarding the pathology of cornu cutaneum. Hyde, among others, claims horns are composed of more or less concentrically disposed epidermal cells, with nuclei as a rule. They may result from friction, pre-existing lesions and heredity, though the latter is a mooted question. The tissue is as genuine a horn growth as you find in the lower animal, notwithstanding many contrary opinions.

SHATTERED HUMERUS AT THE LOWER THIRD, INVOLVING THE JOINT.

Two years ago a mother, attended by a delegation of relatives, friends and acquaintances, brought to my office a white boy about 10 years of age, with a broken and shattered humerus at the lower third, which involved the elbow-joint. The boy had received the injury while playing, and attempting to scale a high plank fence he lost his balance. The bone was badly broken, and when I made the initial examination, it had been done three weeks. The family had waited for the inflammation to subside, as the mother very evasively remarked. Spiculae of bone almost penetrated the outer skin-covering, and were making good headway for an external opening when

I first saw it. The next day I operated, with the assistance of two colleagues. On cutting down I removed several pieces of chipped bone, and during this process a dark bloody exudate ran freely. The portions of bones already noted, that appeared immediately under the integument, were removed easily with bone forceps. The entire shaft of the humerus was traversed by considerable inflammation, but the lower surgical third was more or less involved in the fracture, and made it necessary to do some wire suturing. Although the joint was involved to the extent of partial ankylosis, due to a deposit of fibrin resulting from the trauma, it was carefully opened, washed out with warm sterilized water and closed, without drainage. The same applies to the fractured humerus. Both places healed by primary intention, without any trouble, and in the course of a month the splint was removed and the member allowed perfect freedom. A slight ankylosis existed for some six or eight weeks, but this was easily reduced by repeated hot-air baths at a temperature of 300 F. The boy was seen six weeks ago, and his arm appeared perfectly sound, with little, if any, sign of the operation remaining. Chloroform (Squibb's) was the anesthetic administered, and only one-half ounce was used, the operation being completed in eighteen minutes.

In closing I wish to make some comment on opening joints. With regard to joints treated surgically within the past fifty years, a great deal of importance has been given the propriety of freely operating in and about articular surfaces. I think each year brings us nearer to the point of confessing that joints may be invaded with impunity and with the knowledge of no ill results. Such at least has been my experience. A good many orthopedic men to-day decry the reckless manipulation of joint surfaces, which I will concede is orthodox surgery; but I think the reason has been, not so much on account of the mere invasion of joints, but because such corrosive fluids have been used hereabouts and within them, that bad results have obtained. It is bad surgery to use any corrosive antiseptic in an articular surface. Ninety per cent. of carious sockets will recover by injecting sterilized water, and at the same time you will have fewer ankylosed joints to deal with. I believe firmly in the limited value of antiseptic surgery, but it is carried too far.

230 North Park Avenue.

PATHOLOGIC CHANGES OCCURRING IN THE UNOBSTRUCTED NOSTRIL IN CASES OF DEVIATED SEPTUM.*

BY E. LARUE VANSANT, M.D.

Professor of Diseases of the Throat and Nose, Philadelphia Polyclinic; Physician to the Throat, Nose and Ear Department of the Howard Hospital, etc. PHILADELPHIA.

When only one of the nasal chambers is obstructed by a notable deviation of the septum, the immediate effect produced is a relative increase in the amount of respired air passing through the unobstructed nostril. This increased respiration through the unobstructed nostril causes increased functional activity of the mucous membrane and deeper structures, in order that the inspired air may be properly warmed and moistened. Such increased functional activity necessarily causes hyperemia of the parts, particularly of the tissues constituting the middle and inferior turbinal bodies. The increased blood-supply, together with the enlargement and pro-

*Read before the Eastern Section of the American Laryngological, Rhinological and Otolological Society, Philadelphia.

liferation of the over-acting mucous glands and cells of the deeper tissues, soon leads to enlargement from hyperplasia of the tissues involved, which may be regarded as a true compensatory hypertrophy. This change is first and most markedly shown in the tissues opposite the greatest concavity of the deflection, which in the majority of cases is on a level with the lower turbinal body. Such hypertrophy may continue so far that it becomes excessive, causing considerable obstruction of the nostril. This compensatory hypertrophy of the tissues, through increased activity of function, is not peculiar to the nasal chambers, for it has been observed in many other organs of the body, as, for instance, the marked enlargement of a kidney after the destruction of its fellow. Such tissue, however, by reason of its hyperemia and excessive functional activity, and, when in the nasal chambers, its exposure to mechanical irritation from dust, vapors, etc., is peculiarly liable to the inflammation. These inflammatory changes cause an increase in the interstitial connective tissues, with a gradual destruction of the glandular appendages, which eventually leads to an atrophy of the affected parts. This atrophy is usually first noticeable in the lower turbinal, and continues until the affected nostril is much widened in its lower and middle meatus. This increasing atrophy and lessening functional capacity of the lower turbinal causes a greater demand on the rest of the glandular tissues of the affected chamber, and the middle turbinal soon commences to enlarge and extend downward in the effort to fulfill the great demands on its function. The inflammatory changes, before noted, in the lower turbinal, now, in turn gradually occur in the middle turbinal. Its anterior end, being particularly liable to irritation, frequently becomes granular and polypoid.

The mucous membranes lining the accessory sinuses are from the first affected by the increased function and become hyperemic, irritated and inflamed. Sooner or later, as the various inflammatory changes take place, the nasal chamber becomes septic. This usually occurs after the atrophy of the turbinals is somewhat progressed. The parts then present a picture of marked atrophy of the lower turbinal, atrophy associated with polypoid degeneration of the middle turbinal and mucopurulent discharges from the accessory sinuses. Thus the pathologic changes in the unobstructed nostril, in a case of marked deviation of the septum, may be divided into three stages. The first stage, that of hyperplasia of the tissues from over-function, is a compensatory hypertrophy; the second is that of atrophy from inflammatory changes, and the third that of atrophy associated with sepsis of the nasal chamber and accessory sinuses.

When the septum is but slightly or moderately deflected, the pathologic changes cited are present in a much less degree, for both nostrils still respire, although not to an equal amount. In such moderate deflection a slight compensatory hypertrophy of the turbinals of the more open nostril may be the only pathologic change noticeable.

1929 Chestnut Street.

ELECTRIC TREATMENT OF NEURALGIA.—Velasco describes (*Revista de Med. y Cir. of Havana*) several cases of severe neuralgia of the lower-jaw, etc., cured in a few sésances of galvanization with the positive pole applied to the painful region. In one case the pain was so severe that speaking and mastication were both impossible, swallowing very painful, the escape of saliva from the open mouth continuous. One treatment produced a great improvement and cure was complete in 3 months.

DILATATION OF OPHTHALMIC VEIN: CURE.*

BY R. ORTEGA, M.D.

Chief Surgeon Mexican International Railway.
CD. PONFERRIO DIAZ, COAHUILA, MEXICO.

I will give a brief resumé of an operation which I was called on to perform in a case of dilatation of ophthalmic vein, and which, to my gratification, proved successful.

My patient was a resident of Eagle Pass, Texas, a woman of 32 years of age, married, vigorous, and the mother of five children. The first of these died at the age of 5 months, of hydrocephalus, the second at 2 months, of "fever," and the third at 17 months, also of "fever." The fourth and fifth, both girls, aged respectively 4 years, and 5 months, are now living and in good health.

The patient, referring to the illness in which my services were solicited, stated that on Dec. 21, 1898, she was attacked by la grippe; from this date a humming began in her left ear; Jan. 1, 1899, she noticed that the sight of her left eye was becoming weak, and shortly succeeding that time the affection of the conjunctiva of that eye commenced.

I first saw her on January 18, and after obtaining from her the data given above, I proceeded to the thorough examination which the case demanded, finding a noticeable exophthalmic tumor of the eyelids and neighboring regions, accompanied by immovables and livids, with the conjunctiva strongly congested, and forming a burning wheel between the eye and the lower eyelid, which was so depressed as to prevent its elevation. The tension, the cornea and the iris were normal. (I did not make the ophthalmoscopic examination, because I had not the instruments with which to do so with me, nor, indeed, did I intend doing so afterward, because of the patient's delicate condition, and the lack of proper surroundings.) This, in addition to the very intense pain which she complained of, stating that it extended to the whole side of the head and face, and even to the nape of the neck, explained to me the insomnia, want of appetite, etc., from which she was suffering, and convinced me of the existence of a tumor on the back of the eye.

Suspecting that it might be a recto-ocular abscess, I proposed an examination under the influence of chloroform, to which, however, she would not accede. I then prescribed iodid of potassium, two grams daily, and bichlorid of mercury in lukewarm applications, myself administering an injection of morphin with atropin.

On the next day, the 19th, her condition was worse. I was then compelled to say that if they persisted in refusing to agree to the operation I had proposed, I would feel it incumbent on me to withdraw from the case. They agreed, therefore, to come to some conclusion in the matter within twenty-four hours. In the meanwhile I prescribed a continuation of the treatment then being tried, with the addition of two portions of chloral of two grams each, to be used in case the pain became intolerable. On the 20th, Dr. Duggan administering the chloroform, I introduced the bistoury in the external angle of the eye, coating the surface of the socket as far as the cuspis (caruncle), which resulted in the flow of about sixty grams of blood. Next I made a careful examination with a blunt stiletto, but found no pus, and then made some shallow incisions in the conjunctiva, ordering the continuation of the former treatment.

*Read before the American Academy of Railway Surgeons, Omaha, Neb., Oct. 12-13, 1899.

When the patient recovered consciousness, she expressed great relief, which improvement was maintained for two days, when her condition became worse than it had been before. Suspecting, then, a venous dilatation, and, also, as the vision of that eye was lost, a hypopyon having appeared with the additional symptoms of sympathy in the other eye, I proposed enucleation, which was agreed to.

On January 30, Dr. Duggan again administered the chloroform, and I availed myself of the Volkman spoon No. 1, to load and overset the ocular globe, because the nippers failed to grasp either conjunctiva or the tendon which was tearing it, and the spoon enabled an easier enucleation. I next proceeded to the examination of the cavity, and ascertained that there was dilatation of the ophthalmic vein of about one centimeter. I then abandoned the idea I had of binding the vessel that formed the aneurysm, as, having been prevented from giving the other treatment proposed by the authors, I was forced to leave matters as they were, which I particularly regretted, because, not only would the dilatation increase greatly through need of compression, but also the troubles consequent thereupon would follow, and probably result in the need of a further posterior operation. Fortunately, however, both for my patient and myself, I remembered the advice of Dr. G. Laurens, when the lateral breast comes open when ascending the mastoid prominence, and this seemed to be a similar case, notwithstanding the fact that he referred to the opening of the breast by accident, while in this instance it was through intent, besides which I had the advantage of being able to compress it by reason of a bony surface behind the vessel. The resolution was quickly followed by the operation. With a compress of bichlorid gauze in my left hand, and the spoon in my right, the dilatation was pulled out, producing a copious flow of blood. This, however, did not alarm me, as I expected and was prepared to control it, and did immediately, by compression with the gauze I held in my left hand. I immediately requested Dr. Duggan to assume charge of the compression, while I proceeded to thoroughly clean the operated part. I then raised the level of the compression above the borders of the orbit, placing over these a silver dollar to equalize the pressure at the center, and admit of free circulation in that locality. I then placed a thick wrapper of cotton and antiseptic bandage thereon.

After twelve days I removed these appliances, which had been retained all the while without producing any disagreeable odor, through my having kept them dampened with a solution of formol. There was a sudden hemorrhage, caused by the tearing of some fleshy blood clots. I applied a little gutta with fresh wrappers of gauze and cotton to the outside, which I held in place with a tight bandage. On February 17 I again removed this, without further flow of blood, applying a little gutta as before in the socket of the eye, with a gauze covering, but without a compressing bandage.

On February 20 I was again called in, the patient complaining of a slight pain, which she feared would increase. With the object of relieving this, and hastening the cicatrix retraction, I prescribed the insertion of fifteen to twenty drops of a weak solution of tannic acid and cocain. On the 28th I found everything progressing excellently, the patient informing me that she had discontinued the use of my last prescription after two days, because she had ceased to experience the trouble. Not a drop of pus was found after the removal of the bandages.

There remains at present, as the only trace of the severe illness, a slight humming noise in the ear, which

she states has already greatly diminished, and during a good portion of the day disappears entirely, enabling her to sleep without difficulty.

As another incident, which may be of interest, I would mention the following: On Oct. 17, 1896, two partners and myself were called into consultation with Dr. Duggan, who was attending a brother of the patient referred to above. Having discovered that he was suffering from venous varices of the floor of the mouth, we suggested intervention, to which the family would not agree. He died the following day of asphyxia. He was 32 years of age.

Deductions.—It is undoubtedly true that the members of this family are predisposed to vascular dilatations. It is probable that the dilatation of the vein was somewhat lengthened in the interior of the skull, which produced the humming of the ear mentioned before. The cure was doubtless due to the suppression of the more extended part of the vein, and the formation of coagulated blood in the balance of the dilatation, and the presence of the gauze in the open extreme, and the lengthening of the coagulation to the walls of the vessel, which was proved by the complete cessation of the humming noise.

SOME OF THE ASPECTS OF RENAL INADEQUACY FROM A NEUROPATHIC STANDPOINT.*

BY H. A. TOMLINSON, M.D.

SUPERINTENDENT ST. PETER STATE HOSPITAL,
ST. PETER, MINN.

The subject of renal inadequacy, a term first used, I believe, by Sir Andrew Clark, has become of more and more importance as we have grown increasingly familiar with the effects of autointoxication, and have learned to recognize how great a part the retained products of metabolism—especially those which result from incomplete retrograde change—play in the inception of diseased conditions heretofore attributed either to other causes or looked upon as arising *de novo*. This condition of the kidneys, I believe to be represented in the inability of these organs to completely eliminate the waste products of the body, either because they are themselves the seat of disease or because the products of destructive metabolism come to the kidney in such form chemically, as to be unable to pass through the renal epithelium or to complete their elaboration into those compounds which can be secreted and excreted by the functional portion of the tubules. There are many ways in which this inadequacy can be brought about, but let us first consider the function of the kidney and its relation to the welfare of the rest of the organism. If we accept the current teaching of physiology as to the structure of the epithelial lining of certain portions of the tubule, the kidney is a secretory as well as an excretory organ and has something to do with the elaboration and reduction of the compounded elements which are brought to it by the blood. Next to the brain, the kidney receives a proportionately larger and more direct blood-supply than any other organ, and the blood-vessels are so arranged in their final distribution as to expose the largest possible surface in contact with the functional part of the organ. It receives its nerve-supply from the same sources, both ganglionic and spinal, as the other abdominal viscera, and is surmounted by a glandular structure of whose function we know nothing accurately,

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except that in its blood and nervous supply it is intimately associated with the kidney. It is also worthy of note that the suprarenal body receives, as a part of its nerve-supply, filaments from the pneumogastric and phrenic nerves. Finally, it is important to remember that each pyramid, with the cortex above it, is practically a separate kidney, capable, so long as its blood-supply is not cut off, of performing all of the functions of the organ as a whole. Like the brain, the kidney has a function which is absolutely essential to existence, and this function can not be vicariously performed except to an extremely limited extent. Besides, from the nature of the secretion and excretion from the kidney, any interference with the normal performance of its function will necessarily have a more disastrous effect on the rest of the organism than would disturbance of any other one of the vegetative processes. Furthermore, the intimate association of the kidney through its nerve-supply, not only with the abdominal viscera, but also with the more directly vital processes of circulation and respiration, shows how important its function is to the general welfare of the organism. Without going into the details of the chemistry of the urine and the nature of its constituents, it suffices for my purpose to state that, in both health and disease, those constituents whose elimination is most essential to the welfare of the organism appear in combination with uric, phosphoric, sulphuric, and hydrochloric acids, and as urea representing nitrogenous waste, the relative amounts of these substances eliminated during the twenty-four hours, and their proportion to each other, indicating not only the degree of functional activity of the kidneys, but also the nature and completeness of the changes going on in the organism as a whole. When we take into consideration the intimate association of the function of the kidneys with the vegetative organs, as shown by their intimately related nerve-supply, and indirectly by their association with the general nervous system, we can realize how important the function of these organs is to the welfare of the general organism, and conversely how they in their turn must necessarily be subject to disturbance of their function and normal rate of activity by extra demands resulting from derangement of some one of the vital functions due to visceral disease, excessive somatic change resulting from overwork or overstrain, involvement of the nervous system through impaired nutrition or excessive mental activity, or all of these causes acting together to interfere with metabolism and render incomplete the formative process in the products of retrograde change which it is the function of the kidneys to eliminate. It is a well-known fact in physiology that the activity of the function of the kidneys is greatly influenced by the amount of blood circulating through them, and that the amount of blood in them may be so considerable as to materially increase the size of the organ; while at the same time the tension of the blood-vessels may be so great as to seriously reduce the functional activity of the kidney or check it altogether. The same result may also be produced by vasomotor paresis. It has also been shown experimentally that the functional activity of the kidney may be checked or arrested by disturbance in the nervous system, without the presence of any diseased condition in the kidney. The aberration and sometimes abeyance of function in the kidneys as seen in hysteria, is well known, in some cases the secretion of urine being completely suppressed for considerable periods, while in others there will be polyuria, and both of these conditions occurring without apparent physical cause adequate to produce them, unaccom-

panied by any of the symptoms usually associated with anuria or polyuria.

Two individuals, apparently equally healthy, may sit down to a hearty meal, each one eating of such dishes as he enjoys. Both may be called upon immediately afterward for some unusual exertion, either mental or physical. The one will have an attack of acute indigestion, accompanied by the usual symptoms; the other may or may not have these symptoms, but he will have others. He may become stupid, suffer from intense headache with conjunctival injection, slow pulse with flushed face and body surface, respiration more or less labored. Mentally the patient will be confused, irritable, restless, unable to think or apply himself. After a time he falls into a heavy sleep and awakens comparatively free from discomfort, with the exception of some dizziness and soreness of the scalp. Instead of this symptom-group, there may be another. In the midst of some occupation he will become dizzy, the action of the heart will become rapid and feeble, the surface of the body become pale and covered with sweat, and the patient tumble over in a syncopal attack. He may recover rapidly from this or remain weak and confused for several days; the heart's action continuing rapid and weak, and the pulse feeble and of low tension. In either case there will be, during the persistence of the symptoms, diminution of the secretion of urine, and their disappearance will be accompanied by copious urinary discharge. The examination of the urine will possibly disclose the presence of albumin and, microscopically, a few leucocytes, but usually all that is found is an increase in the amount of phosphoric acid and sulphates, with diminution in the quantity of chlorids and urea. There may or may not be an increase of indican. If the symptoms disappear within forty-eight hours, and the constituents of the urine assume normal proportion, it is safe to assume that we are dealing with a temporary form of renal inadequacy, resulting from imperfect performance of the function of the kidney on account of renal congestion, or engorgement following vasomotor paresis. It can be easily understood how the blood, overloaded with the products of retrograde change, some of which are not completely reduced, will act as an irritant to the general nervous system, producing either vasomotor stimulation with increased tension, or paresis to be followed by blood stasis, and either of these affecting the kidney with its relatively large blood-supply, thus interfering with elimination and adding to the intoxication. If the kidney structure is intact, there will be a gradual resumption of function with increased elimination. But should the kidney be the seat of degenerative change and the vitality of the organism lowered by disease, the effect of intoxication will be more profound, the interference with the function of the kidney greater, with the resulting convulsion followed by paralysis, from which there is slow recovery; or there may be, instead, coma, vasomotor paresis, dilatation of the right heart, pulmonary edema and death. In some people these outbreaks are occasional and short-lived, but there are many others in whom they are of frequent occurrence. In this class of cases the renal inadequacy is habitual and accompanies any unusual or extended effort, either mental or physical, but especially mental. The patients do not seem to be so much the victims of nervous instability as lack of nervous force, with a limited potentiality for sustained effort. In these people the renal inadequacy may be said to be congenital. I have never had an opportunity to follow such a case to the end as yet, because in all with whom I have been familiar I have either

failed to get a post-mortem or other conditions have existed which have modified the changes found in the kidney. Reasoning from analogy, however, such patients should present a purely atrophic change with shrinkage of the kidney, destruction of the epithelial lining of the tubules and capillaries, but no increase of connective tissue; approximately, the same conditions that exist in the so-called granular kidney, which to my mind represents the congenitally defective kidney. According to West¹: "Granular kidney is a disease of great importance on account of its frequency—a frequency which is by no means adequately recognized. Post-mortem it is often discovered when not suspected. It is often in itself a cause of death, even of sudden death, and it often explains why death has happened in other diseases which otherwise might not have proved fatal. During life it is often discovered unexpectedly if looked for, it is often overlooked if not suspected, and it often explains a case which has been a puzzle until granular kidney gave the key. For all these reasons granular kidney is not only one of the most interesting of diseases but also one of the most important." My own experience coincides with this declaration, but my observations suggest a different explanation of the origin and variations in the extent and nature of the changes in the kidney. The probability of primary defect in the structure of the kidney is shown in the persistence of lobulation in the kidneys of the adult. It is quite a common occurrence in our post-mortem work to find lobulated kidneys, and in some the lobulation is as marked as that usually found in the calf or pig; and further, the cortex of these lobulated kidneys is disproportionately thin. What the exact histologic difference between such a kidney and a perfectly developed one is, it is practically impossible to determine, because it would be only by the merest accident that an opportunity might occur to study such a kidney free from gross secondary changes. Another argument in favor of the existence of primary renal inadequacy of varying degree is the fact that while the conditions of life are practically similar for all people subject to the influence of a uniform environment, only a comparatively small number out of any given group will suffer either from simple renal inadequacy or the more conspicuous forms due to degenerative changes in the kidneys. Only a small proportion of the cases in any given epidemic of one of the exanthematous diseases suffer from nephritis, and they are not necessarily the severe ones. Even those conditions resulting from the exigencies of modern civilization, with the strain of industrial and social competition, which are reckoned as the most common causes of degenerative disease of the kidneys, while practically universally operable, really disastrously affect only a comparatively small number of those who are subject to their baneful influence. Again, in the form of renal inadequacy which results in puerperal eclampsia, how few women there are out of the whole number confined during a given period who will have convulsions! It would also be interesting to know the relative number of deaths following puerperal convulsions, occurring among primiparæ and multiparæ, and the number of cases in each class in which the kidney showed evidence of antecedent degenerative change. From an analysis of the cases coming to post-mortem in this hospital during the past seven years, I have found that next to the brain the kidney is more often and seriously involved in the degenerative process than any other organ, and that the extent of the degeneration in the kidney as well as the persistence of

lobulation is always in proportion to the same change in the brain; also that the more marked the defect in the brain development in the individual, the earlier will be the changes in the kidney and the more certain the patient is to suffer from the effects of renal inadequacy. Again, the law governing the form in which the degenerative process will be manifested, as stated by me in another connection², applies equally well and explains why in one case we find a purely atrophic change involving the functional portion of the kidney—in another a structural change resulting in connective tissue increase primarily, with involvement of the functional portion of the kidney, secondarily. This is why, in so-called "granular kidney," the kidney is sometimes small and at others large, while the clinical picture and result of uranalysis is the same. In one case the change is atrophic, especially involving the tubules with only apparent increase of connective tissue, and the other hypertrophic with connective tissue increase. These are the same changes as are found in the kidneys of old people, the difference being that in the one case there is a normal senescence more or less modified by the way the life of the individual was conditioned, and in the other a premature senescence modified by the degree of defect in the individual and its influence in limiting the functional and structural potentiality of the organ. In considering the availability of the class of cases found in an institution of this kind for study, it seemed to me that they offered an opportunity to elucidate functional and degenerative changes in the kidney not to be found among the population of a general hospital, because the existence of degeneracy and its results would exaggerate the changes found in the more normal individual, thus magnifying them and making them more conspicuous, while at the same time the régime of the hospital, uniformity of diet and freedom from excess, together with the simple vegetative existence led by this class of patients would free the subjects of study from the complications resulting from the exigencies of social and industrial competition; and the prolonged existence of the patient would allow of a more comprehensive and well-defined development of the pathologic changes, thus making the clinical picture more clear and definite and the morbid anatomic changes more complete.

During the four years from Aug. 1, 1894, to Aug. 1, 1898, there were admitted to this hospital, as new patients, 618 men and 488 women, total 1106, and in all of these a careful examination was made at intervals during the first month of the residence of the patient in the hospital. The following table contains an analysis of the changes in the urine:

	Men.	Women.	Total.
Specific gravity increased.....	338	210	548
Specific gravity decreased.....	76	104	180
Urea increased.....	26	12	38
Urea decreased.....	337	260	597
Indican increased.....	203	162	365
Albumen present.....	268	204	472
Sugar present.....	138	62	200

A complete quantitative estimate of the amount and relative proportion of the different salts in the urine was not made during the entire quadrennial period, so I have reserved for a separate table the analysis of a series of cases in which changes in the kidneys are known to have taken place. When it is taken into consideration that in the large majority of these patients there was nothing in the history or symptoms at the time of admission to

¹ West: "Lettsomian Lectures," London Lancet, Feb. 11, 1899.

² Tomlinson: "Insanity and Phthisis, their Transmutation, Coexistence and Co-existence." Jour. of Nervous and Mental Disease, October, 1885.

the hospital to indicate that there was any renal disease present, that about 60 per cent. of them either entirely recovered mentally or sufficiently to enable them to get along outside of the hospital, that the death-rate among them was approximately 3 per cent., while out of the whole number considered—1106—the specific gravity of the urine was decreased in 180, urea was diminished in quantity in 597, albumin was present in 204 and sugar in 200 cases, it will be seen that apparently considerable interference with the function of the kidney may be present without serious degenerative change in the organ and that these diseased conditions may entirely disappear, leaving behind them no evidence of chronic renal change. At the same time it is a fact in our experience that when a patient comes to the hospital, in whom uranalysis shows marked evidence of renal inadequacy, the disappearance of the acute mental symptoms almost invariably goes on *pari passu* with the restoration of the constituents of the urine to their normal relation, both as to quantity and quality. In all of the cases of acute delirium admitted to the hospital during the past two years, the uranalysis has shown marked evidence of renal inadequacy; while in those cases where the termination has been fatal, either uremia has been the immediate cause of death, or else bronchopneumonia or pulmonary edema, with marked degenerative change in the kidneys. When it is taken into consideration that the symptoms associated with uremic poisoning, independent of mental disease, are practically the same, including restlessness, insomnia, muscular twitchings, headache, low muttering delirium, and if fatal, coma, pulmonary edema and death, it seems to me a rational conclusion that while in the one case the involvement of the nervous system antedated the renal inadequacy, and in the latter the disease of the kidneys brought about the involvement of the nervous system, yet in both cases death resulted from the inability of the kidney to perform its function. The following table shows a comparison between a series of cases in which there was marked evidence of nephritis clinically and another series in which no such evidence was apparent. In the thirty-eight patients presenting clinical evidence of nephritis, the symptoms varied from emaciation with indigestion, constipation, edema of the eyelids and ankles, to convulsions, coma and paralysis. In one patient, in whom a recent examination of the urine discovered nothing abnormal, there had just been recovery from a severe uremic attack, ushered in by convulsions and these followed by a hemiplegia with profound stupor. In another, who has since died and where the necropsy disclosed extensive degenerative changes in the kidneys, the urine was comparatively normal for a month before death, although he was helpless from a hemiplegia which the post-mortem examination showed to be uremic and not hemorrhagic in its origin.

The following table shows the result of a careful examination of the twenty-four-hours-urine in eighty-three selected cases. In all of these the diet and general environment of the patients was practically uniform at the time when the observations and examination of the urine was made:

EXAMINATION OF URINE.

	Clinical evidence of nephritis. 38 cases.	No clinical evidence of nephritis. 45 cases.
Quantity increased.....	2	3
Quantity decreased.....	29	28
Quantity normal.....	7	14
Specific gravity increased.....	19	16

Specific gravity decreased.....	9	9
Specific gravity normal.....	10	20
Urea increased.....	4	8
Urea decreased.....	7	11
Urea normal.....	27	25
Phosphoric acid increased.....	7	7
Phosphoric acid decreased.....	4	9
Phosphoric acid normal.....	26	29
Sulphates increased.....	24	25
Sulphates decreased.....	13	20
Sulphates normal.....	1	0
Chlorids increased.....	14	12
Chlorids decreased.....	4	12
Chlorids normal.....	20	21
Albumin.....	3	0
Sugar.....	7	0

The comparison made in the table apparently negates the assumption with which I begin this paper, but really it does not! In the first place we must consider that these patients were all placed under practically uniform conditions before the examination of the urine. Next, in placing them in one or the other category, only those symptoms which are recognized as significant of nephritis were considered. I quote from a paper of Dr. Richard C. Cabot², as follows: "It will be readily admitted that the means at present at our disposal for the diagnosis of nephritis are far from satisfactory. On the one hand the autopsy may reveal a nephritis in a case which during life showed no albumin in the urine; on the other hand, we may have albumin and casts and yet the autopsy reveal no nephritis. The estimation of urea or of total solids can no longer have for us that clean-cut significance which once it had. For it has been abundantly proven that urea may be greatly below normal for years and yet no uremic paroxysm occur, while on the other hand a uremic convulsion may come upon a patient out of a clear sky when the urine contains a normal amount of urea."

Finally, in all of the patients suffering from renal inadequacy, in whom there has been a definite, well-marked attack of uremia, there was, in the beginning of the attack, decrease in the quantity of urine, decrease in the percentage of urea and chlorids with increase in the percentage of phosphates and sulphates. Besides, several placed in the category of those furnishing no clinical evidence of nephritis showed this same disturbance of the relative proportion of the solid constituents of the urine, and one of these has since died. At the necropsy, marked evidence of advanced degenerative change was found in the kidneys, although there were no clinical evidences of nephritis before death.

The following cases illustrate the varying aspects of renal inadequacy in its graver forms:

M. W., aged 58 years, a widow, was the victim of circular insanity. She had spent the greater part of the past twenty years in the hospital and was last admitted Sept. 4, 1896, said to have just recovered from typhoid fever. The action of the heart was irregular and intermittent, ankles edematous, and appetite and digestion impaired. She was constipated and could not sleep. At this time the urine was decreased in quantity, contained 1 per cent. of albumin, urea 1 per cent., chlorids 8 per cent. Microscopically there was renal epithelium. She improved rapidly, however, and was in fair health until in June, 1898, when she became weak, stupid, took nourishment poorly and complained of precordial distress. The skin was cold and clammy, the lips and finger ends cyanosed. The twenty-four hours' urine at this time amounted to 900 c. c., sp. gr. 1031, a trace of albumin,

² Cabot: "The Use of Methylene Blue in the Diagnosis of Renal Disease." St. Paul Med. Jour., February, 1899.

urea 3 per cent., phosphoric acid .2 per cent., sulphates 20 per cent., chlorids 5 per cent. The microscope showed granular epithelium and leucocytes. The patient grew weaker, the area of cardiac dullness increased, there was a murmur at the apex, systolic in time and transmitted to the axilla, also a systolic murmur at the base, and she complained of pain over the sternum. The abdomen was distended and tympanitic, but not tender, the tongue heavily coated, the lips blue, and there were petechia scattered over the body and limbs. The temperature was 101 F. in the evening, the pulse rapid and feeble, and she was very stupid. Her physical condition did not change materially during the next month, except that the stupor increased and there was occasional twitching of the facial and flexor muscles of the limbs. The urine became still further reduced in amount, but there was no material change in the proportional amount of the constituent elements. Granular and hyaline casts, however, began to appear. On August 4, the week she died, the sp. gr. of the urine was 1023, there was no albumin, urea was 3 per cent., phosphoric acid .2 per cent., sulphates 1.5 per cent., chlorids 9 per cent. During the last week of her life she had frequent attacks of dyspnea and there was marked decrease in the amount of urine with retention. She took nourishment well, however, until an hour before she died. At 9 a.m., August 9, she became rigid, and passed rapidly into a tonic convulsion. The pupils were dilated but unequal, the urine was passed involuntarily, there was expulsion of frothy saliva from the mouth, and she was cyanosed. In about twelve minutes the muscles relaxed, she gasped once or twice and was dead.

The condition of the brain, post-mortem, was what we have come to consider characteristic in death from uremia. There was increase of cerebrospinal fluid, distension of the pial vessels with dark, fluid blood, the sinuses in the same condition. The membranes and brain were edematous and soggy, the ependyma in the ventricles edematous, especially in the floor of the fourth ventricle, while the blood-vessels were deeply injected and showed well-marked puncta on section of the medulla. The heart weighed 396 grains, the right ventricle was filled with fluid blood, was dilated and its walls thin; the left side of the heart was hypertrophied, the aortic valve incompetent, the other valves healthy. There was marked atheroma of the aorta and it was dilated. There was fluid in both chest and abdominal cavities, and the viscera showed evidence of degenerative change. The right kidney weighed 113 grams; the capsule was slightly adherent. The kidney was lobulated, its surface covered with small infarcts and cyst scars, the cortex very thin, the pyramids illy-defined and the pelvis dilated. The same physical conditions were present in the left kidney. The bladder was empty.

(To be continued.)

TREATMENT OF EPITHELIAL AFFECTIONS WITH FORMALIN.—In the *Deutsche Med. Woch.*, of December 5, Daniel states that he found that if formalin was applied to warts, they soon dropped off, leaving a smooth unscarred surface. Other epithelial affections were treated with complete success in every case: epitheliomata, condylomata, syccosis, etc. Further tests are now in progress, but Daniels considers himself justified in calling attention to formalin as absolutely reliable, easily managed, comparatively painless and leaving no scars, in the treatment of epithelial hypertrophies and the transformation of suppurating affections.

SHOULDER-HUMERO-SCAPULA ARTICULATION.

SOME OF THE COMPLICATIONS AND SEQUELAE ATTENDING OR FOLLOWING REDUCIBLE OR IRREDUCIBLE DISLOCATIONS, WITH A BRIEF REVIEW OF THE VARIOUS MODERN OPERATIVE MEASURES NOW EMPLOYED FOR THEIR TREATMENT.

BY THOMAS H. MANLEY, M.D.

Visiting Surgeon to the Harlem Hospital; Professor of Surgery in the New York School of Clinical Medicine.
NEW YORK CITY.

(Continued from page 806.)

RESISTANCE TO REDUCTION.

One of the remarkable phenomena of shoulder luxations is the inexplicable freak we note here in efforts in reduction. Occasionally we meet with cases which stubbornly resist all our efforts. We have seen some very skillful surgeons utterly fail, others fracture the humerus. It has never been my misfortune to fail to effect reduction when the case has come under my care any time during the first week. I have seen about a dozen, old irreducible cases with fairly good functional results in all.

Thorbone notes that it is a comparatively common experience in hospital practice, to meet with unreduced shoulders of old standing, the patient applying for relief at periods varying from eight to twelve weeks or more after the injury. The condition was not before discovered or the reduction had failed.

Brecht cautions us not to set a case aside as irreducible after our first efforts fail, lest, after muscular spasm passes off and the patient is composed, he may fall into the hands of another surgeon who may very easily replace the bone. Several times cases have come under my observation in hospital service, which had resisted every description of force and manipulation outside, where the bone was very easily reduced by gentle handling. Stimson records an instance in which a man was returned to bed, all efforts at reducing having proven fruitless. After a good night's rest he awoke to find that spontaneous reduction had occurred.

Platt, who has written the latest and best contribution on "Dislocations of the Arm," cites an instance in which manipulation and powerful extension utterly failed to reduce the bone. The man was then sent up stairs to the operating-room, that anesthetics might be given him and renewed efforts made; but when he reached the room, the bone had gone back into place. This was a recurrent case, the humerus having before been dislocated sixteen times.

Stimson advises us to "humor" the muscles in these cases, and never employ great force until all the milder means have been exhausted.⁶

FREQUENCY OF FAILURE IN REDUCTION.

It is interesting to note, in making a retrospect of the literature on shoulder reduction, that about the same proportion of failures to secure reduction occurs now as in preanesthetic times.

ON THE TIME LIMIT WHEN REDUCTION MAY BE SAFELY UNDERTAKEN.

The most noted surgeons of the past, with a few exceptions, recommended that it was unsafe to attempt a shoulder reduction after three months. In modern times, Delbet, Verneuil, and Broca adopt the same limit. Riechet sagely observes that if "Dupuytren and Billroth succeeded at a much later date, it was well for their patients."

The number of published cases in which dire results

have followed futile efforts at reduction is large; and no doubt but a small proportion of them ever saw light in the medical exchanges.

Kuhn reports five. In one, mortal damage to the axillary artery, gangrene, and death after thirteen hours; a second, a woman of 60, while violent traction was being made, had an apoplectic seizure and died. In a third, a woman of 70, while eight medical students were practicing extension and counterextension, something was felt to give. Death came eighteen days later. On autopsy, rupture of all the brachial nerve cords from their roots in the spinal marrow was found. In a fourth, a woman of 45, injured by the overturning of a carriage, seven students exerted themselves in vain in their efforts at reduction, when the muscular attachments gave way and palsy followed. In a fifth case, a man of 50, although reduction was secured, the brachial plexus was ruptured.

Gibson, Cocks, Hey, Bryant, and several others have detailed the histories of a considerable number of old cases of shoulder dislocation, in which grave accidents have attended or followed reduction.

Kocher remarks that "we meet with more old dislocations at the shoulder than any other joint; the reason thereof being because they occur more frequently here." This distinguished surgeon observes that "some practitioners still maintain that certain recent dislocations cannot be reduced." This, he says, is by no means the case, as only a proper method is needed to replace any arm recently dislocated. Mr. Platt has recently published the details of seventy-seven cases of shoulder dislocation, all being reducible without arthrotomy. These were all treated by himself at the Royal-Manchester-Infirmiry. In thirty-four of the seventy-seven manipulations alone sufficed. Hennequin believes that the age, sex, profession, and vigor of the patient are important factors. With the female, whose tissues are more lax and hence offering less resistance, he believes we may attempt reduction after several months with safety and good prospects of success.

There is a general concurrence of opinion among surgeons that, with rare exceptions, the sooner we undertake reduction, the better. This, however, should not be construed to imply that it is of urgent importance that we proceed *immediately* after the accident, in all cases, to attempt or force reduction, or that ill effects will follow six to forty-eight hours' delay; until "torpor" of tissues has passed off, the patient is composed and reaction has set in. Serious mischief may be inflicted and grave consequences only too frequently follow intemperate haste and the injudicious employment of violent force. We should not forget that our patient is often in a state of shock, that there are no organs vital to life imperiled by delay, and, what is more, clinical evidence proves that many of these dislocations rebellious to immediate force, after a few hours' delay and repose, yield to gentle, persevering manipulation.

Appreciating, therefore, the importance of using discriminating judgment, as to when a considerable degree of force is best tolerated and most judiciously utilized, we can understand the grave or troublesome complications likely to succeed immature, misdirected, or excessive effort in the reduction of these dislocations.

INCOMPLETE AND COMPLETE FRACTURE IN SHOULDER DISLOCATIONS.

In several fractures contiguous to joints, varying degrees of luxation are commonly found; but there is no dislocation in which fracture is so frequently a consecutive complication as at the humero-scapula articula-

tion. Some of these coincident or consecutive fractures are very difficult to detect. Stimson says that when there is a fracture through the tuberosities with a dislocation, it can not always be detected.

Erill has described a fracture through the coracoid process, in those luxations, where the outer head engages under the short head of the biceps, and its displaced tendon carries the tip of the apophysis with it.

Kronlein, Stimson and others have described a dislocation downward in which the acromion process is simultaneously fractured. Caird has described a recent case which, on autopsy, showed an indentation fracture through the articular head, after a subcoracoid luxation.

TYPES OF FRACTURE COEXISTING WITH OR SUCCEEDING LUXATION.

1. We have good reasons to believe that osseous diastasis, clipping or splitting through the base of the glenoid cavity, a tearing off or *arrachement* at the muscular insertions of the apophyses of the scapula or the tuberal head of the humerus, is not a very infrequent complication of various luxations at the shoulder.

No such coincident lesions have ever come under my own observation, although I have several times seen cases of fracture through the coracoid, the acromion, and the neck of the scapula without dislocation. There is no evidence on record that those fractures are of any serious consequence, as but very slight displacement of the fragments can occur, and usually repair is rapid. No doubt some of these fractures occur in violent efforts at reduction, especially when the heel is used in the axilla, or great leverage is employed, as in the remarkable case of Proskaska, when the head of the bone was jammed into the thorax between the second and third ribs; and, being irreducible, remained there ten years, with fairly good use of the limb remaining.

2. The most disastrous fractures occurring in connection with dislocation are those involving the humeral shaft; either through the anatomic neck or the diaphysis. A large proportion of these fractures are produced by efforts in reduction. Professor McBurney has collected 117 of these.

There is always great danger of producing this fracture in forcible attempts at reduction, especially in old cases.

From Kocher we learn that in 28 cases of old dislocation, he succeeded in reducing 25, but fractured the humerus in 3.

Fractures through the surgical neck here are quite invariably an accident in reduction. It has once happened in my practice, in a middle-aged woman with a large adipose development, but small bones.

In many recorded cases we find evidence that they are produced by violence in reduction. Very true, it may no doubt have existed at the time a case has entered the hospital; but it comes from another's hands, either in the out-door department or elsewhere.

At the Pan-American Medical Congress, held in Washington, D. C., in 1893, I presented an essay dealing with "Fractures and Their Complications," in which it was stated that when we have a case of fracture of the upper third of the humerus with a dislocation of the shoulder-joint, our efforts should be directed to reducing and adjusting the fragments, leaving the dislocation to itself.

Dr. Steman, of Fort Wayne, Ind., in the discussion which followed, said he could not understand how in these days of antiseptics and improved surgical technique, any surgeon could be content to leave the head outside the glenoid cavity in a case of this description. He then

reported a case of fracture dislocation which he treated by osteotomy as far back as 1870. He opened down on the fractured humerus, seized the proximal end with a stout forceps and readily reduced the head. The wound healed promptly and the fragments readily united, with full use of the arm following. This is the first case on record treated by osteotomy, in which a fracture of the humeral shaft and dislocation simultaneously existed.

Fracture through the greater tuberosity, which is quite the equivalent of one outside the anatomic neck, is said, by Jonathan Hutchinson, Jr., to occasionally occur as a complication. He says that 50 per cent. of recorded cases were wrongly diagnosed; and hence, he advises that when this condition is suspected, a thorough examination under an anesthetic is important.

Epiphyseal separation, a subject which has been so ably and so exhaustively considered by Dr. E. M. Moore, Rochester, N. Y., we can scarcely mistake for a complete luxation.

ON THE MANAGEMENT OF FRACTURE DISLOCATION.

In fracture dislocation it yet remains an open question whether or not it is always in the interest of the patient, failing reduction, to advise an osteotomy or perchance an arthrotomy in addition; or whether it would not be more in the direction of safety, and later to the functional results, if, reduction failing, we delay in forcing reduction by any method until union in the fracture is complete. On this important question, surgical authors are silent; or rather urge sanguineous methods than permit the reduction to remain until the fragments unite. Some very good results have been recorded in these cases where primary therapy has been limited to dealing with the osseous lesion.

These osseo-arthritis traumatism are of unusual occurrence, and involve great responsibilities on the part of the practitioner; and hence, in order to do full justice to this patient and escape the notoriety and expense of civil actions, he will do well to proceed with caution when radical measures are contemplated.

In Wyeth's case of osteotomy for fracture dislocation at the shoulder, the patient, a woman of 45, sank in twenty-four hours. In this instance manipulation of the upper fragment utterly failed; hence, all the muscular attachments had to be divided and the head resected. Our grateful acknowledgements are due to this distinguished surgeon, for giving us the dark as well as the bright side of this subject.

Dr. Strong, *apropos* of the responsibility entailed in this class of injuries, very judiciously admonishes us of the great risk we often incur, and says, "from a medicolegal standpoint, the general practitioner or surgeon who dabbles with injuries which may be followed by fracture or dislocation, takes upon himself an enormous responsibility. No man should practice surgery without a constant fear of the law before him. A superficial or cursory examination with a guess should never be indulged in here, if the physician values his reputation or his pocket book. Patients, as a rule, know nothing at all concerning the gravity of a joint injury, either a sprain, a dislocation, or a fracture into it."

What our line of action should be in the routine management of dislocations at the shoulder, complicated by a fracture through the surgical neck of the humerus, is not yet agreed on, nor is any routine plan adopted or recommended by our leading authorities; certainly none yet recommend sanguineous measures until all other tentative procedures have failed; nor even then in any other than exceptional circumstances.

IRREDUCTION AND ITS OPERATIVE MANAGEMENT.

The most formidable complication in shoulder luxation is that pathologic condition succeeding it which renders all our efforts at reduction futile.

Of late years it has been thought advisable and justifiable to utilize the aids of aggressive surgery and arthrotomy in those cases resisting reduction, on the ground that this involves no special danger, and that the functional state of the limb is very much better after operative replacement than when the luxated head is permitted to roam about, or form a pseudo-arthrosis for itself. Sufficient time has now elapsed for us to formulate some definite line of action, when we contemplate a luxation arthrotomy, and to estimate whether or not the average results following its performance are better than when the displaced bone is left to itself.

FUNCTION IN IRREDUCIBLE DISLOCATIONS.

We all know that there are many who have suffered irreducible dislocation, yet possess practically the full functional use of their limb. A remarkable case illustrating this is published by Stewart, of Sidney, Australia. In an elderly man in the dissecting-room, he discovered a complete double dislocation of both shoulders, of long standing. The muscles were well developed, and the man had worked as a drayman, with full use of his limbs, until he was accidentally killed.

About a year ago a young man from Toronto, the brother of a physician, came to me for advice and the treatment of a subglenoid dislocation of the humerus. Four years previously he fell from a ladder and displaced the bone. Not suspecting the true nature of the injury, he went to no physician for a week, when a liniment was prescribed. One year later, only, was the luxation discovered. From the time of the accident he continued on at his trade of tinsmith and roofer. He had a pseudo-ankylosis, but good use of the limb. I advised him to let it alone.

It is well known that a noted golf player in England has had his left shoulder displaced for many years.

A young German cabinet maker came under my care for the treatment of a fractured arm, some time ago, at the Harlem Hospital, when I discovered that he had a complete subglenoid dislocation of long standing. He had an excellent muscular development, and informed me that the limb was equally as strong as the left—uninjured one. He had been advised before he emigrated not to permit any surgical operation for the replacement. In this class of cases where the full strength and action of the limb are preserved, no surgeon would insist on sanguineous replacement.

STATUS OF OPERATIVE INTERVENTION, ARTHROTOMY AND RESECTION.

There are a considerable number, with some one or other of the thirty or more different types of pseudo-ankylosis after luxation met with at the shoulder, with a painful or parietic limb, where the injured insists on immediate reduction at all hazards.

For the decade preceding 1898 a considerable number of operations have been done for irreducible shoulder; few before that time.

Thorborne, up to 1891, could find but thirteen cases of excision of the humeral head for irreducible shoulder luxation; but up to 1897 Souchen collected 154 shoulder arthrotomies for the same condition. Since 1820, cases of arthrotomy have been recorded for this luxation, the first in America being Dr. Alfred Post's, in 1861.

It is somewhat remarkable to note that but few of our late monographs devoted to dislocations give this

important subject any systematic consideration. In Waring's late work it is passed over, also in Helferich's, recently translated by Hutchinson, and in Stimson's classic work of 1895. But quite a little appears in the current home and foreign literature on operative reduction, before 1897. Since then there could be found, by most diligent research, but very few recorded.

At the outset, surgeons were exceedingly sanguine that a new epoch had opened for the surgery of irreducible shoulder luxation. McLauren wrote that "the readiness with which the joint can be opened, the ease with which the obstacles can be detected, and removed, and the happy result in successful cases encourage performance of the operation, when certain attempts by traction and manipulation fail to reduce old dislocations." Evidently his experience was exceptionally fortunate, for it is the common experience of nearly all surgeons that the detection of obstacles is often very difficult and, when discovered, they can not always be removed. The operation, too, has no trifling mortality. Prof. Nicholas Senn, in a brief contribution on the "Trans-Scapula Incision," also speaks in an assuring tone on the future of radical surgery here, and says "the success that has attended the open method in the reduction of irreducible dislocations has added a new impetus to this department of surgery." But events would seem to point to there remaining some doubt as to the "success" of these proceedings, if we weigh them by remote functional results as well as by the operative effects.

Delbet, in 62 cases collected, found that there were 12 deaths; an operative mortality of more than 12 per cent. As to function, in 25 reduced by arthroto-my, in 12 the results were satisfactory; in 4, mediocre; in 4, secondary resection; in 2, bad.

In 1875, Annandale, in an arthroto-my on a woman 62 years old, for dislocation, encountered great difficulty, wounded the circumflex nerve, and had to ligate the axillary artery, mortal gangrene following.

Madyl observes that "because excellent results sometimes follow an operation for a dislocation which would leave a limb useless is no reason why we should not hesitate before we apply it to the shoulder, which, he says, may be often dislocated permanently without serious permanent functional effects, and which are operated on only with danger, and seldom with satisfactory results."

The early evolution of any major operation must necessarily be attended with a large mortality and unsatisfactory results. This certainly was the case in the early history of ovariotomy and hysterectomy; in our own time in properly selected cases, procedures succeeded generally by little danger to life and happy ultimate effects.

On this side of the subject Tillaux observes that "the operative cure of old dislocations, especially those of the shoulder, every day gains new ground, and if the guiding principles of operative treatment are not yet settled, the number of published cases points to the legitimacy of their adoption." He then cites Rotier's case, in which a resection was made for an old shoulder dislocation, in a young woman in whom ankylosis was complete. He opened the joint, forced the adhesions, resected the head, and closed the wound. Complete union followed in ten days, and ultimate results were very satisfactory.

ARTHROTOMY OR RESECTION OF THE HUMERAL HEAD.
PERIOD FOR OPERATION. RESULTS.

Could we only determine the exact pathologic state after every dislocation, we would have no difficulty in

deciding on appropriate treatment. But all the etiologic factors entering into irreducible shoulder dislocation are not yet understood, nor agreed on, as all must admit they are more vague and complex than in any other luxation of the larger articulations.

Philip Crampton, when he published his "Observations on Surgery," in 1810, stated that there was, up to that date, but one case on record which revealed the pathologic conditions obtaining in a recent shoulder luxation. In 1782, Bonn described the morbid anatomy of several unreduced luxations; twelve of the shoulder; but the most recent of the dozen was of more than a year's standing.

Rupture or "button-holing" of the capsule is said to play a prominent rôle in irreducible luxations at the shoulder; but this assumption lacks confirmation. The capsule has been reported as having been partly detached from its insertion, and lacerated in various ways, but there does not appear a single case recorded in which an arthroto-my was performed, that this so-called button-holding of it was found. In fact, without a complete detachment of all the deep rotators, this is quite impossible.

Both Pott and Cooper were of the opinion that the narrowness of the opening in the capsule could never create an impediment to reduction, though Desault, Dupuytren, and others took a different view. Some contend that rupture of the capsule is invariable in dislocations, while others believe it can occur only when the dislocation is complete.

My own experimental work on the cadaver incontestably demonstrated that the capsule exercises practically no restraining influence on the normal shoulder movements, as it readily permits the head to roll about in every direction after the deltoid is completely divided by a semicircular incision.

Ankylosis, either from intra- or extra-articular conditions, as Souchon well observes, as a troublesome complication or sequel, is usually a less serious affair than in other points because of the free motion of the scapula.

Ricard records one instance illustrative of the influence of various osseous lesions as constituting an impediment to reduction. After vain efforts at reduction in a dislocation six weeks old, he exposed the deep parts, and came upon a fracture through the greater tuberosity. This had united in a vicious position, and was so locked under the acromion process as to render reduction impossible.

ARTHROTOMY.

M. Chaput agrees with Nélaton, that arthroto-my is the treatment of choice in all recent irreducible luxations of the shoulder. In old, inveterate cases dating over three months, with effacement of the articular hollow, operation with resection is not to be recommended, because, in many of these, there is ample movement, or at all events such as may follow many resections; a fair amount of passive movement remains, but the free and active movements of a sound joint are wanting; as they should be after most operations.

Souchon, who has made a most exhaustive study of this subject, says: "in recent cases of dislocation it is most important to operate before union to the bones has taken place." This must be supposed to mean, before osseous ankylosis has developed.

Ollier records a case of a young man on whom he operated, whose shoulder was luxated the day he was born. He resected the articular head, with excellent ultimate results. He operated on another by resection, the patient 26 years old, the bone out six months. Very

painful arthritis followed the operation, June 24, 1885. He left the hospital with a useful limb, Jan. 8, 1886. The head of the humerus was well drawn up into the glenoid hollow and free movement secured.

Hennequin draws the line on children, and says arthro-tomy should be rarely resorted to with them for irreducible dislocations of the shoulder, because of the danger of doing harm to the epiphyseal isthmus.

M. Dalageniere briefly recounts the indications for arthro-tomy in effecting reduction by surgical intervention in those cases failing to yield to ordinary measures, and observes that, "when luxations resist the combined methods, where there is a special lesion, as ligamentous interposition, tendinous or osseous, which oppose usual procedures, we should not hesitate to open the joint." He then inquires whether it is logical, when there exists a lesion of a character unknown to us, to have recourse to great violence by any mechanical appliance, exercising a brutal traction, sometimes perilous and often compromising the functions or the integrity of the articulation. In dislocations of several weeks' standing, he would recommend the liberation of the adhesions by free motion or forced traction; this failing, he would freely open the joint.

Dr. Monks, a surgeon to the Manchester General Hospital, has reported a case of resection in a dislocation of ten months' standing. It is interesting to note that the excised head was atrophied and so soft that it broke down easily under pressure of the finger.

(To be continued.)

Therapeutics.

Cod Livers in Local Tuberculosis.

Guerder attributes to fresh cod-liver a threefold action: 1, by its fat; 2, a medicinal action by its bile elements stimulating nutrition and the secretions, and 3, by its ferments, which include it in the domain of organ therapy. He reports numerous experiments and five observations in *Revue de Therap.*, January 15, which establish that injections of a glycerinated extract of fresh cod-livers are harmless, and induce a pronounced local phagocytosis and elimination of morbid products, similar to the expulsion of false membranes after treatment with diphtheria antitoxin. The general health is also favorably affected.

Some Modern Views of Gout.

A. P. Luff, in a paper read before the West Kent Chirurgical Society (*Merck's Archives*, February, 1900), brought forward some new ideas on the etiology of gout which may alter the general methods of treating this disease. He showed that in gout, uric acid exists in the blood, not as an acid but as a sodium quadrate; that this changes into gelatinous biurate and then into crystalline sodium biurate. Delaying conversion of the gelatinous biurate into the crystalline form will aid its "uricacidemia," which has no conclusive experimental basis on which to rest, he is of the opinion that the gouty paroxysm is due to precipitation of crystalline sodium biurate in the implicated tissues causing irritation and inflammation. The deposition must be sudden and rather copious to start inflammation; otherwise no inflammation results.

Actual blood-tests show that instead of a diminished there is an increased alkalinity of the blood in gout; hence, treatment to increase alkalinity hastens the conversion of the gelatinous sodium biurate to crystalline biurate and is one of the causative factors in the production of gout.

Treatment of acute gout consists first of relieving the paroxysms. Colchicum and potassium citrate should be freely administered and a mild blue pill and Epsom salts purge be given. Painful joints may be bound with wool saturated with a warm alkaline and anodyne solution. Uric acid should be eliminated by free diuresis, encouraged by plenty of water

and the continued administration of potassium citrate or similar salts. Excessive formation of uric acid should be checked. This is accomplished by a carefully selected dietary. Meat, after the acute attack has subsided, should be moderately partaken of and green vegetables should be eaten freely. The principal thing is exclusion of variety, and especially to avoid mixing proteins and carbohydrates. The liver should be kept active by doses of guaiacum and an occasional mild liver pill, and by keeping the bowels open. Open-air exercise should be insisted on as soon as the patient is able to take it. Golf and cycling are two excellent forms of exercise for the gouty. Enlarged joints should be treated by massage, muscular movements and electricity, with a view to working off the deposition of sodium biurate.

Oil of Wintergreen Preparation for Rheumatism.

- R. Olei gaultheriæ.....5iv
Alcoholi, q. s.
Syr. simplex, q. s., ad.....5iv
M. One teaspoonful in vichy three times daily.

—*Richmond Journal of Practice.*

Acute Bronchitis.

- R. Vin ipecac
Vin antimonii, āā.....ā3i
Glycerini.....ā5iv
Sol. ammonii acetati.....5i
Aque, q. s., ad.....5iii
M. Teaspoonful every three or four hours.

—*Medical Record.*

Rigid Perineum.

- R Chloroformi.....5ii
Ether sulphurici.....5i
Cologne spts.....5i
M. Apply locally.

—*Southworth.*

Salt Solution in Grippe Tetanus.

A boy 7 years old was affected with the catarrhal form of influenza simultaneously with the rest of the family but complained of pains in the abdomen, back and lower members, which became so contracted that walking was impossible. Opisthotonos and trismus followed. No medication produced any relief until subcutaneous injections of salt solution were tried, and this proved successful in attenuating and curing the tetanus. Gomez relates the observation in the *Riforma Méd.*, January 23, and calls attention to hypodermoclysis as an effective measure in the nontraumatic tetanic manifestations of la grippe.

Facial Erysipelas.

- R. Acidi carbolicæ.....5i
Tinct. iodini.....5i
Alcoholi.....5i
Olei turpentina.....5ii
Glycerini.....5iii
M. Paint the affected parts and cover with aseptic gauze, once in two or three hours.

—*La Presse Medical.*

To Promote Renal Elimination in Pneumonia.

- R. Fl. ext. hydrangie
Spts. etheris nitrosi, āā.....5iv
Acidi salicylici.....5ss
Fl. ext. gelsemii.....5iii
Syr. simplici, q. s., ad.....5xii
M. Adult dose, teaspoonful every four to six hours.

—*Medical Bulletin.*

Home Remedy for Leg-Ulcers.

G. V. Buehler, *Philadelphia Medical Journal*, Feb. 17, 1900, states that good results have been obtained in indurated varicose leg-ulcers with the following treatment, but in syphilitic ulcers it has had little effect.

After thoroughly heating a pint of boiled linseed-oil, a half pound of red oxid of lead is added and the mixture allowed to boil for some time. It is then allowed to cool, then boiled again, and after cooling a second time, one-half ounce of gum camphor is stirred in. The oxid of lead is in this manner decomposed to black oxid, and the repeated boiling so changes the consistency that it can be made into

a stick or can be spread on a cloth by heating over an alcohol flame.

Cystitis.

S. S. Jones says that in catarrhal cystitis, acute and sub-acute, especially in women, bismuth and boric acid are very useful, applied in the following manner: To a pint of warm boiled water add a teaspoonful of a powder made up of 75 per cent. of bismuth and 25 per cent. of boric acid. Use a soft catheter, to which a small glass funnel has been attached. Pour into the empty bladder half of the mixture, which must be kept well stirred, and let it run out; the other half should now be poured in and permitted to remain a few minutes, when it may be voided *per vias naturales*.

IN PAINFUL TUBERCULOUS CYSTITIS.

- R. Guaiacöl 3i¼ 5|
- Iodoform gr. xv 1|
- Sterilized olive-oil 3xxv 100|
- M. Sig. Inject ¼ to ½ dram (1 to 2 gm.) into the bladder once or twice daily. —Colin.

CYSTITIS COMPLICATED BY RHEUMATISM.

- R. Sodii salicylatis 3i to 3iiss 4—6|
- Syrupi limonis
- Aquæ menthæ pip., ãã 3xv 60|
- M. Sig. Teaspoonful every hour. —Colin.

ACUTE BLENNORRHOIC CYSTITIS.

- R. Sodii biboratis 3viiss 30|
- Sodii bicarbonatis 3iiss 10|
- M. Sig. Two teaspoonfuls during the day in a quart of lemonade. —Balzer.

FOR SENILE CYSTITIS.

- R. Ext. hydrangæ 3ii
- Tinct. gentianæ comp. 3iv
- Tinct. staphisagriæ
- Tinct. cannabis indicæ, ãã 3i
- Syrupi aurantii, q. s., ad. 3iv
- M. Sig. A teaspoonful three times daily. —Hopkins.

IRRITABILITY OF THE BLADDER AFTER DELIVERY.

- R. Salol
- Tinct. hyoscyami, ãã 3iii
- Infusi buchii, q. s., ad. 3vi
- M. Sig. Teaspoonful three times a day. Shake well. —Fothergill.
- R. Liquoris potassæ 3i
- Mucilag. acaciæ 3ss
- Tinct. hyoscyami, q. s., ad. 3ii
- M. Sig. Dose a teaspoonful.

IN ACUTE CATARRHAL FORM WITH MAL-ODOR.

- R. Amyli nitritis gtt. v
- Aquæ destil. 3iv
- M. Sig. Add 3ss of this solution to the proper quantity of water for a vesical injection.

IN CHRONIC CYSTITIS.

- R. Acidi borici 3ss
- Glycerini 3i
- Aquæ destil. 3x
- M. Sig. For an injection into the bladder. At moment of employment mix it with an equal part of warm water. —Ulltmann.
- R. Acidi oxalici gr. xvi
- Syrupi aurantii 3i
- Aquæ, q. s., ad. 3iv
- M. Sig. Teaspoonful every four hours. —A. W. Marsh.

CYSTITIS IN FEMALES.

To neutralize alkaline urine, five grains of benzoic acid in capsule every three hours. Large draughts of water after each dose.

In ammoniacal decomposition, five grains of salol, in capsule, every two hours until the urine is acid. —Bloom.

FOR WASHING OUT BLADDER.

- R. Argenti nitratiss gr. xv
- Aquæ destil. Oii

GONORRHOIC VESICAL IRRITABILITY.

In gonorrhœal vesical irritability in females, after cleansing the urethra with bichlorid solution, apply pure ichthyol and give:

- R. Ichthyoli m. ii
- Olei santali m. v
- M. Sig. In capsule every three hours. —Bloom.

Eugallol.

In the *Dermat. Cbl.*, iii, 1, Hugo Goldschmidt says eugallol has been used in a number of cases of inveterate psoriasis at the Alterheiligen Hospital of Berlin. The eugallol was dissolved in acetone—the solution being painted daily for several days on the affected spots, followed in from fifteen to thirty minutes by the application of a zinc paste. The only drawback, so far as the face treatment is concerned, is the blackening of the spots; but this lasts only for a few days. The discoloration can be removed, too, to a certain extent, by means of ether. The following conclusions are based on the results obtained:

1. Eugallol, used in the manner above described, exerts an extremely rapid and energetic action on psoriatic efflorescences in every stage.

2. In extended psoriatic eruptions, with numerous recent efflorescences, the remedy is not eligible, at least for use by the patient, because of the tediousness and difficulty of application. Individual efflorescences of the face and head may, nevertheless, be advantageously treated.

3. The eugallol-zinc treatment is excellently adapted for isolated inveterate plaques that are resistant to all other treatment.

4. Toxic effects are never observed, even after the most extended use; or, at least, are but very unimportant.

5. Eugallol causes, in some cases, slight local irritation, which, however, rapidly disappears on suspension.

The remedy, like all others, can not prevent a recurrence of the psoriasis; hence an absolute cure can not be expected.

Treatment of Hemorrhoids.

According to J. Boas and F. Karewsky (*Therapie der Gegenwart*, November, 1899), in hemorrhoids a bland diet, especially sweet milk, is absolutely injurious on account of the lack of stimulation of the peristalsis. Great care should be paid to the toilet of the anal region after defecation, a solution of tannin or alum on a cotton wad being used. An ascending douche is of value. In giving enemata, a soft sound should be used, and all irritating substances, like glycerin, salt, etc., should be avoided. Except in extreme cases purgatives should not be given. To control hemorrhage, which occurs even when the feces are normal, a teaspoonful of fluid extract of hamamelis Virginia in a wineglassful of water three times a day for four weeks, then twice a day for another month, is to be recommended. If the hemorrhage is severe, a powerful dose of opium should be given and the bleeding spot tamponed with gauze. After it has been arrested for three days, a dose of castor-oil is to be taken.

Medicolegal.

Ten Thousand Dollars for a Leg.—For a previously strong and healthy man with a life expectancy of thirty-three or thirty-four years, and earning \$1080 a year as a switchman, the Court of Civil Appeals of Texas holds, in the *Gulf, Colorado & Santa Fe Railway Company vs. Warner*, wherein the supreme court has denied a writ of error, that \$10,000 is not excessive damages for serious and permanent injuries, requiring the amputation of his leg midway between his knee and hip-joint, and causing him intense suffering, and confining him to his bed for about eight weeks, and to his house much longer.

Imputing Adultery to Physician.—A publication in writing, which the law presumes must do damage, is called a libel *per se*. And of this character. Mr. Justice Gaynor holds, at a Kings County special term of the Supreme Court of New York, is a newspaper imputation that a physician has been guilty of an act of adultery. Indeed, he says that a written charge of adultery against man or woman always was libelous *per se*. The strange intimation to the contrary in the dissenting opinion in the *Gates Case*, 155 N. Y. 234, he states, is the first that seems ever to have been made. No special damage, he goes on to hold, *Cruikshank vs. Bennett*, need be alleged in the complaint nor proved to maintain an action on such a libel. An allegation of general damage to reputation or to business, or to both, suffices. Special damages may, however, be pleaded

and proved in such an action and recovered in addition to general damage; and, to be proved, must first be specifically alleged in the complaint. For example, if loss of patients be claimed, the names and particulars must be stated in the complaint.

Residence of District Physician.—A city charter providing, as does that of the city of Buffalo, for the appointment of a certain number of district physicians, each of whom "shall reside in the district for which he is appointed," the appellate division, third department, Supreme Court of New York holds, case of *People vs. Leavy*, not only must the appointment of every district physician be made for a certain specified district, but no one is eligible to such appointment unless he at the time resides in the district. In other words, the court denies that an appointment can be one at large and the district in which the appointee is to reside, and in which his services are to be rendered, be determined by subsequent assignment.

Intoxication Not Negligence Per Se.—In *Sylvester vs. Town of Casey*, an action brought to recover for personal injuries caused by a fall on a defective sidewalk, the Supreme Court of Iowa condemns, as an incorrect statement of the law, an instruction: "Intoxication is evidence of contributory negligence, and from it alone you may infer contributory negligence." It holds that unless it appeared to have been negligence for the plaintiff to be on the walk in an intoxicated condition, or unless the evidence showed that his intoxication in some way aided in bringing about his injury, his condition would not be available to the town as a defense. Intoxication it does not consider negligence in itself.

Jury a Judge of Permanency of Disability.—When the character and extent of injuries received by a man in a railway accident are described by him and by physicians, and when the effect of the injuries in disabling him from manual labor are stated by him, the Supreme Court of Kansas holds, in *Missouri, Kansas & Texas Railway Company vs. Fowler*, that the jury can judge whether, and to what extent, he will be permanently disabled, and the testimony of physicians as to the permanent impairment of his ability to labor is not of necessity required to enable him to recover for permanent disability.

May Testify to Effect of Existing Ailment.—A distinction is made by the appellate division, first department, Supreme Court of New York, between a physician testifying to the effect of an existing ailment, which has already resulted from the injury for which damages are sought to be recovered, and his testifying as to the probable outbreak of a new disease, having its cause in the original injury. As to the latter, it states, he will not be permitted to say that such a disease will occur, unless he is able first to testify that he can determine its probability with reasonable certainty. But a competent witness, giving testimony as to the continuance of a present existing condition, it holds, *Knoll vs. Third Avenue Railroad Company*, is at liberty to state what, from his observation and experience, will be the probable effect of the present condition, and it is not necessary to limit the question as in the other case. Nor does it attach any importance to the use of the word "likely" instead of the word "probable" in the question asking about the effect of the ailment, although the two words are not synonymous.

Not Dying Declaration.—On account of what it holds was error in admitting in evidence what it does not consider was a dying declaration, the Supreme Court of California reverses, in *People vs. Fulbrig*, a judgment of conviction of the crime of abortion, and orders a new trial. It does not find the requisite evidence of a solemn belief of impending death in a statement of 184 words prepared by a stenographer, beginning with the formula, supplied by him: "Knowing I am about to die, I hereby make this my last statement, and declare same to be the truth, and the whole truth, so help me God," when that was all that there was to show the condition of mind when the purported dying declaration was made, and it was not read over and approved sentence by sentence after being written out, but as a whole, and so stated to be all right. Moreover, the court here lays aside as unimportant the facts that the person making the alleged dying declaration,

was emaciated and in a weak state, it being of the opinion that hardly to the slightest degree did these circumstances tend to prove that she believed at the time that she was about to die, although it admits that they might be quite material in some cases. Nor does it deem it sufficient that the doctor told her that she "would probably die." Not being positive that the usual and ordinary effect of such a statement by a doctor to a patient would be to infuse in his mind a hope, a possibility at least, of recovery, indeed, such a statement, it thinks, would naturally indicate that the doctor himself still had some hopes of the patient's recovery. But dying declarations, the court repeats that it has held before, are not admissible in evidence if the declarant had the slightest hope of recovery, although he dies within an hour afterward.

Denied Divorce for Mistreatment when Sick.—In *Bonney vs. Bonney*, the Supreme Judicial Court of Massachusetts has denied a husband a divorce, notwithstanding that the testimony left no doubt that his wife had failed to perform the duties of a wife, in failing either to stay at home and take care of him when sick, or to consent to his hiring a nurse or housekeeper so to do. It seems to consider it important in this connection that he was not dependent solely on his wife, but was under the care of a physician, and had the money with which to secure proper food and nursing. It says that, if he was not content with the care his wife gave him while he was sick in bed, his remedy was to hire a nurse, even if his wife wrongly threatened to leave his tenement if he did so, there being no pretense that this could not have been done through the physician in attendance. And, under these circumstances, it holds that the fact that the husband's health was temporarily injured by his wife's failure to comply with the doctor's orders as to his diet and medicines was not sufficient to constitute cruel and abusive treatment, within the meaning of a statute making that a ground for divorce. Her action in that respect, it admits, might, in one sense, be said to be cruel, and the husband might be said to have been abused by her. But, the court holds, it was not such cruel and abusive treatment as, under the circumstances of the husband, will cause injury to his health, or create danger of such injury, or reasonable apprehension of such danger, if the parties continue to live together; and nothing less, it insists, will make out a case of divorce on this ground.

Ambulances and Right of Way.—A judgment for \$500 damages, in favor of a hospital house surgeon, who responded to an ambulance call, in the absence of the ambulance surgeon, and was injured in a collision in which a cable-car struck the rear wheel of the ambulance, has been affirmed in the case of *Buys vs. Third Avenue Railway Company*. It has been held, the appellate division, second department, Supreme Court of New York says, that a violation of a municipal ordinance is some evidence of negligence. And so here it holds that it was proper to place before the jury an ordinance of the city of New York giving to ambulances the right of way, as that, it declares, was one of the restrictions under which the defendant street railroad company operated its cars. At street intersections, the court goes on to say, the rights of all vehicles, in the absence of municipal or statutory regulations, are equal, but considerations of humanity step in, and determine that ambulances shall have the right of way, and the defendant owed the duty to the public of operating its cars with reference to that ordinance. Unfortunately, this is a little ambiguous. But the first and last parts of the sentence would seem to indicate that the court means that the considerations of humanity referred to step in when, and when only, a municipal or statutory regulation to that effect is passed. And this would seem to be borne out by the further declaration, in this immediate connection that the duty to give the right of way is not absolute; it must "yield the right of way where possible," these last words being quoted, with specific credit, from section 370 of the Ordinances of New York; and, the court adding in the same sentence, it was proper that the jury should have this ordinance in view when determining the question of the defendant's negligence.

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

Philadelphia Medical Journal, March 24.

- 1.—*Preliminary Report on Etiology of Scarlatina. R. H. B. Gradwohl.
- 2.—Clinical Memoranda on Chronic Suppurative Otitis Media. John F. Oaks.
- 3.—Radiograph of Bullae Seen Through Osseous Tissue, in Femoral Trochlea, Two Lines from Surface of Bone. Charles Venge.
- 4.—Case of Cesarean Section. George G. Hopkins and Earle E. Woolworth.
- 5.—Medicological Case in Alaska; Forceful Injection of Corrosive Poison with but Slight Gross Lesions. Henry B. Fitts.
- 6.—Case of Addison's Disease, with Autopsy. William Fitch Cheney.
- 7.—*Parotitis complicating Croupous Pneumonia. James Ely Talley.
- 8.—*Etiology and Pathology of Major Epilepsy. William House.
- 9.—*Reflex Neurosis from Phimosis. J. Orton Edie.

New York Medical Journal, March 24.

- 10.—*What Precautions Shall We Take to Avoid Leaving Foreign Bodies in the Abdomen after Operations? Howard A. Kelly.
 - 11.—*Sheldon Murder Trial; Résumé of Expert Testimony for State. (Concluded.) Wm. M. Chasman and Albert H. Hamilton.
 - 12.—*Gout and Rheumatism; Their Etiology and Dietetic Treatment. William H. Porter.
 - 13.—*Administration of General Anesthetics. (Concluded.) C. Algeron Temple.
 - 14.—*Cerebral Complications Caused by Extension from Accessory Cavities of Nose. Robert H. Craig.
 - 15.—*Treatment of Retroposition of Uterus. I. L. Watkins.
 - 16.—*Erectation, Regurgitation and Remission. H. W. Lincoln.
 - 17.—Case of Acetaminil Poisoning. O. R. Summers.
- Medical News (N. Y.), March 24.**
- 18.—Suprarenal Therapy. W. H. Bates.
 - 19.—*Some Directions as to Care of Hair. George T. Jackson.
 - 20.—*Neurologic Observations in the Hawaiian Islands. Daniel R. Brower.
 - 21.—*Alcohol as an Extra Stimulant and Heart Tonic; Its Use to the Animal Economy in Health and Disease. T. J. Hillis.
 - 22.—*Thrust-Fungus as a Cause of Gastritis. W. A. Bastedo.
 - 23.—Case of Transverse Presentation; Double Uterus. A. H. Hayden.

Boston Medical and Surgical Journal, March 22.

- 24.—*Open or Operative Treatment of Fresh Fractures: Is it Ever Justifiable? With an Analysis of Results of Present Methods of Treatment in 153 Cases of Lower Extremity. Charles L. Scudder.
- 25.—*Intermittent Gastric Hypersecretion, with Report of Case. Arthur W. Elting.
- 26.—A New Needle-Holder. G. H. Monks.
- 27.—Self-Closing Stopper for Ether Bottle. L. R. G. Craudon.

Medical Record (N. Y.), March 24.

- 28.—*Non-malignant Gastric and Duodenal Ulcers; with Illustrative Cases. Thomas E. Satterthwaite.
- 29.—*Treatment of Fatty Heart. Th. Schott.
- 30.—*Round Ulcer of Duodenum. Percival R. Bolton.
- 31.—*Prophylaxis and Treatment of Gonorrhoea by Methylene Blue. Joseph A. O'Neill.
- 32.—Uterine Vaginal Fistula; Operation; Cure. F. W. Johnson.
- 33.—Epileptiform Convulsions Following Intranasal Application of Cocain. Samuel Kohn.
- 34.—Gushot Wound of Kidney. William F. Barry.

Cincinnati Lancet-Clinic, March 24.

- 35.—*Justus Test in Syphilis. Mark A. Brown and Geo. P. Dale.
- Medical Review (St. Louis, Mo.), March 17 and 24.**
- 36.—*Normal Prophylactic Appendectomy; a Symposium by American Surgeons.
 - 37.—*Question of Prophylactic Appendectomy. Thomas H. Manley.
 - 38.—*Additional Observations on Normal Prophylactic Appendectomy. Geo. F. Fowler, W. Anderson and T. A. Reamy.
 - 39.—*Some Remarks on Antistreptococcus Serum with Report of Cases. Norville W. Sharpe.

Virginia Medical Semi-Monthly (Richmond), February 23.

- 40.—Four Cases of Penetrating Wounds of Abdomen—With Visceral Lesions and Wounds of Entrance above the Umbilicus. Hugh M. Taylor.
- 41.—Excision of the Shoulder-Joint. A. R. Shands.
- 42.—Consumptives and the State. Louis P. High.
- 43.—Heart in Life Insurance. John N. Upshur.
- 44.—Technique of Vaginal Hysterectomy, with Especial Reference to Consecutive Clamp Hemostasis. James N. Ellis.
- 45.—*Use of the Normal Saline Solution. Virgilus Harrison.
- 46.—Report of 1371 Cases of Tuberculosis Treated in the Asheville Climate. James A. Burroughs.
- 47.—*Disinfection of School Rooms and Public Conveyances after Exposure to Infectious Diseases. Frank Warner.

American Gynecological and Obstetrical Journal (N. Y.), March.

- 48.—New Method of Making Applications to Vaginal Vault, and New Instrument to Facilitate Cleansing the Vagina in Leucorrhoea. Howard A. Kelly.
- 49.—*When Shall the Uterus be Doached, and How Shall it be Done? Edward P. Davis.
- 50.—*Plea for More Surgical Practice of Obstetrics. Samuel L. Weber.
- 51.—*Remarks on Extruterine Pregnancy. Charles P. Noble.
- 52.—*Detached or Parasitic Tumors of Uterus and Ovary. Henry C. Coe.
- 53.—*Extirpation of Uterus, Vagina and Rectum for Carcinoma. William M. Polk.

Medical Reviews of Reviews (N. Y.), February 25.

- 54.—Medical Inspection of Schools. Wm. L. Robins.
- 55.—Treatment of Cancer by its Own Toxins. P. J. McCourt.

Maryland Medical Journal (Baltimore), March.

- 56.—*Case of Pneumonia Treated with Antipneumotoxin. Charles E. Canby.
 - 57.—*Changes in the Skin in Paralysis Agitans. Robert Reuling.
 - 58.—Electrolysis as a Means of Curing Chronic Glandular Urethritis. George Walker.
 - 59.—*Exstrophy of Bladder from Ulcerative Destruction of Urethra of a Suprapubic Cystotomy. Louis Kolpiuski.
- Archives of Pediatrics (N. Y.), March.**
- 60.—Dilatation of Colon. F. T. Stewart and Alfred Hand, Jr.
 - 61.—Analytical Study of Certain Clinical Phenomena Observed in 112 Consecutive Cases of Chorea. John L. Steven.
 - 62.—Two Cases of Idiopathic Hematuria. T. J. Elterich.

International Medical Magazine, (Philadelphia), March.

- 63.—*Treatment of Pulmonary Tuberculosis. S. Edwin Solly.
- 64.—*Tuberculin, Antituberculin and Antitubercule Serums. Joseph McFarland.
- 65.—*Diagnosis and Treatment of Tuberculosis of Bones and Joints. DeForest Willard.
- 66.—*Tuberculosis of the Skin. Jay F. Schamburg.
- 67.—*Tuberculosis of Nervous System. D. J. McCarthy.
- 68.—*Franklinic Electricity and Methods of Application. (Continued.) Margaret A. Claves.
- 69.—*Laboratory Diagnosis of Tuberculosis of Urinary System. W. Wayne Babcock.
- 70.—*Tubercular Ulcerations in Stomach and Intestines: Use of Tuberculin. Boardman Reed.
- 71.—*Initial Form of Tubercular Laryngitis. D. Braden Kyle.
- 72.—*Treatment of Consumption. W. Blair Stewart.

Laryngoscope (St. Louis, Mo.), March.

- 73.—Case of Fatal Splenoidal Suppuration. Samuel Lodge, Jr.
- 74.—*Report of Case Illustrating the Importance and Possibilities in Early Recognition and Treatment of Malignant Growths of Larynx. W. K. Simpson.
- 75.—*Itch of Auditory Meatus. Alex. W. Stirling.
- 76.—*Silver Salts in Treatment of Chronic Suppuration of Middle Ear. E. B. Gleason.
- 77.—Report of Case of Persistently Recurring Epistaxis. C. C. Stephenson.

Medical Dial (Minneapolis, Minn.), March.

- 78.—Clinical Features of General Infection from Gonorrhoea. A. Wang.
- 79.—Gonorrhoea in Female. H. E. Catts.
- 80.—Review of New Remedies and Methods in Treatment of Gonorrhoea. C. D. Harrington.
- 81.—Prophylaxis of Gonorrhoea. Knut Hoegh.
- 82.—Remarks on Joint Diseases. Knut Hoegh.

St. Louis Courier of Medicine, February.

- 83.—*Increasing Frequency of Malignant Disease. Joseph D. Bryant.
- 84.—*Studies of Lactoserum and on Other Cell Sera. C. Fisch.
- 85.—Climate of Tucson, Arizona. A. W. Olcott.
- 86.—Relative Value of Antisepsis and Improvement in Technique, as Regards the Actual Results in Operative Gynecology. L. Gustave Richelot.

The Stylos (St. Louis, Mo.), March.

- 87.—Terminology in Nervous Disease. Sidney I. Schwab.
 - 88.—Infantile Convulsions. Remy J. Stoffel.
 - 89.—Fibroma of Ovary. L. H. Laidley.
 - 90.—Abuse of Medical Ethics. R. M. Ross.
- Merck's Archives (N. Y.), March.**
- 91.—*Present Status of Antiseptics in Surgery. Thomas H. Manley.
 - 92.—*Orexin Taunate in Anorexia. J. W. P. Smithwick.
 - 93.—*Use and Abuse of Ergot in Obstetric Practice. J. H. Jackson.
 - 94.—*Antidote Apparatus for Use in Poisoning by Hydrocyanic Acid and Cyanids. E. Merck.

Cleveland Journal of Medicine, February.

- 95.—*Digitalis and its Aids in Chronic Cardiac Disease. J. B. McGee.
 - 96.—*Feeding in Typhoid Fever, with Report of Cases. George W. Moorehouse.
 - 97.—*Bloodless Enucleation of Tonsils under Local Anesthesia. Royce D. Fry.
 - 98.—Prevention of Deafness. J. G. Grant.
- Occidental Medical Times (San Francisco), March 1.**
- 99.—*Choice of Operation for Radical Cure of Inguinal Hernia. Emmet Rixford.
 - 100.—*Limitations of Gargle—Some Internal Uses of Formalin. Saxton T. Pope.
 - 101.—*Remittent Fever. T. B. Reardon.

Richmond Journal of Practice, February.

- 102.—*Old-Time Monthly Nurse. W. A. Plecker.
- 103.—*How Does Albumin Get in Urine? M. D. Hoge, Jr.
- 104.—*Painful Ulcer and Fissure of Rectum. Livius Lankford.
- 105.—*Uses of Normal Saline Solution. Virgilus Harrison.

Journal of Mississippi State Medical Association (Biloxi, Miss.), March.

- 106.—Uranalysis. W. R. Neville.
- Denver Medical Times, March.**
- 107.—*Climate for Nervous Diseases. Henry W. Coe
 - 108.—*Medical Legislation; Its Relation to the Laidy and Medical Professions. R. Harvey Reed.
 - 109.—*Chronic Interstitial Nephritis. Edward C. Hill.
 - 110.—*Treatment of Hemorrhoids. W. A. Kieckland.
 - 111.—*Case of Pneumothorax. Alfred Mann.

Medical Council (Philadelphia), March.

- 112.—Eye: How it Sees; its Defects and Their Cure with Glasses. A. H. P. Leuf.
 113.—Radical Cure of Grave and Remarkable Digestive Disease. Paul Paquin.
 114.—Plea for More General Use of Anesthesia to Full Surgical Degree in Version in Obstetric Practice. D. S. Hanson.
 115.—Use of Forceps in Normal Labor. S. Herbert Britton.
 116.—Neurasthenia. Irving D. Willrott.
 117.—Suggestive Therapeutics, Magnetic Healing and Osteopathy. T. H. Line.
 118.—Pigeon-Post Pointers. Charles L. Lang.
 119.—Otorrhea. E. B. Gleason.

Medical Bulletin (Philadelphia), March.

- 120.—Rational and Scientific Investigation and Treatment of Epilepsy. A. L. Ranney.
 121.—Electric Treatment of Two Cases of Hemorrhoids. John V. Shoemaker.
 122.—Case of Tetanus Treated by Subdural Injections of Antitoxin and Hypodermic Injections of Carbohc Acid. Ernest LaPlace.

Memphis Medical Journal, March.

- 123.—Mosquito as Definite Host in Malaria. Wm. Britt Burns.
 124.—Injuries of Patella. Report of Case of Stellate Fracture. Wm. D. Sumpter.
 125.—Retrolaxations of Uterus. W. B. Sanford.
 126.—Care of Mouth and Teeth in Syphilitic. C. Travis Drennen.
 127.—Important Factor in Treatment of Malarial Complications. C. R. Shinaul.
 128.—Was it a Nervous Reflex? Report of Case. A. L. Elean.

Medical Fliror (St. Louis, Mo.), March.

- 129.—Different Phases of Electric Treatment. J. McFadden Gaston.
 130.—Nicholas Senn, M.D., L.L.D. Byron Robinson.
 131.—Use of Serum in Consumption and What to Expect. Paul Paquin.
 132.—Tuberculosis Pulmonalis: Facts vs. Fads. H. J. Tillotson.

Medical Summary (Philadelphia), March.

- 133.—Important Medical Thoughts. James G. Atkinson.
 134.—Obscure Abdominal Trouble. J. J. Waller.
 135.—Retail Druggist vs. Physician. Geo. A. Harris.
 136.—What Causes Disease. J. M. Hamilton.
 137.—Antiseptics—Iodoform. Joseph Adolphus.
 138.—Syphilis. Wm. V. Wilson.
 139.—Irrigations, Drainage and Dressings. Thos. H. Manley.
 140.—Acute Articular Rheumatism. Wm. Hooker Vail.
 141.—Treatment of Catarrhal Conjunctivitis. Milton P. Creel.
 142.—Concerning Finger Amputations. Arthur E. Strong.

New York Lancet, February.

- 143.—Should a Colostomy be Done for Cancer of the Rectum? Joseph M. Mathews.
 144.—Treatment of Compound Fractures. Charles G. Cumston.
 145.—Radical Operation for Hydrocele. Geo. Everson.
 146.—Unusual Case of Hyperchlorhydria. H. W. Lincoln.

New England Medical Monthly (Danbury, Conn.), March.

- 147.—Southern Colorado, Its Climate: Therapeutic Value in Diseases other than Phthisis Pulmonalis. H. Foster Hazlett.
 148.—Report of Obstinate Case of Ulceration of Cervix Uteri. G. A. Gilbert.
 149.—Fracture at Base of Skull, with Recovery. Newell C. Bullard.
 150.—Functional Constipation and its Treatment. A. J. Jenkins.
 151.—Tolland County Medical Society, Springs House, Oct. 17, 1899. C. B. Newton.
 152.—Alopecia. L. Duncan Bulkley.

Memphis Lancet, March.

- 153.—Fractures of Lower Extremities. Jere Lawrence Crook.
 154.—Smallpox. F. S. Raymond.
 155.—Elephantiasis of Scrotum. G. G. Buford.
 156.—Importance of Early Diagnosis of Adenoid Vegetations. M. A. Goldstein.
 157.—Report of Case of Pseudo Cystis. Alfred Moore.

Georgia Journal of Medicine and Surgery (Savannah), February.

- 158.—Preliminary Report of Discovery of Ameba and Plasmodia in Cultures from Blood of Persons Suffering with Malaria and Paludal Fevers, and Discovery of Motile Bodies in Human Blood Plasma and their Growth in Pure Culture, with Some Remarks Pertaining to the Subject. St. J. B. Graham.
 159.—Recent Investigations Concerning Hematozoa of Malaria. William Sidney Thayer.
 160.—Prevention and Treatment of Pelvic Inflammatory Diseases in Female by General Practitioner. R. R. Kime.
 161.—Nasal Obstruction and its Influence. J. Lawton Hiers.
 162.—Case of Diphtheritic Sore Lower Lip with Secondary Infection of Throat. Jno. R. Rose.

AMERICAN.

1. **Scarlatina.**—Gradwohl has found Class' diplococcus in seven cases of scarlatina, which he has been able to examine since his investigation began. He describes its characteristics and believes that it is the specific etiologic factor of the disease.

2. **Parotitis in Pneumonia.**—This rare complication of pneumonia is discussed by Talley, who notices the cases heretofore reported and gives one of his own observation.

3. **Epilepsy.**—The convulsions due to hemorrhage, alcohol and paresis are compared with the epileptic *grand mal* by

House, who believes that the increase in quantity of cerebrospinal fluid bears a causal relation to the convulsion. He concludes that: 1. We have no record of pathologic findings which logically explain the symptoms of epilepsy. 2. An increase of cerebrospinal fluid would readily account for the seizures. In many instances it is analogous to the marked increase of fluid in the crania of alcoholics and paretics, and is not dissimilar in clinical effects to the more localized lesions of hemorrhage or abscess. 3. This fluid, physiologically subject to more or less variation in quantity from day to day, is fully capable of pathologic increase, and from analogy must bear exciting relation to the convulsion. 4. Its increase is probably gradual, and to this we may ascribe the *auræ*. 5. Its absorption probably begins with the third stage of the convulsion—relaxation and coma—and if this fails, repeated convulsions—status epilepticus—ensue. 6. Its superabundance may be due to lymphatic spasm, or to marked disturbance of equilibrium between lymphatic and general circulatory activity, which may be favored by heredity, toxemia, or any of the recognized predisposing causes. 7. This creed applies to the so-called idiopathic epilepsy, as distinguished from the convulsion of Jacksonian epilepsy, in which there is a local cerebral lesion, although even in such cases, the condition described will help to explain many otherwise unexplained symptoms.

4. **Reflex Neuroses from Phimosis.**—Edie reports several cases of impotence, urinary retention, respiratory neurosis, and insanity relieved by operation.

5. **Foreign Bodies in Abdomen.**—Kelly reports three cases which have come under his observation during the last ten years, in Baltimore, where gauze or sponges were left in the abdomen in operations, and notices the dangers. To avoid such accidents he recommends always commencing with a definite number of gauze pieces and sponges, and if more are added have careful note taken of it at the time. Entirely abandon the use of small sponges and packing gauze up in the abdomen out of sight. The use of tapes or strings is not an absolute safeguard. The operator should ask, at the close of the operation, how many pieces of gauze and how many sponges are called for, and the answer should be positive. Under no circumstances should the count be muddled by cutting them. It is his practice to make two persons responsible for the number of pieces used and their production at the end of the operation, viz., the assistant who handles the sponges and the nurse. The discarded gauze or sponges must always be thrown in a receptacle, never under any circumstances mixed with other things or carried out of the room. He has had a special rack made for the purpose, which he illustrates. This contains a definite place for each article used. In addition to all precautions the surgeon must always use his own judgment in taking exact note of everything put into the abdomen, and it may be of service to state it aloud as each piece is put in. An examination should be made in all cases, by actual inspection and touch, that nothing has been left behind. Such an examination will not be too extreme unless there is a missing article to be discovered.

6. **Sheldon Murder Trial.**—Cheesman and Hamilton conclude their article on the Sheldon murder trial and figure out the spread of powder grains in the skin at the various distances from the muzzle. They claim to see that in this special case the shot was not fired at contact, and that Dr. Phelps thus becomes a witness for their side of the case.

7. **Gout and Rheumatism.**—After discussing the theories of uric acid production and its causes in the organism. Porter claims that it is produced by oxidation of proteid substances in the protoplasm of the renal cells. It is one method for the elimination of nitrogen in the system, and when it rises above the normal it is simply the symptom found in the urine which indicates an imperfect state of the proteid oxidation and a general condition of malnutrition. It becomes in these instances a chemical irritant of parts of the body, and produces a local inflammatory action until the fibroplastic exudate is thrown around the urate of sodium precipitated in the cartilage and elsewhere. He notices the bacteria theory, but thinks that it does not thoroughly explain the condition,

though the toxins acting on the alimentary canal may give rise to it. The diet is discussed and the relative value of vegetable and animal food stated. In some cases where the indigestibility of the vegetable and the difficulty of disposing of the saccharine contents and their liability to fermentation can be avoided, the vegetable diet may be very satisfactory; fruit should usually be avoided. The adaptability of the system to any special form of diet must also be considered in each individual case. The best results require utilization of both animal and vegetable foods. The mixed diet, free from excess of saccharine elements and substances liable to excite putrefactive fermentation, as little irritating as possible to the alimentary canal and not in quantities to excite oxygenating capacity of the system, will give the best results. Add to this considerable medication to augment digestion and absorption and stimulate glandular action in general and many cases will speedily recover which would otherwise become chronic and incurable.

13. Anesthetics.—Temple thinks there is a future for the Schleich method of anesthesia, and that it will revolutionize the old ones. The mortality from chloroform is discussed and the best methods for preventing it, also the avoidance of the uncomfortable complications of nausea, vomiting, headache, etc.

14. Cerebral Complications from Nasal Extension.—In this article Craig reports cases and describes the effects of pressure from the nasal veins on those of the meninges, and the nasal etiology of cerebrospinal meningitis.

15. Retrodisplacement of Uterus.—Watkins says that when determining the best method of treatment in any cases of retrodisplacement, the several following questions should be answered: 1. Is there any disease of the pelvic organs that would be benefited by operative measures? 2. Is it a case where a pessary can be fitted without difficulty? 3. Can the patient have intelligent medical care while wearing the pessary? 4. Is she willing to give the time necessary for her recovery? Diseased appendages should be removed and the fundus suspended from the abdominal wall. If it is impossible to fit a pessary, this operation should be resorted to, otherwise the patient will not appreciate your efforts, and she will justly look for some one who will operate. It is unwise to send a patient away when she will not be looked after, as too long or improper use of this instrument will produce damage, which will be charged to the one who inserted it. As to the time necessary to wear a pessary for relief, that varies. At intervals of three to six months he removes it for a few days, and if the organ remains in position, discharges the patient. He favors a hard rubber Hodge instrument, which can be slightly molded by oiling and holding over an alcohol lamp. When endometritis or laceration of the cervix with glandular infiltration exists, the condition should be corrected. Adhesions may require laparotomy, as also cases of neoplasms. He thinks the Alexander operation has been performed too much.

16. Eructation, Regurgitation and Rumination.—These three conditions are noticed and their treatment described by Lincoln. In the first, suggestion is all-important; perhaps a little bromid may aid. In regurgitation, which is more common than is generally supposed, the patient should reswallow the food as fast as regurgitated, should always eat in company, and the diet should be regulated. Bromids may sometimes be needed; electricity, externally and internally may do good. Rumination, which is the most serious condition, is not usually dangerous to life. The cause must be removed if possible, and strong will-power is the best thing. Meals should be served in the presence of some one whom the patient respects, the diet regulated with strict regard to gastric secretion. He uses, as far as possible, foods that remain but a short time in the stomach, and warns and guards against contraction of the abdominal muscles. A good idea, suggested by Hemmeter, is to administer some very bitter preparation at meal time. He had used quinin, and Lincoln suggests a formula containing condurango, quassia, gentian, nux vomica, and capsicum. He says the patient once regurgitating this mixture will not do it again. Internal faradization acts well, and alkalies or hydrochloric acid may be used as indicated.

19. Care of the Hair.—Patients sometimes ask advice in regard to the care of the hair, especially when it is falling out, as after fevers. There is little to be done. Once or twice a week a little ointment consisting of precipitated sulphur, Si , to good cold cream, Si , should be gently worked into the scalp, and every two or three weeks, the latter should be washed and a little pomade applied as soon as the hair is dried. Once in two to four weeks is usually enough to wash the scalp; it is bad to wash it too often. The best soap is a liquid one, such as the tincture of green soap, and whatever soap is used must be thoroughly washed out and a little pomade rubbed in to take the place of the natural oil that has been washed out. He thinks that the use of hair ointments that will not turn rancid, once a week is good. Avoidance of wetting the hair would diminish the frequency of baldness. As regards cutting the hair it makes no difference how often it is cut, and singeing is a foolish fashion with no basis to recommend it.

20. Neurologic Observations in Hawaiian Islands.—Brower finds the Hawaiian climate somewhat depressing on the sea coast, and neurasthenia is not uncommon, while it is an ideal place for spinal sclerosis generally. Insanity among the natives is generally mild. Leprosy in the islands is an important subject. The difficulty of stamping it out is enhanced by the lack of fear of the disease on the part of the natives and the tendency to conceal it. When a case is discovered it has generally been spreading infection for a long time. It seems to affect the white race but little.

21.—See abstract in THE JOURNAL of Nov. 4, 1899, p. 1164.

24. Open Treatment of Fractures.—Scudder, whose article is continued, thinks the ideal result is union without deformity and impairment of the function, and that the generally used methods of treating closed fractures do not give satisfactory results. They can be safely treated by open incision and internal fixation when other methods fail to secure reduction and immobilization.

25. Intermittent Gastric Hypersecretion.—Eling reports a case of this disorder which is characterized by intermittent attacks of nausea and vomiting occurring usually when ingesta are no longer present in the stomach. The diagnosis is not difficult, though there may be some confusion if associated with gastric crises in tabes. The treatment is not very satisfactory. During the attack, the indications are to remove the accumulated secretion with a stomach-tube, and use weak alkaline lavage, or 1 to 1000 silver nitrate solution. When the pain is very severe, anesthetics may be indicated. Food should be given only between paroxysms and in small quantities, preferably fluid. Subcutaneous infusion or rectal enemata of normal salt solution are the best means of allaying the sometimes intense thirst. As the disease appears to be a functional neurosis the constant tonic treatment of the nervous system is indicated. Cold water treatment is often good. Strychnin, quinin, morphin, etc., are indicated, and care should be used to guard against mental excitement.

28. Gastric Ulcer.—According to Satterthwaite, gastric ulcer is comparatively rare in this country, more so than in some parts of Europe. It seems to be more frequent in females. The causes are numerous, but the evidence that tuberculosis is a cause is accumulating; syphilis is another prominent one. The symptoms are described and the treatment given. Two things should be emphasized, relief of immediate symptoms and care of the ulcer. For this he advises rest in bed, rectal feeding for some days after hematemesis, warm applications to the epigastrium, avoidance of the stomach-tube, etc. The mortality in medical treatment is small, but in some cases surgical operation is the only possible resort for saving life, and the dangers of surgery are rapidly lessening. The most dangerous complication is peritonitis, which should be recognized at the earliest moment. Subphrenic abscess is another important surgical complication. The duodenal ulcer is practically identical, anatomically and etologically, with gastric ulcer, excepting that possibly it is more frequent in association with burns. Six cases are reported.

29. Treatment of Fatty Heart.—Schott describes the methods that have been advised in cases of fatty heart and

describes his own with regulated, resisted exercises and baths at Nauheim. The article is illustrated with reproductions of sphygmographic tracings.

30. Duodenal Ulcer.—Bolton reports five cases of round ulcer of the duodenum, and discusses its surgical treatment. Of the operations, the most eligible consists in excision of the ulcer, which can be done in almost any part excepting at the entrance of the pancreatic duct. The incision need not go very wide of the ulcer, but must be closed by Czerny-Lembert sutures, as in pyloroplasty, so that the suture line lies at right angles to the long axis of the gut. The peritonitis attending perforation should be treated according as it is localized, spreading, or general. In the first case, if well circumscribed by adhesions, nothing is necessary beyond sponging out the pus and supplying gauze drainage. For spreading or general peritonitis, it is sometimes doubtful what should be done, but the author does not think that any great advantage is gained by eviscerating the patient or extensive manipulations. So far as removal of blood exudates is concerned, this can be done as well by carrying a large quantity of salt solution through the Chamberlain tube to all parts of the cavity until the returning fluids become clear. Drainage should be done to the point of infection. He has not found it necessary to drain other regions which have simply been repositories of turbid serum.

31. Methylene Blue in Gonorrhœa.—The advantages of methylene blue in gonorrhœa are mentioned by O'Neill, who suggests its use in the prophylaxis of this disorder.

35. Justus Test in Syphilis.—The article of Brown and Dale is an elaborate study of the Justus test, which consists in the observation of the diminution of hemoglobin. The author's conclusions are: 1. The test is not always reliable, though present in many instances. 2. It is occasionally present in diseases other than syphilis, and in which active syphilis can be excluded. 3. These exceptional diseases are characterized by great hemoglobin anemia. 4. It is necessary to try the test in a series of cases of the essential anemias before claiming it as absolute. 5. The low point is not necessarily reached after the first injection. 6. Practically the test is of but little value.

36-38. Normal Prophylactic Appendectomy.—The issue of the *Medical Review* for March 17 is almost entirely taken up with responses to inquiries addressed to various American surgeons as to the propriety of performing appendectomy in infants and children to prevent future appendicitis. Over 80 physicians give their opinions, which were more or less decidedly unfavorable, with the exception of half a dozen. The list includes most of the prominent surgeons in the country. In the issue of March 24, Manley furnishes a more elaborate article on the subject, and concludes that there is no condition of any kind whatever which ever warrants any description of mutilation of the body in well-formed vigorous children. He doubts whether the sanitary advantages claimed for circumcision justify the operation. Several surgeons whose names were not included in the first list also give their opinion against the procedure.

39. Antistreptococcus Serum.—Sharpe notices the known facts in regard to antistreptococcus serum, noting in full the conclusions of the committee of the American Gynecological Society in 1898. He thinks, however, that the serum deserves further trial, and reports two cases in his own experience in which it was used with satisfactory results.

45.—This paper is also titled elsewhere in this issue of THE JOURNAL: see title 105.

47.—This paper has appeared elsewhere: see THE JOURNAL of March 17, title 98, p. 674.

49.—See abstract in THE JOURNAL of March 3, p. 561.

50 Surgical Obstetrics.—Calling attention to the fact that obstetrics is largely in unskilled hands, Weber insists on the need of more attention to the possible morbidity of the parturient condition. He thinks that a woman has a right to expect more than that the child should be born alive, and that she should not get fever or merely escape without a serious-perineal tear. He describes what he considers a proper method of conducting an obstetric case, which implies general knowl-

edge of prior medical history as well as careful attention to every detail during parturition. Most careful search should be made for possible injuries, especially for laceration of the levator ani muscle or the floor of the pelvis, which is often very serious in its consequences.

51.—See abstract in THE JOURNAL of March 3, p. 561.

52. Detached Tumors.—Coe's article is based on a case recently observed, in which a tumor was found adherent to the bladder. It had been a subperitoneal fibroid, probably attached to the anterior surface of the uterus and separated by rotation. The points of clinical interest were the persistent pains at the side of the tumor, its resemblance to ovarian neoplasms and the absence of vesical disturbance, and incidentally the development of tubal pregnancy, which masked the original symptoms. He reviews the pathology of the condition and concludes: "Subperitoneal fibroids may become completely detached from the uterus and may receive their nourishment entirely through adhesions. Such transplantation with entire disappearance of the pedicle must be exceedingly rare. Although axial rotation is probably the first step in the process it is fair to assume that vascular adhesions form before separation is complete. Clinically these tumors may be mistaken for growths developing primarily in the organ to which they contract adhesions, especially ovarian, renal and splenic. Transplantation of ovarian and parovarian cysts is less common, and is more likely to be followed by degenerative processes. Chronic rather than acute axial rotation is the usual cause. The clinical diagnosis of this condition is practically impossible. The prognosis is better in cases of solid than in those of cystic tumors."

56. Antipneumotoxin.—Canby reports a case of severe double pneumonia, in a man aged 20, with temperature 105, pulse uncountable, respiration 56. He was given 12 c.c. of antipneumotoxin, and in three hours his temperature fell 2½ degrees; respiration was 24 and pulse 96. He received another dose and his improvement was after that uninterrupted. The attack itself was a second one, or rather a relapse after the first. Two other cases are reported with similar good results, which occurred in the practice of one of his confrères. He does not give the source of his serum, but it is apparently similar to that of Pane.

57. Skin in Paralysis Agitans.—The changes in the skin which have been reported by Frenkel, are here noted by Reuling, who reports a case with careful microscopic examination. In the six cases which were examined, these changes were found in four. They consisted in a thickening of irregular distribution with loss of elasticity and accompanied with pains located in just these parts. Reuling thinks that these pains are due to the constrictions of the sensory nerves involved. The skin thickening, he believes, is a trophic phenomenon of the disorder, and not especially due to toxic substances in the blood, as suggested by Frenkel.

63. Treatment of Pulmonary Phthisis.—The first step in intelligent treatment of pulmonary tuberculosis is a study of the personal and family history, what depressing conditions or diseases have preceded it, and what the family history has been in regard to probable resistance to disease. When this reveals an inherent deficiency of resistance, the treatment almost always requires a radical change of life, and climate if circumstances will permit. Solly seems to think that a collateral history of consumption in brothers and sisters is more serious as indicating predisposition to disease than direct parental heredity. He says that, with certain exceptions, patients with family phthisis do not do any worse but rather better than those without it. As regards the question of climate, the following statements are true: Cold is better than heat; dryness than dampness; sunshine than cloudiness; high ground rather than low; wind in moderation is healthy and stimulating, unless it be damp, in which case it is depressing. Variability of temperature with dryness is generally beneficial, and with dampness the reverse. The best climate for the consumptive is one in which cool, dry air can be taken into the lungs while the surface of the body is stimulated by warmth, light and bright sunshine, and in which at night the chamber windows can be safely left open so that the patient may

breathe cool, dry air while sleeping under a warm cover. He thinks that diminished barometric pressure is better than dryness in checking the progress of phthisis. He divides consumption into three classes, the tuberculous, catarrhal and pneumonic, all being tuberculous. In the first, the tuberculosis seems to overshadow the other conditions. These have usually a marked feebleness of resistance. The catarrhal group comprises those subject to catarrhal attacks, and in whom the obstruction of the nose or nasopharynx is very common and bronchitis frequent. The pneumonic group embraces those cases in which an inflammatory process has usually preceded the tuberculous invasion and the disease advances by leaps, following recurrent catarrhal pneumonias. The tuberculous do best in high, cold, dry climate. The catarrhal also do best in high, dry sunny regions, but preferably warm to cold. The pneumonic cases are better off in a climate of medium elevation, with plenty of sunshine and moderate in warmth and dryness.

64. **Tuberculin.**—McFarland reviews the history of tuberculin, its method of manufacture and its results as far as known. The general impression left by his paper is that treatment by it is not yet matured or thoroughly effective.

65. **Tuberculosis of Bones and Joints.**—The most important point made by Willard is that many cases of tuberculosis are called rheumatism until the disease is seriously advanced. He thinks the profession should absolutely recognize the fact that rheumatism in a single joint in a child never exists without positive indications of fever, swelling, heat, etc. The symptoms of invasion of the tuberculosis are usually plain. Muscular rigidity is one of the earliest and most reliable. The onset may be some slight traumatism that may be past and forgotten. Heat and swelling are absent in the early stages, and the diagnosis should be made long before they appear. The examinations are liable to be too superficial, one of the greatest sources of errors. Another common error is too much dependence on a history of tuberculosis in these patients. There is but one rational line of treatment: 1. To fortify the entire resisting powers of the individual and repel all elements so as to ultimately cure the disease. 2. To assist these powers by rest and mechanical measures to prevent inflammatory action leading to mixed infection and suppuration. 3. Removal of the diseased focus or its products as necessity arises. Each of these indications is discussed in detail and measures described.

66. **Tuberculosis of the Skin.**—The skin diseases of tuberculous origin are given by Schamberg as follows: Tubercular ulceration, anatomic tuberculosis or verruca necrogenica, and a somewhat similar condition known as tuberculosis verrucosa cutis, met with in butchers, cooks, etc. Scrofuloderma is a term used for that form of tuberculosis of the skin around caseating and suppurating lymph glands, and with those also associated symptoms of scrofula. Lastly, we have the most important of all forms, lupus vulgaris. In all of these infections the tubercle bacillus can be found, though sometimes only after laborious search. In lupus vulgaris and the warty form the skin infection is usually primary. Ordinarily these troubles do not give rise to generalized tuberculosis. The treatment should consist in extirpation of the diseased tissues, with as little resultant scarring as possible, performed by knife, curette or caustics. Finsen's light treatment is also mentioned. Plenty of nutritious food should be given, with attention to hygiene.

67. **Tuberculosis of Nervous System.**—The conditions mentioned by McCarthy are meningitis, which may be generalized or, less frequently, circumscribed, myelitis, encephalitis, tuberculous tumors, insanity, hysteria, etc.

69. **Tuberculosis of Urinary System.**—Babcock's article is an elaborate description of the methods of examining the urine for tubercle bacilli. He calls attention to the special points of cleanliness in obtaining the specimens, and the certainty that the smegma bacillus is excluded.

70. **Intestinal Tuberculosis.**—Existing in children, according to Reed, tuberculosis of the intestine is nearly always due to swallowed sputum, and is only amenable to palliative treatment. He calls especial attention to the tuberculin test,

which he believes is an important diagnostic agent and perfectly safe if properly used. In the treatment of gastrointestinal tuberculosis, all the usual modern methods are applicable, including the hygienic, climatic, etc. Special attention should be given to each case, with occasional tests of stomach contents, frequent analysis of the urine, a study of the blood, and occasionally in some cases examination of the feces. Medicine by the mouth is to be given with care, and reaction of the digestive organs should be carefully watched. One or two drop doses of Fowler's solution suits most cases. The various phosphates, strychnia, and iron preparations are liable to disagree in the usual doses when the gastric glands are excited or irritated. Hydrotherapeutic measures are often useful. Gymnastics, horseback riding, cautious bicycle riding and mountain climbing for those who have good circulation, are to be recommended.

71. **Tubercular Laryngitis.**—A large part of Kyle's article is a translation of one by Monsarrat, pointing out the signs of laryngeal tuberculosis. He himself remarks in regard to the tuberculin test, that it should be employed only with great care. The importance of positive diagnosis at the earliest possible moment is urged.

72. **Treatment of Consumption.**—Stewart advises the open air treatment as far as possible, perfect hygienic surroundings, daily baths gradually becoming cooler until the patient can stand cold baths; short salt baths every three or four days are often of use. Unsuitable clothing is responsible for much trouble. He advises medium mixed woolen and cotton underwear for winter and very light weight for summer, using heavy or light wraps as need be. The better the patient stands cold the easier his management. Air baths, consisting in removing all clothing and remaining naked in the air of the room, are advised. Consumptives should always sleep alone. Diet is important. Rich milk and cream should be given three times daily, if it can be digested, and we should feed the patient all the simple albuminous foods he can assimilate. When the stomach refuses to act, the case is hopeless. Exercise and gymnastics short of fatigue, never just after a meal, are to be systematic, moderate and regular, and under a physician's direction. The medical treatment is largely symptomatic. He keeps his patient in bed when the temperature is above 95, and allows no active exercise until it is below that point. Good cheerful company adds materially to the effects of treatment. He thinks no patient is absolutely cured, but the disease may be arrested so that the patient may enjoy apparently good health for very many years.

74. **Malignant Growths of Larynx.**—The case reported by Simpson was subjected to three operations, the conditions of which are illustrated by cuts. He calls attention to the important fact that all new laryngeal growths in the adult, especially if recurrent, however simple they may appear, should be regarded with suspicion and prognosis made accordingly. His case also illustrates the difficulty and anxiety attending positive diagnosis in very early cases, where a period of transition is apparently present and where microscopic examination admits of some doubt. It also shows the satisfactory results from persistent efforts of removal and the possibility of cure without resorting to the major operation of laryngectomy.

76. **Silver Solution in Ear Operation.**—From the four cases here reported, Gleason is inclined to think that protargol is an antiseptic astringent superior to any now used in chronic middle ear suppuration. He admits the small number of cases and submits this preliminary note on account of the rapidity of the cures. Unlike nitrate of silver solution, it is uniritating to the posterior pharyngeal wall, and he has used it there as well as in the atrium and auditory canal.

83. **Increasing Frequency of Malignant Diseases.**—Reviewing the statistics as given by Park and others, Bryant concludes that malignant cancerous diseases are increasing, and that in spite of the improved methods of surgical treatment the frequency of attacks in the different parts of the body is also changing. The increase has been comparatively slight in the formerly most common seats, the mammary and genital organs of women, but as shown, it is notable in the

intestines, rectum, liver, etc. He does not believe that facts point strongly to the parasitic origin. As regards treatment, he points out the great improvement in the statistics of surgery, and the importance of early recognition and thorough removal of the infected parts. The discovery of a tumor demands prompt diagnosis of its nature.

84. **Lactoserum.**—Fisch's paper is a report of his own investigations of animal sera and especially those of milk.

91. **Antiseptics in Surgery.**—Manley reviews the history of surgical antiseptics, showing it was overdone at the first and that asepsis, which is the favorite term at the present time, simply means modified antiseptics. Antiseptics occupy a prominent place in the practice of antiseptics, and soap takes first place. They are not now employed during an operation, but are rigidly restricted in non-infected cases to before and after the surgical procedure. The actual operation therefore, is the only aseptic part of the whole performance. The dry treatment of wounds marks a notable advance.

93. **Ergot in Obstetrics.**—The advantage of ergot in obstetrics, according to Jackson, are chiefly the prevention of post-partum hemorrhages, though he would give it in early stages if labor is slow, until the escape of amniotic fluid. As a rule, however, it is neither necessary nor desirable, and there are other agents that are better. It should not be thought of if rupture of the membranes has taken place, unless it is known that the fetus is dead. Shall we give a dose just before or just after birth to prevent excessive hemorrhage? He says an intelligent physician would not, but with the routine physician it would be safer to give it in all cases. The other methods to prevent post-partum bleeding should not be neglected. He thinks ergot would not give rise to rupture under proper restrictions in one case in thousands, and he doubts whether it could occur in healthy persons. It does not increase the danger in pregnancy if Bright's disease exists, but it should never be taken during pregnancy before labor.

94. **Cyanid Poisoning.**—Merck describes an apparatus as an antidote for cyanid poisoning, which transforms the hydrocyanic acid into oxamid by means of hydrogen dioxide. A 3 per cent. solution of hydrogen dioxide is given from a sealed flask, by subcutaneous injection, every three to five minutes, in various parts of the body, until the respiration becomes normal again and pulse strong. A number may be made rapidly if necessary, and the stomach is washed out with another solution of the same agent.

95.—See abstract in THE JOURNAL of Jan. 13, p. 110.

96.—Ibid., p. 111.

97.—Ibid., Dec. 16, 1899, p. 1552.

99. **Inguinal Hernia.**—After reviewing the different operations, Rixford suggests the following indications for the choice of operation in different forms of oblique inguinal hernia. The Kocher operation would be suitable for congenital or infantile cases when the canal is very slightly distended and the sac long and narrow. The Bassini and Macewen operations will probably be best in cases where the conjoined tendon is found to be firm and well developed, the latter to be preferred where, with these, the aponeurosis of the external oblique is not greatly stretched. The Bassini would perhaps be better where it would seem advisable to take up slack in the external oblique by approximating the pillars of the external ring and where, on account of adhesions, it is necessary to cut the external oblique in order to reduce the hernial contents. The real grounds for debate in the hernia question are in the management of cases in which the conjoined tendon is thin and weak and where none of these, nor the Champigniere operation, is satisfactory. Andrews has devised a so-called imbrication method by which a flap is lifted up from the aponeurosis of the external oblique to pass beneath the cord, making an aponeurotic canal. Rixford thinks there are some serious objections to this, and that not enough cases have been operated on as yet to prove its value. Bloodgood has offered a method of utilizing a portion of the rectus muscle to fill in the gap on the inner side of the canal, and Rixford thinks, from anatomic considerations and results obtained, this method deserves trial.

100. **Limitations of Gargle—Formalin.**—Pope has ex-

perimented with methylene blue to determine the limitations of the parts reached by the gargle, and he finds that it is practically limited to the buccal membrane, the uvula and tongue. Where the pharynx and larynx are to be medicated, a spray is better. He also recommends the internal use of formalin as an internal antiseptic, and also for the disinfection of urine.

105. This paper appears elsewhere: see title 45, above.

107. **Climate for Nervous Diseases.**—Coe gives figures, temperature tables, etc., comparing the climate of Portland, Ore., with those of various interior health resorts. He calls attention to the special benefits of its mild, and soothing climate.

111.—See abstract in THE JOURNAL of March 17, p. 689.

120. **Treatment of Epilepsy.**—Ranney here repeats his arguments in favor of his theory of eye strain causing epilepsy, and reports several cases.

121. **Electricity in Hemorrhoids.**—The theory of Shoemaker, here given, is that the negative pole of the galvanic battery properly applied will reduce the strangulation of hemorrhoids and tend to restore normal circulation. He reports two cases where the use of the galvanic current produced permanent cure in strangulated hemorrhoids.

122.—See abstract in THE JOURNAL of March 3, p. 560.

123.—Ibid., Dec. 2, 1899, p. 1420.

125.—Ibid.

126.—Ibid., p. 1421.

128.—Ibid.

129.—This paper has appeared elsewhere: see THE JOURNAL of March 3, title 170, p. 549.

131. **Serum Treatment in Tuberculosis.**—Paquin enumerates the indications for the use of serum in tuberculosis. It is not always indicated in all cases, but in incipient ones especially it may be expected to be of benefit. The heart and urine should be carefully examined, as cardiac insufficiency and albumin, while not direct counterindications, suggest caution in dosage and administration. Begin with small doses, and 30 drops a day, six times a week, is enough after tolerance is established. There is great difference in individual susceptibility, and there may be slight eruptions or flushings, etc., in some of these patients, which should cause the cessation of the treatment for a time. A fine, sharp needle, rather than a coarse one, should be employed, and the patient should be rested one week in six, beginning again with a small dose, say five drops. The stomach, bowels and kidneys should be watched, diet regulated, and proper climatic conditions, when available, utilized. One must remember that the results are sometimes slow, and patience and persistence in treatment is essential. In cases where there seems to be much pus infection, he uses antistreptococcus serum. In some he finds serum injected into the bowel beneficial; this dose should be about twice the hypodermic one, and should be diluted with equal parts of water to facilitate absorption.

143. **Colostomy in Rectal Cancer.**—The following are Mathews' conclusions: 1. In the majority of the cases of cancer of the rectum, colostomy is not to be advised. 2. When the malignant growth is sufficiently low down in the rectum to be circumscribed, it should be excised. 3. Gradual dilatation or division of the strictured portion is much preferable to a colostomy. 4. Colostomy is fully justified in cases where total, or nearly total, occlusion has taken place at a height in the gut which precludes its division. 5. Opium is much to be preferred to a colostomy, as a means of quieting pain the result of cancer in the rectum.

144. **Treatment of Compound Fractures.**—The milder cases of compound fractures with simple solution of continuity of the skin without protrusion, Cumston would treat antiseptically, as a simple fracture, and if comminuted, the periosteal fragments may unite with the callus or afterward be eliminated or removed. In serious fractures with considerable tissue laceration, narcosis is necessary if it is intended to entirely disinfect the wound. In removing spines we are to be careful not to take away any part that may be useful in the union of the bone, and should refrain from

immediate resection of ends if they project. If there are extensive irregularities, counter-incisions and drainage may be employed. If the wound is regular and even, it may be sutured, but generally this is not the case. The treatment is the same with joints as with shafts of bones, but very careful sponging of the cavities should be done and drainage used. When the compound fracture has become infected, the nature of the inflammatory process will guide the treatment. If the inflammation is slight, open up the wound; if it is serious, the greatest care must be used. The method of using splints and plaster casts is mentioned. As regards the changing of dressings, there can be no fixed rule, but we should watch their condition carefully, also the facies of the patient, whether he is in pain, and the temperature. When the temperature reaches 39 C. it means that the dressing should be removed at once and the condition examined. The appearance of the patient will be a guide to an experienced surgeon. When the traumatism and bones have healed, it may be necessary to have an operation to restore the bone to its normal function, but in every case a conservative treatment should be adopted as far as possible. He does not favor too ready resort to amputation in serious compound fractures, but if it has to be done it will probably have to be higher up than first indications would seem to demand. He thinks that modern surgery diminishes the danger of infection, so that so many cases do not need surgical interference as was formerly thought necessary.

153. Fractures of Lower Extremities.—A series of cases of fractures are reported by Crook, who thinks that any injury about the hip in a person past 45 should receive careful attention, and that impacted fractures are especially apt to be unrecognized. It is never safe to give a positive opinion without examination under anesthesia or the X-ray. To differentiate between intra- and extra-capsular fractures is unnecessary. The simple Buck's extension apparatus gives good results. In fractures of the femoral shaft, it is wise to use anesthesia, and he calls especial attention to the combined extension and plaster apparatus, especially in double fracture. In compound fractures success or failure depends almost entirely on the first dressing, hence the necessity of rigid antiseptics. If the wound can not be sterilized otherwise, it is better to cut down on the fracture, irrigate and treat it as an open wound.

FOREIGN.

British Medical Journal, March 17.

Remarks on Holmgren Wool Test: Is it Adequate for Detection of Color Blindness? THOMAS H. BICKERTON.—While at first thoroughly believing in the Holmgren test for color blindness, Bickerton has of late become less a believer in its allsufficiency and he reports a case where the mate of a steamer suffering from a dangerous form of color blindness was able to pass these tests with ease. He thinks that the Holmgren test is by no means a certain discoverer of the lesser marked forms of color blindness. That there should be a phase of physical infirmity such as he has described rather strongly indicates that color and luminosity are in some way or other immediately associated, and the person who loses the ability to discriminate between color at a distance but gains it at close quarters certainly possesses a type of color disturbance which the Holmgren test will never discover. He quotes in support of his view, Dr. Hubert Seager, Captain Abney, and Drs. Mackay and McGillivray. He thinks to insure a certain discovery of all color defects, a quantitative test for color is required in addition to this now used.

Practical Applications of Largin in Diseases of the Eye. SYDNEY STEPHENSON.—Largin, a new silver preparation said by Merck to contain 11.1 per cent. of silver combined with protalbin, has been tested by Stevenson in several cases, and he concludes as follows as to its value: The application of largin, even in concentrated form, is painless, but, when prolonged beyond a few weeks, may stain the conjunctiva. It acts well in blepharo-conjunctivitis, and in some cases of dacryocystitis. It is an efficient substitute for silver nitrate in any of the conjunctival inflammations associated with the Koch-Weeks bacillus, such as infectious ophthalmia and acute or subacute

trachoma. It acts admirably as a temporary remedy after any of the operations commonly practised for the relief of chronic trachoma. In gonorrhoeal ophthalmia, on the contrary, it is, in his experience, distinctly inferior both to protargol and to silver nitrate. In diplo-bacillary conjunctivitis too, it does not succeed as well as zinc sulphate. In short, largin seems likely to gain a permanent place among the somewhat restricted number of remedies employed in everyday eye work.

The Lancet, March 17.

Surgery of the Stomach. A. MATO ROBSON.—In this second lecture on surgery of the stomach, the subject of perforation is first taken up. It may be acute or subacute. The acute form is not difficult to diagnose, as a rule, but the subacute type may give some trouble and there is a third variety where perforations occur and a small amount of fluid escapes, but is quickly limited by adhesions at some distance from the perforation. In the acute type where there is usually peritoneal catastrophe with previous history of gastric ulcers, there can be little doubt as to the case. In subacute cases the diagnosis rests mainly on physical signs. The exploring syringe may be necessary. Greig Smith called attention to an important symptom in this class of cases, a line of induration underlying and adherent to and moving with the parietes, indicating where omentum is adherent to the abdominal wall. As for treatment there is only one method, and that is surgery. Time is the principal element of success. In cases operated on early, within twelve hours, the mortality was 28.57 before 1896, but only 16.66 since that date. The details of the operation are of great importance. Everything should be done to save shock. The ulcer can generally be discovered readily, as in the majority of cases it is anterior, and on the posterior wall in only 8 per cent. The details of operation are given in full, but can not be repeated here for lack of space. The condition next taken up by the author is gastric fistula, the result of perforation, which he classifies as pathologic and traumatic. In these cases the fistula may be internal or external, and in the former the diagnosis can only be made, as a rule, by opening the abdomen. The external fistula may be serious for the health of the patient from the loss of gastric juice and stomach contents producing local irritation and disturbance of digestion. Internal fistula is liable to produce dyspepsia, loss of flesh and other disordered symptoms. The treatment of internal fistula would be much the same as in cases of chronic gastric ulcer, unless in cases of malignant disease where there would be little hope of doing good. Surface fistulas can be rapidly closed by plastic procedure, or may be cured by careful dressings and rest. Perigastritis and adhesions with their symptoms are also mentioned, and in their treatment surgical operation is often justifiable. To detach the adhesions in mild cases careful medical treatment may suffice. The hour-glass contraction is noticed, its chief cause being cicatricial contraction of ulcers; Robson is not satisfied that it is ever congenital. Surgery of these conditions is likely to be called for only in the later stages. Three courses are open: gastroplasty, gastro-gastrostomy and gastro-enterostomy. The first is the one he has always preferred, and he appends a list of cases with results. Gastro-gastrostomy seems a good term to apply to the operation for making an artificial opening between the two cavities of the stomach. The statistics show seven cases, with six recoveries. Gastro-enterostomy between the proximal cavity and the jejunum will leave the second cavity with its foul contents untouched, and he thinks that it may give relief but can never lead to cure. If there is not only constriction of the stomach but also of the pylorus, it would be worth considering. Dilatation of the stomach is generally classed as suitable for medical treatment, but if this does not succeed, surgery may be required. If there is a stricture of the pylorus, it must be dealt with in one of the several ways, pylorodiosis, pyloroplasty, gastro-enterostomy or pylorotomy, according to its nature. The author does not favor the first. The second is a more hopeful method and he gives a tabulated statement of his own and others' operations, and describes the modifications that have been suggested. Gastro-enterostomy may be employed if dilatation is dependent on an obstruction outside of the stomach which can not be removed; in the malignant diseases of the

pylorus, pylorotomy is indicated. The lecture concludes with some remarks on congenital stenosis of the pylorus, which is held by Maier to be one of the most frequent causes of gastric dilatation. Its literature is not very full, though it may be more common than supposed.

Treatment of Rheumatism, with Special Reference to Prophylaxis and Its Cardiac Complications. WILLIAM EWART.—The infective theory of rheumatism is first discussed. The author is non-committal on this point. The prophylaxis is still somewhat obscure, and the most important indications are attention to climate, environment and general management of health, digestion, etc. Ewart is inclined to think that the administration of salicylates may have some effect. Varieties of the disease are described, and here include chronic, acute, and subacute arthritis with the typical rheumatism under the same general head. Chronic fibrous rheumatism is not included. The most important feature of the whole group is the implication of the heart. The mode of action of the salicylates is not thoroughly understood; the author seems to favor the theory that the remedy corrects some fault in the blood or juices either by neutralizing an infecting toxin or by dealing with the products of unhealthy metabolism. Any purely nervous action and any special microbicidal action are less strongly indicated by the facts. There is no doubt that salicylates may do harm in some cases. The question is whether they can be withheld without damage. It is said that heart complications are apt to follow their use; this is one of the most important points to be considered, and further statistics are desirable on this point. It would seem from statistics of St. George's Hospital that mixed alkaline and salicylate treatment is less favorable to the occurrence of heart complications than that of salicylates alone. The author evidently believes in salicylate treatment, but he would in all cases admit alkalies, and would bar salicylates in the presence of albuminuria. Blisters may be applied from the first as a prophylactic measure, and as a curative one in all cardiac affections, especially in pericarditis. The use of iodids would appear to be indicated by their action on the lymphatic system; the potassium salt would seem suited to the acute form. Purgation is one of the first things to be attended to in the treatment of all cases, and he doubts whether rheumatic arthritis can exist with diarrhea. The keynote of the condition is general embarrassment of the metabolism, especially evidenced by the characteristic persistence of anorexia and failure of excretion. Local treatment and diet are more briefly discussed. In rheumatic fever the diet can not be too light, and he thinks a small quantity of salt added to the milk is important in all cases of exclusive milk diet to prevent fermentation. A temporary vegetarian diet is also indicated.

Journal of Laryngology, Rhinology and Otolaryngology (London), March.

Antiseptic Purification of Meatus and Adjacent Parts: Both for Operations and as Treatment in Chronic Middle-Ear Suppuration. URBAN PRITCHARD.—The method here described, of antisepticizing the meatus, is, according to Pritchard, especially adapted to two classes of cases: 1, when the membrana tympani is intact and there is no suppuration, and 2, when it is perforated and suppuration already exists. In the first class, an hour or so before operating the meatus is well syringed out with 1 in 40 carbolic solution, and afterward mopped out with 1 in 20, until it is quite clean, so far as the eye can judge. The whole auricle is then well scrubbed with 1 in 20. A strip of double cyanid gauze—well wrung out in 1 in 20 or 1 in 40, in order to get rid of the irritating soluble cyanids—twisted so as to form a loose cord, is lightly packed into the meatus, and a pad of similar gauze is applied over the auricle and kept in place by means of a bandage. When the patient is under the anesthetic the bandage is removed, and all the gauze, and the operation is performed with all antiseptic precautions of ordinary surgery; when completed, the ear is dressed with strips of gauze in the meatus, and pads of the same in the concha and over the auricle, secured in position by a bandage. If during the operation there is anything which needs to be removed, this is done by syringing with 1 in 40. He emphasizes the importance of all syringes being thoroughly purified before they are used. In the second class the antiseptics must be most thorough: the ear should be syringed out with 1 in 40, or stronger,

once or twice a day previous to operation, instead of only once as in the other cases. This should be repeated after operation. If the case is a very septic one, as in caries, the strip of gauze should be dipped in 1 in 20 and tipped with powdered iodoform. The dressing needs to be changed more frequently; at first, at the end of twenty-four hours, and afterward about once in two days, according to circumstances. Whenever the gauze is tipped with pus the dressing should be renewed daily, the ear being syringed out each time with 1 in 40: if the pus is fetid, the iodoform should be used each time. In cases of chronic otorrhea, the same method should be applied, but the gauze should be in two pieces, one packed down to fill the deeper two-thirds of the meatus, and the second smaller piece used to fill up the remainder. The auricle should be wiped dry, and the dressing should be repeated from once a day to once in three or more days. It is well to continue the dressing after the discharge has ceased, leaving the gauze in for ten days or a fortnight. Even after that a piece of dry gauze lightly introduced into the outer part of the meatus, changed now and then, is advisable. He thinks that almost all cases that are suitable for the dry or absorbent treatment are likely to be readily healed by the use of this purification method.

Bulletin de l'Academie de Medecine (Paris), March 6.

Treatment of Obesity by Modifying the Diet. G. M. DEBOVE.—The feature of this communication is the assurance that it is possible, by merely restricting the diet, to cure obesity. A convincing instance is detailed, in which a short man, obese by heredity and occupation, about 54 years of age, was reduced from a weight of 325 pounds to 206 in less than a year, with restoration of activity and vigor after having been helpless and bedridden from his obesity, gravel and gout. The principles followed in the diet were restriction to small amounts of articles of food unmodified by cooking, such as milk, raw eggs, raw meat, salads, fruits and plenty of cooked green vegetables. He was first limited to 2¼ liters of milk a day for a month, then to one liter for five months. Removal from the home table is indispensable in this method of treating obesity. The shrinking of fat under the skin, with the loss of over two pounds of flesh a week, caused the wall of the abdomen to hang down over the thighs like an apron.

Dysenteric Abscesses of the Liver. KELSCH AND NIEMER.—The peculiar character of these abscesses is emphasized in this article: their remissions, exacerbations, their tendency to recurrence and their chronic character. The anatomic evolution is entirely different from that of ordinary suppuration and classes them more with tumors, with tubercle-formation in particular. Tuberculous lesions in the liver closely resemble the exact characteristics of dysenteric hepatitis. The anatomic process in the latter is exactly the same as the dysenteric process in the intestines, allowing for the difference of structure between the two organs, and is essentially a necrosis in each, due to the same cause. In over 50 observations dysentery was found associated with the hepatitis in 85 per cent. In most cases observed in temperate climates, the hepatic symptoms accompanying the dysentery are so slight as to escape notice, but in tropical countries the hepatitis becomes a very important lesion. Either the hepatitis or the dysentery may appear first or may alternate, and the hepatitis may not manifest itself for a long interval after the dysentery. Cold seems to favor its development in the latter case, as after return to a colder climate.

Progres Medical (Paris), March 3 and 10.

Bacillus Coli in Suppurations of the Ear. BAUP AND STANCLEANU.—The bacillus coli has only been noted twice in suppurations of the ear, but this communication describes an observation of mastoiditis in which this bacillus was associated with an anaerobic one, the bacillus perfringens, and from the middle ear, infected the mastoid and thence the rest of the organism, producing pronounced stupor, diarrhea and abrupt drop in temperature, death four days after evacuation of the mastoiditis. Inoculation of the bacillus coli and of the bacillus perfringens into animals produced slight lesions separately, but combined they induced a fulminating septicemia every time.

Excitement and Mental Depression in Connection with Epileptic Attacks. M. DE FLEURY.—Several observations are reported in which, with the precision of a laboratory experiment, the epileptic irritation of the cortical gray matter by some anatomic lesion or convulsive toxin, gradually induces restlessness, the subjects become excited, optimistic, quarrelsome, insolent; then comes the epileptic seizure, after which all the nervous and mental symptoms indicate depression and exhaustion, extreme pessimism and timidity, gradually rising again to normal cheerfulness, then to excitement and the seizure, a constant pathologic chain.

Revue Gen. d'Ophthalmologie (Paris), February 28.

Treatment of Hemeralopia with Physiologic Horse Serum. J. SANTOS FERNANDEZ.—In the course of eighteen years the writer has had occasion to observe 28 cases of hemeralopia, and the failure of all methods of treatment has been one of the most prominent features of this annoying affection. Last year he tried physiologic horse serum with such success that he now announces that we can positively assure a cure with from one to four injections of 20 c.c. each. He describes four observations in detail, omitting a number in which hysteria was a possible factor. The sight improved even with one injection and was completely restored with four.

Semaine Medicale (Paris), March 7.

Evolution of Tertiary Syphilis. A. FOURNIER.—The date of the first appearance of tertiary manifestations in 4400 private patients with syphilis, has been carefully recorded by Fournier. His figures are an interesting contribution to our knowledge of syphilis, and enable us to console syphilitic subjects in dread of tertiary invasion, by showing them that the danger of invasion diminishes remarkably with time, and to such a degree that they have scarcely anything to fear—especially if they have been treated—at a period remote from the original infection.

INVASION OF TERTIARY ACCIDENTS.

Year.	No. Cases.	Year.	No. Cases.	Year.	No. Cases.
1.....	188	19.....	66	37.....	5
2.....	453	20.....	78	38.....	3
3.....	471	21.....	36	39.....	3
4.....	358	22.....	35	40.....	5
5.....	357	23.....	30	41.....	4
6.....	326	24.....	29	42.....	2
7.....	274	25.....	26	43.....	2
8.....	211	26.....	20	44.....	1
9.....	195	27.....	14	45.....	1
10.....	233	28.....	21	46.....	2
11.....	142	29.....	15	47.....	0
12.....	134	30.....	17	48.....	0
13.....	114	31.....	11	49.....	0
14.....	113	32.....	6	50.....	0
15.....	117	33.....	7	51.....	0
16.....	95	34.....	4	52.....	1
17.....	70	35.....	2	54.....	1
18.....	75	36.....	5	55.....	1

The tertiary accidents first appeared during the first year in 188, or 4.2 per cent. (This does not include 90 cases of precocious malignant syphilis.) This proportion was doubled the second year and reached its height during the third, in which the proportion was 10.7 per cent. In nearly 11 per cent., therefore, the first tertiary manifestations appeared during the third year, the culminating, the terrible year, as he calls it. The fourth year inaugurates the decline, and by the ninth year the proportion is about half of what it was during the fourth. The second, third and fourth years alone furnish nearly a third of the total of tertiary invasion; the ten first years, 70 per cent. The following ten (10 to 20) furnish 22.3 per cent.; the following ten (20 to 30), 5 per cent., and the following years only .28 per cent. All but 400 of the total number were men.

Centralblatt f. Chirurgie (Leipzig), March 6.

Silver Filigree Netting to Close Abdominal Wounds and Prevent Recurrence of Hernia. O. WITZEL.—Further experience has confirmed Witzel in the advantages of silver wire for a permanent suture. It can not only be thoroughly sterilized, but possesses a distinct antiseptic action of its own.

He has been using it more and more extensively of late years, and now announces that a pad of silver filigree netting can be inserted and will heal in place, affording absolute protection against recurrence of a hernia, as he has repeatedly demonstrated. He suggests that it might supersede the plates of celluloid now used to close defects in the skull, with advantage, and tubes of this filigree netting might prove useful as a support for bone formation. He sutures the abdominal wall in three tiers, first with loops of the wire, the ends cut off and twisted together, then with a continuous suture with fine wire to unite the fasciæ and hold down the 1 cm.-long ends of the loop wires. The superficial suture is also made with fine silver wire.

Centralblatt f. Gynekologie (Leipzig), February 24.

Weight Treatment of Retroflexio Uteri Gravidæ. A. FUNKE.—The benefits of a bag of shot or colpeurynter filled with mercury, in chronic inflammatory pelvic affections and displacements, have long been proclaimed by this writer, and the treatment has been quite widely adopted. Funke now reports five cases in which the retroflexed gravid uterus was promptly restored to normal position by this means, in one case in less than half an hour. The efficacy, certainty, and harmlessness of this treatment are its chief advantages, as also the absence of narcosis.

Centralblatt f. Innere Medicin (Leipzig), February 10.

Iodophile Leucocytes in Blood Diseases. L. HOFBAUER.—Leucocytes taking the iodine stain are only encountered in grave affections with unfavorable prognosis, such as anemia, gravis and perniciousa, and vanish as the prognosis becomes more favorable. The iodine reaction is positive in leukemia and negative in pseudoleukemia and anemia pseudoleukemia in infants. The iodine stain is valuable therefore, not only in the differentiation but also for the prognosis.

Deutsche Medicinische Wochenschrift (Leipzig), March 8 and 15.

Simultaneous Extra- and Intra-uterine Pregnancy. HERMES.—This is the first case in the author's knowledge, of simultaneous extra- and intra-uterine pregnancy in which the latter developed normally to term after laparotomy for the former, the seventh week on a healthy multipara.

Removal of Bone Aspirated Into Right Lung a Year Before. G. KILLIAN.—THE JOURNAL has frequently referred to Killian's direct bronchoscopy, and a new observation is reported in which it rendered possible the removal of a piece of bone 15 mm. long, 11 wide and 4 thick, extracted by forceps inserted 3 cm. down in the main right bronchus. This is the first case on record in which a foreign body was removed by the natural route after a sojourn of a year in the lung.

Double Diaphanoscope for Seeing Through the Frontal Sinuses. GERBER.—By making the Vohsen lamp double, and improving on it slightly, it is possible to see through both frontal sinuses at the same time, and thus have a standard of comparison between normal and pathologic conditions. A number of observations are described in detail, showing the important information thus derived, confirmed by operation. Frequently nothing else suggested the involvement of the sinus. The area of transparency is marked on the skin.

Dietetic Treatment of Dilatation of the Stomach. ALBU.—Instead of the dry diet usually imposed, Albu considers fluid diet indicated in case of dilatation of the stomach, as the anatomic affection should not be taken into account as much as the disturbance in the physiologic function. He establishes it as a general principle that "the food should be food, and should be fluid." The ingestion of non-nutritious fluids, watery soups, etc., must be strictly forbidden. Milk should be given freely, rendered appetizing in every possible way. Meat should be finely chopped or given in jellies. Toast is not necessary, all bread, etc., is best dipped in milk. Beef, pork and all fats should be avoided, except a small amount of pure butter, not over 30 gm. a day. The meals should be as limited as possible and follow each other, just avoiding interference with the last. The diet outlined is a cup of milk and two rolls at 8; at 9 a cup of cream; at 10, two soft eggs; at 11, a cup of cocoa with milk; at 12, a saucer of cereal food; at 1, one-quarter pound of sweet-breads and three tablespoons of spinach; at 3, a cup of milk;

at 4, a cup of chocolate and a zwieback; at 5, a cup of cream; at 6, a saucer of oatmeal soup with egg and plasmon, or four tablespoons of minced meat; at 7, soup with egg and a roll; at 8, a cup of milk and another at 9. After lavage of the stomach morning and evening, he administers, through the sound, a mixture of plasmon, condensed milk, etc., representing a food value of 400 calories. After each meal the stomach is massaged which strengthens the musculature and stimulates peristaltic movements. If there is great debility the patients stay in bed. Albu's experience includes fifty observations. In many cases of extreme stenosis the subjects increased in weight, and operation could be postponed indefinitely.

Deutsche Zeitschrift f. Chirurgie (Leipzig), January.

Regeneration of Male Urethra. INCIANI.—A series of experiments on dogs has shown that it is possible to obtain regeneration of a section of the urethra. It occurs in the membranous portion and the cavernous tissue, not in the muscularis. The endothelium in the cavernous spaces, exposed by removal of the section, first begins to proliferate. The new-formed cavernous layer is then gradually covered with a single layer of pavement epithelium propagated from the epithelium of the stump. The less post-operative inflammation, the more rapidly regeneration proceeds. Other experiments proved that it is possible to create an artificial urethra by implanting a small stump of an urethra in a passage made artificially under the skin. The piece of urethral tissue will develop and spread until it lines the entire passage, and thus artificially produce a new urethra resembling the normal in structure and function. In this case also it is merely the mucous membrane and cavernous tissue which become regenerated. The muscularis does not take part in the process.

Removal of Osteoma of Upper Wall of Orbit Without Injury to Eyeball. SCHUCHART.—The osteoma was the size of a walnut and was removed by Krönlein's method of temporary resection of the outer bone wall of the orbit. The eyeball was not interfered with, and the double vision caused by the tumor vanished with its removal.

Wiener Klinische Rundschau, February 25 and March 4.

Malignant Edema. A. BRAEBC.—Study of a typical case, at Maydl's clinic, of malignant edema of the upper extremity, led to the following conclusions: the characteristic features are edema without gas formation, and without suppuration, but with a pure hemorrhagic, edematous fluid. The progress of the process is peculiar; it does not spread by way of the blood or lymph routes, but actively in the free, subcutaneous interstitial connective tissue, and hence malignant edema remains for a long time a purely local affection. It only leads to a fatal termination by the incessant spread of the edema, involving too large areas of the body. It is a local intoxication, and the fever, the absence of tumefaction of the spleen and of albuminuria, confirm this assumption. The clinical picture can change by mixed infection or invasion of some vital portion. Amputation or exarticulation is indicated if diagnosed early enough, and if not, efforts to destroy the anaerobic bacillus, which closely resembles the anthrax bacillus.

Wiener Klinische Wochenschrift, March 15.

So-Called Pericarditic Pseudo-cirrhosis of the Liver. V. EISENMENGER.—Fr. Piek attempted to establish a new morbid syndrome under this title in 1896, characterized by a symptom-complex resembling that of cirrhosis of the liver while the pathologic-anatomic foundation was a chronic "schwielige" or adhesive pericarditis. This conception has been generally accepted, but his facts do not stand the searching inquiry described in this communication. It is true that excessive ascites without edema of the legs coincides comparatively frequently with adhesive or indurated pericarditis, and, if the pericarditis is latent, the symptom-complex has a certain analogy with that of cirrhosis of the liver. But this syndrome is not the result of proliferation of connective tissue in the liver, caused by disturbances in the hepatic circulation, as Piek maintains, with consequent congestion in the portal circulation and resulting edema. It is due to various causes, differing with individual cases. Prominent among these are the dragging, compression and flaws in the vena inferior due to

coincident effusion or pericardio-mediastinal "Schweilen," or coexisting peritonitis of the portal liver, and finally, to the circumstance that the symptom-complex occurs chiefly in young persons in whom the normal structure of the capillaries and smaller vessels of the major circulation, yields more readily to edematous transudation. Consequently Piek's conception is shown to be unfounded.

Societies.

COMING MEETINGS.

AMERICAN MEDICAL ASSOCIATION, Atlantic City, N. J., June 5-8.

Tennessee State Medical Society, Knoxville, April 10.

Florida State Medical Society, Orlando, April 11.

Mississippi State Medical Association, Meridian, April 11-13.

Medical Society of California, San Francisco, April 14-16.

Medical Association of Alabama, Montgomery, April 17.

South Carolina Medical Association, Charleston, April 18.

Louisiana State Medical Association, New Orleans, April 19-21.

Medical Association of Georgia, Atlanta, April 18.

Medical and Chirurgical Faculty of Maryland, Baltimore, April 24.

Texas Medical Association, Waco, April 24.

American Proctologic Society, Washington, D. C., May 2 and 3.

Illinois State Medical Society, Springfield, Ill., May 15-17.

Association of Military Surgeons of the United States, New York City, May 31 to June 2.

American Medico-Psychological Association.—The next sessions of this Association, to be held at Richmond, Va., have been postponed until May 22-25. The program includes a large number of subjects to be treated in medico-psychologic papers.

Association of American Physicians.—This Association will hold its fifteenth annual meeting in Washington, D. C., May 1-3. Members who expect to contribute papers should send their titles to the president, Dr. E. G. Janeway, 36 West Fortieth Street, New York City.

Therapeutic Society.—At a recent meeting of the Therapeutic Society of the District of Columbia, the following were elected to office: president, H. H. Barker; vice-presidents, B. G. Poole and L. Kolipinski; secretaries, D. O. Leech and N. P. Barnes; treasurer, J. S. McLean; librarian and curator, H. T. A. Lemon.

American Surgical Association.—The next meeting of this Association will be in Washington, D. C., May 1-3. The program includes a number of fifteen-minute papers on the surgery of the stomach, by authorities on that subject, with papers on miscellaneous surgical subjects by leading American surgeons.

Medical Association of Missouri.—This Association will meet in Mexico, Mo., in forty-third annual session, May 15-17. A symposium on gall-stones will be a feature of the meeting, while, besides numerous other papers, arrangements have been made for an exhibit of pathologic specimens. Those who have appropriate ones available are requested to notify Dr. A. R. Kieffer, 4268 W. Belle Place, St. Louis, Chairman.

Medical and Chirurgical Faculty of Maryland.—The annual address before the faculty will be delivered on April 25, by Dr. G. E. de Schweinitz, of Philadelphia. It is proposed to continue the practice inaugurated during the centennial meeting last year, of devoting the mornings to clinics at the various hospitals while the afternoons and evenings will be devoted to the scientific and business matters and to social functions.

Louisiana State Medical Society.—This Society's next annual meeting will be April 19-21, in New Orleans. In the section on general medicine tuberculosis will receive consideration, and in that on surgery, local and regional anesthesia. The care and treatment of the insane will be discussed in the

section on mental diseases; surgery of salpingitis and value of electricity, in the section on obstetrics and gynecology, while the members of others will have special subjects peculiar to the several sections.

International Congress of Public and Private Benevolent Institutions.—The first congress of "public assistance and private benevolence" was held in 1889, the second in 1896. The results have been most important in the line of organized charities and hospital improvement, and have influenced legislation in many instances. Among the questions to be discussed at the coming congress in Paris, July 30 to August 5, are the advantages and best methods of assistance at home, and the assistance of the tuberculous poor. Fee \$5. Secretary's address: rue Cambacérès 7, Paris.

New York County Medical Association.—At the stated meeting of this Association, which will be held on Monday evening, April 16, Dr. J. H. Woodward will read a paper entitled "The Prevention of Intracranial and Intravenous Complications in Suppurative Diseases of the Ears," and Prof. Howard A. Kelly of the Johns Hopkins University, Baltimore, Md., will read one on "What are the Ultimate Results in Treating Cancer of the Uterus, and What is the Best Plan of Treatment?" The following named are expected to take part in the discussion: Jos. E. Janvrin, Herman J. Boldt, H. M. Vinberg, Ralph Waldo, Geo. T. Harrison, Clement Cleveland, E. E. Tull, Henry C. Coe, Jno. Byrne of Brooklyn, and P. H. Ingalls, of Hartford, Conn.

Cincinnati Academy of Medicine.—The regular meeting of the Academy, March 19, was set apart as a memorial meeting in honor of the late Dr. John A. Murphy. A committee, which had been appointed for the purpose, consisting of Drs. W. E. Kirby, Louis Schwab, John C. Oliver, W. E. Schenk, and J. C. Mackenzie, submitted suitable resolutions, which were adopted. Addresses were made by Drs. Wm. H. Taylor, C. D. Palmer, Robert Stewart, J. C. Oliver, T. A. Reamy, Francis Dowling, Joseph Eichberg, C. E. Caldwell, and Dan Millikin of Hamilton, Ohio. A letter from Dr. N. P. Dandridge was read. In addition to the tributes of praise concerning his personal character, mention was made of his great efforts in behalf of effective medical legislation; that with all his honors he had never held a position in public service that carried with it any pecuniary compensation. Dr. Murphy was a charter member, the last, of the Cincinnati Academy of Medicine, and was one of its most active workers and supporters almost up to the time of his death.

Chicago Medical and Chicago Neurological Societies.

Joint Meeting, March 7, 1900.

GENERAL SYMPTOMS OF BRAIN TUMORS AND THE DIFFERENTIAL DIAGNOSIS.

This was the topic of the evening.

DR. ARCHIBALD CHURCH, before taking up the principal symptoms, directed attention to a number of subsidiary ones which are commonly of late occurrence, and which help in making a diagnosis of intracranial growths.

With reference to headache, Knapp found that this symptom existed in 401 out of 614 cases. Dr. Church has collected 23 cases that have fallen under his own observation, of tumor of the brain, verified by operation or by post-mortem examination, or both, and he finds that 20 out of these 23 presented headache in a marked degree. In some cases where the tumor is angiomatous, or more particularly when an aneurysm, the headache is throbbing, this being synchronous with the heart's action. In certain cases, where the headache is circumscribed and characterized by overlying tenderness on pressure, it serves as a localizing feature.

Choked disc is a symptom which is not generally of early appearance in brain tumor, consequently in the early stages of the growth it does not furnish the almost positive evidence which is provided by it later in the diagnosis of tumor of the brain. The presence of choked disc, either on one side or the other, or on both sides, is presumptive evidence of the presence of brain tumor, and when coupled with two or three major symptoms may serve to confirm the diagnosis of tumor

within the skull. He said that this symptom is found at one time or another in over 80 per cent. of the cases. In the 23 that came under his own observation it was observed 14 times. He mentioned a case in which an infiltrating sarcomatous growth invaded the entire left cerebral hemisphere, but in which choked disc did not appear until two or three days before death. In another instance the choking was early, although the tumor was slow growing and very small. Marcus Gunn reports 24 cases in which choked disc and tumor were unilateral. In 18 out of 24 the choked disc and tumor were on the same side of the head.

The more the speaker sees of cases of brain tumor, the more he is convinced that there is a defective mental state, although this symptom may not develop until rather late. The patient is apathetic, and indifferent to surroundings and conditions. He manifests mental sluggishness. In certain cases the stupor is pronounced. The patient may become lethargic, or comatose. A defective mental condition was observed 17 times in the 23 cases tabulated.

Dr. Church referred to epileptic and epileptoid convulsions associated with brain tumor. He treated one man for epilepsy for three years before a diagnosis of brain tumor was made. He mentioned the case of a patient who had been treated for nineteen years before a diagnosis of cerebral tumor was made; another for twenty-four years. Brain tumor may exist without manifesting any symptoms during the life of the patient. In some cases the convulsions are preceded by intense headache; in others by vomiting. Hysteria may present manifestations that are difficult to differentiate from the general convulsions of brain tumor, but a thorough study of the patient will enable the physician to differentiate between the two. Hysteria, however, does not exclude brain tumor.

As to vomiting, Jacoby reports it to have been present in 172 out of 568 cases. This symptom was present in 13 out of the speaker's 23 cases. In only one instance was it typically projectile.

Vertigo occurred in 31 per cent. of the cases collected by Mills and Lloyd. This symptom was marked in 17 out of the 23 cases observed by the speaker.

He makes it a routine practice to auscultate the head of every patient who manifests symptoms indicative of a brain tumor, believing that something may be gained by it. Auscultation should be practiced in conjunction with percussion. By placing the stethoscope over the patient's brow one is enabled to detect changes in the percussion note which may in some instances be of undoubted value.

In reference to erosions of the skull, he recalled seeing a case with Drs. Fütterer and Henrotin in which, after the death of the patient a tumor, located in the prefrontal region had eroded the temporal bone to such an extent that the end of one's finger might be pushed through the skull.

Another means of investigating the condition of the skull is direct concussion. Macewen and Dana claim to have noticed a distinct change in the percussion note over the seat of a brain tumor and cerebral abscess. A distinct dulness is elicited in these cases.

He regards the cracked-pot sound as a symptom of considerable value in the diagnosis of hydrocephalus, and referred to the investigations of Paoli and Mori along this line.

Speaking of the X-ray in the detection of brain tumors, he said he had had the good fortune in one case to obtain a good skiagraph of a very vascular and hemorrhagic glioma of the cerebellum. The X-ray likewise revealed a tumor in the motor region in a case in the practice of Dr. Carl Beck, as was subsequently verified by operation. Cysts have also been detected in two cases.

Referring to the differential diagnosis, the patient ordinarily first complains of headache. Headache is a generalized symptom. Some headaches confounded with those of brain tumor are migrainous. A history of migraine coupled with the clinical features of the case should be sufficient in most instances to make the diagnosis. A migrainous patient, however, may have brain tumor. Patients with neurasthenia, who so commonly suffer from periodic headache, may have brain tumor; in 6 of the cases of brain tumor collected by him a diagnosis of hysteria had been made, and in 3 it was present in a marked form.

One of the conditions which closely simulates brain tumor is anemia, especially chlorotic anemia. Not only may anemia produce headache, vomiting and vertigo, but choked disc, which, to the man who is not highly skilled in the use of the ophthalmoscope, is indistinguishable from the choked disc which accompanies brain tumor. He said a case was reported by Dr. H. M. Bannister of this city, in which the diagnosis lay between brain tumor and anemia for some time until, under proper medication, all symptoms of cerebral tumor disappeared. He remembers a woman who went the rounds of three hospitals with a diagnosis of brain tumor. She presented evidences of brain tumor, among them choked disc, and yet she got well on Blaud's pills.

Basilar meningitis, hydrocephalus, hemorrhage and acute softening, polioencephalitis, nephritis, many of the toxic conditions arising from extraneous or other causes may closely simulate brain tumor. In nephritis, there may be disturbance of the optic nerve; there may be a comatose condition, etc. Albuminuria may be present, consequently it is only by making an absolute diagnosis of nephritis that a safe course can be adopted in the differentiation of these two conditions. Patients with nephritis, however, may have brain tumors. One of the most puzzling cases he had ever seen from a differential standpoint was one in which the major symptoms of parietic dementia of the insane were present. The patient had expansive ideas of a delusional character. He had inco-ordination; the peculiar staggering gait; tremulous tongue; attacks of vomiting; such convulsions as are found in general paralysis. In addition to these symptoms the man had choked disc. He finally died of brain tumor, and no evidences of parietic dementia were found post-mortem.

CEREBRAL LOCALIZATION.

DR. SYDNEY KUH read a paper on this topic, in which he gave a brief review of what is to-day known about cerebral localization. The differential diagnosis between so-called idiopathic and Jacksonian epilepsy and the general characteristics of cerebral palsies were discussed in detail. The uncertainty of brain localization was emphasized particularly, and this point illustrated by a number of interesting cases, partly taken from medical literature and in part from the author's own experience. Thus two cases were mentioned in which spasms occurred on the same side of the body on which the cerebral lesion was found at the post-mortem; another one in which an angiosarcoma had destroyed practically all of the vermis superior cerebelli without causing any topical symptoms; one in which a psammoma of the hypophysis, in place of causing acromegaly, was associated with stunted growth, and finally a case of cerebellar abscess with typical Jacksonian epilepsy on the same side on which the abscess was found and no cerebellar symptoms. The author also gave a brief history of one of those very rare cases in which laryngeal spasms were caused by cortical disease; his patient presented, besides the laryngeal spasms, such in the muscles of the face and a purely motor aphasia, to which later on in the course of the disease a right hemiplegia was added; examination of the fundus showed atrophy of both optic nerves.

EYE AND EAR SYMPTOMS IN BRAIN TUMOR.

DR. WILLIAM H. WILDER read a paper on "Value of Eye and Ear Symptoms in Brain Tumor." In the list of general symptoms we should put optic neuritis second to headache, and yet it is surprising to note how often in the reports of such cases no mention is made of the condition of the optic nerve. Optic neuritis should be looked for at once in all cases of suspected focal disease of the brain, for it may be present although normal central vision exists. As to the frequency of this sign, the writer found mention of it in 104 cases out of 140 of brain tumor recorded in the literature for four consecutive years, this being about 75 per cent. It is safe to say that this condition occurs in 80 per cent. of all cases of brain tumor. The records show that it is of somewhat more frequent occurrence in cerebellar tumors, being noted in 90 per cent. of such cases.

Although so valuable as a general sign, it possesses very little worth as a localizing sign, nor does it furnish any definite information as to the character or size of the growth. It may be present with small tumors, and may be absent with large ones. Inasmuch as the optic neuritis may in some cases be of

a low grade, it is important for the observer to avoid mistaking for organic change the blurring of the outlines of the disc in high degrees of astigmatism.

Certain general conditions causing optic neuritis, such as meningitis, anemia, chronic kidney disease and plumbism should be carefully excluded before placing too much reliance on this sign. Emphasis should be placed on the importance of repeated examinations of the fundus of the eye during the course of every case of suspected brain tumor.

Another important general eye symptom of brain tumor, although less frequent than the former, is temporary periodic blindness, coming on in the early stages of the growth. The attacks of blindness are sudden, and last from a few seconds to half a minute or longer. In the intervals the vision is as good as before, but frequent attacks may lead to permanent impairment of sight. A marked case of this occurred recently in the experience of the author.

Hemianopsia may be an important localizing eye symptom of brain tumor. It may be absolute or relative, and coexisting with certain other symptoms such as mind blindness, amnesic color blindness, word blindness, etc., would point strongly to lesion of the occipital lobe. It must be differentiated from the hemianopsia occurring with lesions of the optic tracts. Wernicke's pupil sign may aid in this.

The ear symptoms in brain tumor relate principally to the labyrinth and the auditory nerve, and consist of subjective sounds and varying degrees of deafness. Careful exclusion of middle ear disease is necessary before formulating any conclusion as to the relation of ear symptoms to a possible intracranial growth.

RECENT WORK IN SURGERY OF BRAIN TUMORS.

DR. WELLER VAN HOOK limited his paper to the consideration of recent additions to the technique of opening the cranium for diagnosing and removing tumors. He described the Wagner method of temporary resection of parts of the cranium and the Doyen method of so-called temporary craniectomy. The former has for its object the raising of a flap of skin, muscle, pericranium and bone from the side of the skull, with a nutrient pedicle of the soft parts. The Doyen method consists simply in raising a very large flap of the same kind. After exploration or the removal of a tumor the flap is turned back into place and sutured. The Cryer, Doyen and Van Arsdale saws, driven by electric engines, were mentioned.

Two modern devices for opening the skull were considered, at once commendable and novel. The Gigli saw, consisting of a simple wire of steel twisted while hot, to produce a roughened surface, is used to open the skull by making cuts about the plate of bone to be lifted. The wire saw is introduced through drill-holes. Dr. Van Hook raised the objection to the saw that it acts inside the skull in an approximately straight line in the direction of a chord of an arc in which the skull is to be opened. The dura may be wounded unless great care is used. On the whole the writer most favored the DeVilbiss-Dahlgren cutting-forceps for making channels in the cranium. This instrument has the advantage of availability as to price, ease of transportation and sterilization, and making a cut through the bone narrow enough to facilitate rapid healing without injuring the brain or its coverings.

DR. SANGER BROWN believes that there is quite a large number of cases in which no one is able to make an exact diagnosis of brain tumor. As illustrating the difficulty which attends the diagnosis, he was called out of town last summer to see a man, 40 years of age, who had symptoms of nervous prostration for a few weeks. One night the patient had numbness of all four extremities and was considerably frightened by it. A very careful and thorough examination disclosed nothing in particular. The man had had no headache, and there were ample reasons for supposing he was suffering from profound neurasthenia. Dr. Brown advised him to take a rest for several months. This he did, and went to California, where, in the course of two months, he developed the typical symptoms of brain tumor and died of the disease.

DR. A. J. OCHSNER said he had seen a number of cases of tumor of the brain, and had operated on three, the patients dying soon after. The surgical treatment of brain tumor is not very promising in his experience. Brain surgery in cases of traumatism offers more hope.

DR. OSCAR A. KING said that in the diagnosis of brain tumor the older text-book writers insisted on the existence of optic neuritis before a positive diagnosis of intracranial growth could be made. In his opinion the statistics with reference to the presence of optic neuritis are very wide of the mark. He believes that a great many patients die from brain tumor without a diagnosis. In cases in which optic neuritis frequently exists, unquestionably the tumor is situated in the posterior fossa. To give a rough estimate, in about 90 per cent. of the cases in which the tumor is located in the posterior fossa optic neuritis is present. A tumor measuring $2\frac{1}{2}$ by 2 inches, occupying the foot center on the left side of the brain, was removed in a case of his by Dr. Steele. The patient was living five years after the removal of the tumor, and seemed to be in better condition than before the operation. In this case there was no headache, and no optic neuritis. The symptoms that did exist were Jacksonian epilepsy, which began in the right foot; there was paresis of the muscles of the right foot, and taking these symptoms together with the history of the case a diagnosis of brain tumor was made, the tumor located in the foot center, and successfully removed.

DR. FRANK BILLINGS narrated a case illustrating what physicians and surgeons do not know about brain tumors. A few years ago he had a patient, a young man, who suffered from Jacksonian epilepsy. He felt that the patient had a tumor of the cortex in the arm area. Dr. Church saw the man in consultation with him, agreed with the probable diagnosis, and the patient consented to an operation, which Dr. L. L. McArthur did at St. Luke's Hospital, removing a large button of bone from that portion of the skull covering the arm area of that side. After making quite a large trephine opening in the skull, intracranial pressure was not noticeably increased. The dura was incised and turned back. Palpation did not reveal anything. The use of the faradic current in the hands of Dr. Church revealed contractions in the muscles under the control of this cortical area. A small portion of the cerebral substance was removed and afterward examined. No tumor was found near the surface by acupuncture. The man recovered from the operation; the button of bone was returned; there was primary healing of the skull wound, and for about three months he had no convulsions. The convulsions had appeared in this case at irregular intervals, as often as once a month. His convulsions returned; he visited New York and consulted two prominent neurologists, who made a diagnosis of idiopathic epilepsy and condemned the operation which had been done. Two months later the man returned to Chicago, and about $1\frac{1}{2}$ years after the operation he went suddenly into status epilepticus and died after about twenty-four hours. A post-mortem was made, and a small tumor of the size of an ordinary almond-nut was found directly under the convolution where the operation was made. The post-mortem examination was made by Dr. Frank. This case exemplifies the fact that in operations on the brain it is sometimes necessary to proceed further than to make a mere opening in the skull with or without intracranial pressure; the surgeon should go through the dura. The speaker could not help but repeat the dictum of Stokes that there is not a single nervous symptom which occurs in organic disease of the cerebrospinal apparatus that may not occur without any organic change. He does not refer, of course, to optic atrophy.

DR. DENSLOW LEWIS asked Dr. Wilder to explain, if possible, the difference in the appearance of optic neuritis of brain tumors and the neuroretinitis which is occasionally observed in eclampsia and chronic Bright's disease.

DR. W. H. WILDER, in reply, said it was sometimes difficult to make such a differentiation. The physician should exclude certain conditions. He believes there are certain cases of optic neuritis which would be difficult to differentiate from the neuro-retinitis of eclampsia or of chronic Bright's disease. In the typical cases of retinitis of Bright's disease there is a peculiar arrangement of the patches of degeneration in the layers of the retina, etc. This is seen especially in cases where there is a stellate arrangement of the plaques around the macula lutea, etc.

DR. J. HOLLINGER could not coincide with Dr. Wilder in the statement that the ear does not give just as valuable informa-

tion relative to the existence of brain tumors as does the eye. Competent otologists are now able to differentiate middle-ear disease from disease of the labyrinth, etc.

In referring to the differentiation between brain abscess and brain tumor, he said that Macewen stated at a meeting of the otologic society, held in London, that an accurate differential diagnosis between brain tumor and cerebral abscess is impossible.

DR. CHARLES H. BEARD exhibited some colored drawings from two patients known to have had optic neuritis in connection with brain tumor. One drawing showed optic neuritis in one, 16 years of age, who died of sarcoma of the cerebellum; another, optic neuritis which existed in a woman, 24 years of age, who died of glioma of the cerebnum. There was double optic neuritis in both cases. He showed a third colored drawing of a patient still living, and who is supposed to have intracranial gumma. He said it is quite well agreed by all authorities that optic neuritis is a very important diagnostic sign of brain tumor. In a great many text-books stress is laid on choked disc as being a prominent symptom of brain tumor. Choked disc, pure and simple, that is, an edema of the optic nerve-head, is a very rare condition. He does not think he has ever seen typical choked disc more than two or three times in a large number of cases, and probably two of these were in conjunction with other things than that of brain tumor.

DR. W. H. WILDER said he did not wish to be understood as having conveyed the impression, as intimated by Dr. Hollinger, that we could not differentiate between internal-ear disease and pressure on the auditory nerve, because this can be done with a reasonable degree of certainty. The differentiation could likewise be made in some cases between labyrinthine disease and pressure on the auditory nerve.

PRIMARY LATERAL SCLEROSIS.

DR. HAROLD N. MOYER reported the case of a child, $3\frac{1}{2}$ years of age, who was brought to him from the country for a defect in locomotion. There was a tendency, when walking, for the child to place one foot in front of the other, the gait being essentially spastic in character. The child would tip upward on the toes, and it was only when its attention was directed to this that it was able to bring the heels down, and then always with an effort. The peculiar gait was not associated with loss of power in the legs. The muscles were firm, but not more so than normally, as would be the case in pseudohypertrophic muscular paralysis. The bellies of the muscles were well-rounded, but not unduly large. Knee-jerks were exaggerated. There was no ankle-clonus, except that one or two slight jerks could be obtained when the tendo Achillis was put on a stretch. The upper extremities were normal. There were no eye symptoms, and no sensory disturbance anywhere. As near as could be determined in so young a child, temperature, tactile and pain senses were normal. According to the history, the condition was congenital. The child developed normally during infancy, without the manifestation of any defect, and always appeared well-nourished, there being no rickets, convulsions, nor other disturbances of the general health. The parents, however, noted that the child was late in walking, and crept until it was 18 months of age. When it began to walk this disturbance in locomotion was noticed and began to increase as the child grew older, according to the statement of the parents. This Dr. Moyer is inclined to doubt, and he believes that the disease is not progressive. He believes the disease must be in the crossed pyramidal tract, to give the peculiar symptoms present. So far as he could learn, there was no inco-ordination. He knows of no other disease located in the spinal cord that gives the spasticity of gait, the increased reflexes, without atrophy, without alteration of sensation, with no other disturbance than that named, excepting primary disease of the crossed pyramidal tract. Those who are familiar with the literature understand that this is a very doubtful proposition. Many competent neurologists maintain that primary lateral sclerosis never occurs. They predicate their opinions largely on the fact that if these patients are watched long enough, they eventually develop sensory disturbance, inco-ordination, and other symptoms associated with mixed lesions of the spinal cord throughout its entire extent.

A strikingly interesting feature about this case is the dis-

ease appeared to be congenital; apparently a developmental defect. Perhaps a more strikingly interesting feature in connection with the history of the case is that the mother has the same disease. In her case the history shows that she was normal until about 2 years of age. Up to this time she walked as well as do children of that age, without any apparent disturbance in gait. She then developed some obscure disorder, the exact nature of which is not known, but it is said to have been accompanied by convulsions. She recovered from this disorder, shortly after which there was a tendency to tilt on her feet. He has not seen the woman, but the physician who examined her says that she presents the same changes noted in the child; that she is strong in her legs, but that there is more or less difficulty in advancing them in taking ordinary strides. Her trouble has not advanced since infancy, and she is now 38 years of age.

Dr. Moyer believes that these two cases establish a family type of disease. In the mother the affection seems to have been acquired. Notwithstanding that many writers contend that this peculiar form of lateral sclerosis does not exist, there is one excellent clinician who holds that it does, namely Hirt. This author reports several cases similar to the one described by Dr. Moyer, and says that the disease may be hereditary, but he does not report any cases in confirmation of such a conclusion. Dr. Moyer reports this case as a rare type of disease, and one which is interesting from the standpoint of heredity, illustrating what was apparently an acquired defect in the child appearing as a congenital condition in it.

Philadelphia Pathological Society.

March 8, 1900.

TUMORS OF VERMIFORM APPENDIX.

DR. A. O. J. KELLY read a paper on this subject. He reported two cases of fibromyoma of the appendix, one from a patient also the subject of fibromyoma of the uterus. The appendix presented two nodules, one of which was the seat of marked calcareous infiltration. He also reported three cases of carcinoma and one of endothelioma of the appendix. Two of the carcinoma cases and the endothelioma were primary in the appendix, as was probably also the other carcinoma. The cases were of especial interest because, in all, the clinical manifestations were those of appendicitis, for the relief of which operation was undertaken. In three of the cases the tumors were of microscopic size and were not detected by the ordinary macroscopic examination. The youth of the two patients, aged respectively 24 and 19 years, was also of interest in this connection. Reference was also made to the relative frequency of tumors of the vermiform appendix and to the previously reported cases.

DR. DAVID RIESMAN spoke of Dr. Kelly's work in this line, and said that the finding of these tumors of this region might imply that the condition is one of more frequency than has been supposed.

DR. G. G. DAVIS detailed a case of appendicitis in which a recurrence came on ten days after a primary attack. At a subsequent operation a segment of tapeworm was found in the appendix. Later two were expelled per rectum.

DR. H. D. BEYEA spoke of a case of appendicitis operated on by Dr. Penrose, in which ocyures were found.

CYST OF THE INGUINAL REGION.

DRS. DEFORREST WILLARD and WILLIAM G. SPILLER presented a specimen of cyst of the inguinal region, the diagnosis being somewhat uncertain. The patient was a man, 55 years of age, who had complained of vague nervous symptoms. Later a slight swelling was observed in the left inguinal region, not well defined at first, and only after waiting for some time could its correct outline be felt. At operation a cyst was found attached to the deep tissues about the tumor. A psoriasis abscess was suspected, but on incising it a large number of small white particles were discharged. These looked like fat, more or less flattened, some egg-shaped, and tough, some one inch in length and one-half in width. The cyst, solid, was filled with these particles, which, after drying, shriveled and became quite hard. In a solution of osmic acid they did not change color to any extent. With Van Giesson's stain they became an orange-yellow color. In some respects the

particles seemed to be made up of a colloid material, and were perhaps remains of a dermoid cyst.

DR. JOSEPH SAILER thought possibly the particles were loose bodies spoken of as being cast off from serous membranes. Similar bodies were found in the pleura.

DR. J. D. STEELE spoke of a case of typhoid fever in which similar bodies had been expelled per rectum.

DR. DAVID RIESMAN was of the opinion that the products might be remains of a bursa.

DR. SIMON FLEXNER, after examining the specimens, thought amylaceous bodies could be found, these possibly having been twisted off from the connective tissue and forming the products shown.

CEREBROSPINAL SYPHILIS.

DRS. W. R. BLACKWOOD and WM. G. SPILLER reported a case of this affection in a man 60 years of age, who presented a clear specific history. Two years previously a large tumor of the sternum developed, later an abscess in the region of the third and fourth cervical vertebrae, which was incised, but never completely healed. Some time afterward ptosis on the right side occurred, and still later the speech became incoherent and death ensued. At the autopsy the membranes of the brain and cord were thickened. In the interpeduncular space this thickening was especially marked, the process seeming to affect the adventitia mostly. Thickening was also noted about the region of the optic chiasm. The ptosis might be explained from the proliferation of cells in the interpeduncular area. In the occipital lobe on the right side a small cavity was found, and a similar one in the lenticular nucleus.

DR. SIMON FLEXNER spoke of certain instances in which "painful fat" areas had been found in cases of sypylis.

Wayne County Medical Society.

Detroit, Mich., March 14, 1900.

OBSERVATIONS ON THE TREATMENT OF EPILEPSY.

DR. DAVID INGLIS, in a paper on this subject, referred to one he read before the Michigan State Medical Society in 1893, in which he took the position that the routine use of the bromids was not "desirable treatment, as they produce damaging effects. He advocated, in their place, use of coal-tar preparations, and cited his experience of seven years with the latter, giving cases to illustrate their efficacy. In no case reported in the paper of 1893 has there been a relapse, excepting one, that patient dying in the meantime. In using the coal-tar antipyretics one should keep a close watch on the action of the drug on the heart, and only when depressing manifestation is noticed discontinue them. As yet, however, no deleterious effects have been noticed and the peculiar stupefying condition that the bromids produce is wanting. The Doctor thinks the best effect was noticed in giving the coal-tar products where the bromids have been freely and continuously used and had failed to give good results. He would recommend, therefore, putting the patient first on the bromid treatment and pushing it to tolerance. He claims that his treatment with the Flechsig method was *nil*. One reason for discontinuing use of bromids was their toxic effect on the nervous elements in the nature of degeneration. The reader of the paper cautioned his hearers to search for the reflex causes of epilepsy, and cited the case of a girl of 14, well developed, with a negative hereditary and personal history. Her teeth were large and sound, but the two upper canines had never come down; the incisors, being large, had filled up the space, and the two canines developing later were protruding themselves forward beneath the ala of the nose. In a man of 16, of good build, good habits and good family, the last molar on the left side had grown up to the full height of the other teeth, but the tough mucous membrane still covered it, and when his physician had removed this his attacks of grand-mal disappeared and those of petit-mal became much less frequent. Another case was that of a normal child, 4 years of age, who developed epilepsy, and attacks occurred daily. At the time the child was seen it was almost a complete imbecile. The persistent use of a vermifuge brought away a mass of round worms, after which the child recovered. The Doctor referred to auto-intoxication as a cause of epilepsy and said that in the body, as the result of tissue changes and changes in the

foods, toxic alkaloids are developed which should receive attention so that we should be able to eliminate them from the body. As in hereditary neurotics, putrefaction of the alkaloids may bring about the same loss of equilibrium in the cortical cells. So the excrementitious poisons should be evacuated from the body by drugs that will act on the liver, intestines, kidneys and skin, and while doing this we should not forget out-door physical exercise, restricting the appetite and giving a large amount of vegetable food. While the majority of people eat too much, the epileptic, of all sick people, is a heavy eater and recognizing physical exercise and restriction in the diet are two essential factors in the treatment of epilepsy.

The author welcomes the endeavor being made by several states, and also by some of the countries of Europe, to establish farms and homes for epileptics. He does not believe that surgery offers much hope for the general epileptic. Hope could only be expected in these cases by surgical operation where the spiculum of bone and blood clot or some cause that was resulting in some gross anatomic lesion could be removed by surgical interference. To illustrate the last point, he cited the case of a farmer with good habits who, during the past two years, has had repeated attacks of acute delirious mania which would last from one-half hour to several hours. The patient was struck on the head by a log-chain two years ago, and was sent to a surgeon to be trephined; but where to trephine was the question. The scar was located over the center for the left leg, but the patient had never had any spasm or other nervous trouble in the left leg nor any disturbance of motion, sensation or function anywhere. So the frontal lobes were considered, and then the trephining was given up and, on further examination, it was found that the patient was unable to read for any length of time on account of asthenopia.

The Kings County Medical Association.

Brooklyn, New York, March 13, 1900.

UTERINE FIBROIDS: ABSENCE OF HEMORRHOAGES.

DR. ALBERT M. JUDD presented a specimen of fibroid uterus, which he had removed by operation, the chief feature of interest being the absence of any history of hemorrhages.

SOME IMPROVEMENT IN GENERAL ANESTHESIA.

DR. THOMAS L. BENNETT, of New York County, read a paper with this title. He said that the method of anesthetization known as gas and ether constituted one of the happiest and most valuable modifications of anesthesia. The safety is increased from the fact that the dose of ether is diminished. The anesthetization is more rapid, and the sensations before loss of consciousness are vastly more agreeable with gas and ether than with either ether or chloroform alone. Complete anesthesia can be induced in from one to four minutes, according to the individual. By this he did not mean to say that it should always be done so rapidly, for, in some instances, this rapid method is certainly objectionable. A particularly noticeable feature of this method is the absence of the stage of excitement. To start with a struggle is a bad beginning for almost any patient who is about to undergo a critical operation, and, in some cases it becomes a positive danger. This is especially true of ectopic pregnancies about to rupture, also in cases of internal abscess, and of severe visceral disease. Bronchorrhea is very much less frequently seen with gas and ether than with ether alone. Owing to the small quantity of ether used, the unpleasant after-effects are very greatly lessened. The speaker said that we are indebted to the late Dr. Clover, of England, for this method, described in 1876 and used quite extensively in that country since that time. Dr. Bennett introduced the method into New York City in 1897, and it has since been adopted in a number of the hospitals.

Differences of opinion have been expressed regarding the advisability of an abrupt or a gradual transition from the nitrous oxid gas to the ether. Hewitt's gas and ether inhaler he considers an excellent apparatus, and so constructed that it can be easily attached to the Clover ether inhaler. In the latter, the ether chamber is so arranged on a central chimney that when the chamber is rotated ether is gradually admitted.

Hewitt's gas apparatus consists of a bag, a valve chamber, and a face-piece. In using the combined apparatus the patient first breathes gas from the bag, the expirations escaping. After about fifteen seconds the patient becomes unconscious, and the ether is then turned on. After about one minute anesthesia is complete, chiefly owing to the nitrous oxid gas, and there is cyanosis present. Air is admitted, and ether also added, the proportion of ether being gradually increased until there is sufficient to maintain the anesthesia without any gas. Dr. Bennett said that long experience had taught him that while Clover's ether inhaler is the best for inducing anesthesia, Ormsby's is better for maintaining it. He has, therefore, endeavored to combine these in one apparatus of his own invention. The ether chamber is first charged with ether by pouring it on gauze. The bag is then filled with nitrous oxid gas, and connected with the ether inhaler, the valves being so adjusted that gas is admitted to the patient. After the first few inhalations of the gas it is advisable to allow the patient to rebreathe the gas from the bag. The ether should be turned on so gradually that it does not excite cough. When cyanosis, jerking respirations and twitching of the extremities occur the valve is opened for a moment to allow the admission of air and cause the disappearance of the cyanosis. The ether is then pushed until complete ether anesthesia is secured. It is the rapid induction of the anesthesia that permits the doing away of the stage of excitement. It is almost impossible to induce ether anesthesia quickly enough if an ordinary cone is used. Gas and ether might be used in practically all cases in which ether is suitable. Special caution is necessary, however, as to the amount of gas effect to be produced in certain cases. Patients having dyspnea for any cause, while not good ether subjects, are particularly bad ones for gas. Very fleshy individuals with short stout necks should have very little gas before ether. He emphasized the great danger of giving chloroform after nitrous oxid gas. Under such circumstances one simply invites a fatal ending from the action of the chloroform.

For many years it has been taught that the anesthesia of nitrous oxid gas is nothing more than asphyxia, but this has been conclusively disproved since 1878 by the induction of anesthesia with a combination of oxygen and nitrous oxid gas, the blood of the patient remaining of a bright red color meanwhile. This method of inducing anesthesia is valuable, most suitable for very short operations, but can be continued for a considerable time, and with much satisfaction, in certain cases. This difficult method has been rendered practicable largely through the labors of Hewitt. With his apparatus a double bag was used, one-half of the bag containing oxygen, and the other half nitrous oxid gas. The gases are mixed in a metallic chamber, the proportion of the two being varied at will by an ingenious arrangement of valves. From one to twenty parts of oxygen may be used with the nitrous oxid gas. The bag is filled about three-fourths full with the two gases, and the valves tested to be sure that they are working perfectly, and that there is no leakage of air around the face-piece. The index is then turned to No. 1 or No. 2, giving about ninety-eight parts of nitrous oxid gas and two of oxygen. After three or four breaths have been taken, the indicator is moved so that the patient gets three parts of oxygen, and, after a few more respirations, the proportion is still further increased. A small proportion of oxygen is used at first because one must allow for the oxygen already in the patient's system. If this were not done, the patient would probably become excited. After the first minute, the index finger points to six or seven, and signs of anesthesia are beginning to be present. Complete anesthesia by this method is induced in from 1½ to 2 minutes. At this stage, one usually administers about ten parts of oxygen and ninety of nitrous oxid gas. As a rule, the color of the patient at this time is quite normal. If the anesthetic is then stopped, the anesthesia will continue for from thirty to sixty seconds. If anesthesia is to be maintained, the percentage of oxygen is gradually increased. Sudden changes in the percentages of the two gases are decidedly objectionable.

(To be continued.)

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61 MARKET STREET, - CHICAGO.

SATURDAY, APRIL 7, 1900.

CHRONIC VILLOUS POLYARTHRITIS.

There is a growing belief that there are numerous varieties of acute arthritis dependent on different causes, although the most common and the best-defined of these is that which may perhaps be considered specific and alone entitled to the designation "acute rheumatism." It is probable, also, that some of the conditions included under the heading of subacute rheumatism are really not rheumatic at all in the sense in which this term is applied to the specific variety of acute polyarthrititis. In the same way confusion exists in the classification of the several chronic diseases of the joints. Occasionally chronic arthritis is the sequel of acute rheumatism; at other times it may be wholly unrelated to previous articular disease and may set in insidiously and progress slowly. Although among this latter group so-called rheumatoid or deforming arthritis is a well-recognized condition, both clinically and pathologically, its essential nature yet remains unexplained, and little is known with regard to its etiology.

An interesting discussion of this disorder and of another that may be mistaken for it is entered into by Schüller,¹ in whose opinion a sharp distinction should be made between chronic villous arthritis and deforming arthritis. The former is a peculiar morbid process, occurring with relative frequency, involving generally several and often numerous joints, beginning usually in several synchronously, though exceptionally remaining localized to one. Sooner or later, generally slowly, with pain, enlargement and deformity of joints occur, with impaired mobility and usefulness. The changes in the joints are peculiar, depending almost exclusively, at least essentially, on chronic inflammatory enlargement and chronic inflammatory hyperplasia of the villi of the synovial membrane, while the cartilage and bone of the articular extremities remain uninvolved. Generally, in consequence of these villous hyperplasias, irregular prominences appear at various parts of the articular capsule, in seat and form differing entirely from the well-known typical and uniform swelling of the articular capsule such as results from fluid effusion. Although, at times, some fluid may be found in such joints, this effusion is wholly subordinate to the villous hyperplasia of the synovial membrane. The affected extremities, further, assume abnormal positions, varying with the individual member, but quite characteristic for each. The cartilaginous borders of the articular extremity can be felt to be unchanged.

This peculiar disorder has been considered chronic

articular rheumatism, joint-syphilis and gout, but it has been shown to be an independent affection. The condition has been studied both after death and after operation, and has been found to consist essentially in chronic inflammatory hyperplasia of the synovial membrane in the form of peculiar fringes and villi, much larger and more massive than normal, or than are observed in connection with other chronic inflammatory disorders of joints. The villi often exhibit dendritic ramifications, although they may be undivided. They are generally firm, though at times they may be soft and slippery, and they vary from the most delicate filaments to club-shaped structures, with thick, broad extremities or leaf-like in shape. In the freshly opened joint they appear reddish, bluish-red, greatly swollen and vascular. In no instance, even when the disease has persisted for many years, is the cartilage affected, as in deforming arthritis, although in the latter villous hyperplasia of the synovial membrane may take place. In one variety of the disease the villi, instead of forming massive hyperplasias undergo early contraction, and finally contracture and ankylopoietic may result. This has been designated "ankylopoietic," in contradistinction to the "hyperplastic" variety. Both varieties may be present in different joints at the same time, or the latter may be transformed into the former. In the hyperplastic variety the morbid process generally begins with the formation in the lowest layers of the synovial membrane, principally through inflammatory proliferation of the connective-tissue cells and the large endothelioid cells of the synovial connective tissue, and in less degree through the migration of leucocytes, of small circumscribed inflammatory foci, accompanied by hyperemia and swelling of the entire synovial membrane. Only in the further course of the disease do similar circumscribed inflammatory foci appear just below the surface of the synovial membrane. In stained preparations all of these foci resemble spindle-shaped, oval or round dark nodules containing numerous blood-vessels. About them the entire connective tissue becomes involved in inflammatory cellular proliferation. The interstitial connective tissue swells and is penetrated by numerous blood-vessels. The small inflammatory foci bear a certain resemblance, in structure and in arrangement of their cells, to some young tubercles, from which they differ, however, particularly in the presence of an abundance of newly formed blood-vessels; and also in never undergoing caseation. The foci increase in number and appear at the surface of the synovial membrane, which they elevate in places and then form villi. Although proliferation of the villi is first noted in situations where villi normally are present, by far the largest number are formed anew, and apparently in the manner described. Villi also contain inflammatory foci arranged in groups and penetrated by blood-vessels and in the center generally also a relatively large vessel surrounded by inflammatory connective tissue. In other villi fat cells or fatty tissue may be present in addition.

¹ Berliner Klin. Woch., 1900, Nos. 5, 6 and 7.

A further characteristic of chronic villous arthritis is the presence of short bacilli with polar enlargements, dumb-bell shaped bacilli, which are situated especially in the small foci of inflammation in the synovial membrane; but also, here and there, especially near the blood-vessels, in the inflamed synovial tissue and also in the villi, preferably within the inflammatory foci. The appearances suggest that the bacilli may be brought by the blood and set free in the joint, where they give rise to the subsequent processes. The relatively chronic action corresponds with the participation, especially of the large connective-tissue cells and of the endothelioid cells of the synovial membrane, in the formation of the inflammatory foci by their swelling, nuclear multiplication and division, as these are first affected by the irritation of the bacilli. Often the tissues about collections of large numbers of villi are pale and the nuclei faint, and this effect has been attributed to the toxic influence of the bacteria. Both the inflammatory hyperplasia of the synovial membrane and the often enormous production of villi, as well as the cellular multiplication, are attributed to the action of the bacilli. Everywhere in the inflammatory foci in the synovial membrane and in the villi numerous cells can be found with two and even with three nuclei. Mitotic changes in the nuclei have also been observed. These factors furnish the conditions for the hyperplasia of the synovial membrane, and they explain the progressive character of the villous formation. In addition to the bacilli described, cocci also are sometimes found, but these are thought to take no essential part in the hyperplastic villus-forming inflammatory process. They are found likewise in association with the most varied forms of articular inflammation. By treating animals with cultures of the peculiar dumb-bell shaped bacillus it has been possible to excite villous arthritis like that observed in man.

In the treatment of chronic villous arthritis the only successful remedies consist in the injection of a mixture of guaiacol, iodotorm and glycerin and extirpation of the hyperplastic tissue. In accordance with the extent of the disease and the size of the joint affected the injection must be repeated more or less frequently at intervals of about twelve days. By this means long-continued improvement may be effected, villi reduced in size, pain relieved, impairment of mobility lessened and function restored. In some cases permanent recovery has resulted. Massage and electricity may be employed as adjuncts, and guaiacol and eucophen-oil may be rubbed into the joints, particularly the smaller. Douches and baths may exert a useful local effect at an early stage of the disease. Operative intervention may be followed by hydrotherapeutic measures, such as hot baths, saline baths or cold affusions. It is well in connection with both varieties of treatment to administer guaiacol or thioocol. It would be futile to rely on these remedies alone, but after previous treatment by injection or operation they appear not alone to contribute to the improvement in the general condition, but also to confer a certain protection against recurrence.

OPERATION FOR HEMATURIA IN NEPHRITIS.

In recent years much has been said concerning hemorrhage from the normal kidney. Usually the diagnosis settled upon tumor, tuberculosis, or nephrolithiasis, and great has been the surprise when the kidney on exposure was seen to be macroscopically normal, as has happened not a few times. In many of these cases the apparently normal kidney has been the seat of nephritis, but cases have been recorded of renal hemorrhage and hematuria in which the histologic examination failed to reveal any changes in the kidneys. And there are many other cases the course of which would seem to speak for normal kidneys, although no opportunity for microscopic examination was given. Israel,¹ in his article on splitting of the kidney in acute and chronic diseases of the parenchyma, believes that a large number of the instances of hemorrhage from apparently normal kidneys concern chronic nephritis. As pointed out by Naunyn,² the hemorrhages now referred to are different from those observed in connection with acute and chronic, so-called hemorrhagic nephritis. It concerns copious, periodic hematuria associated with attacks of renal colic. Consequently the attention is first directed to stone in the kidney, to tuberculosis, or to tumor, and cases are more frequently placed in the care of surgeons than of physicians. As indicated in not a few cases, operations have been made on the suspected kidney, cystoscopic examination and ureteral catheterization usually correctly indicating the kidney affected. Extirpation of the organ and mere incision into its substance have yielded about equally successful results, the hematuria and other symptoms subsiding; hence Israel's dictum that nephrectomy should not be performed on account of the hemorrhage alone. Macroscopically apparently normal, the microscopic examination of the kidney revealed nephritic changes, generally of slight extent. In a kidney of this sort, examined by Floderus,³ there was a disseminated, sclerotic glomerulitis with degeneration and atrophy of the epithelium. In most cases the uriniferous tubules contained but few blood-corpuscles. Naunyn suggests the renal pelvis as a possible source of the bleeding. Inasmuch as operation has been followed by freedom from hemorrhage and by diminution or disappearance of albumin in the urine, it has been thought that the disease was unilateral. This does not necessarily follow, because we know that there may be chronic nephritis without recognizable symptoms, and Naunyn suggests that operation on one kidney may also have a beneficial effect on the other.

Naunyn further remarks that these observations place nephritis among those diseases that occasionally demand surgical interference, in this case massive hemorrhages. He even goes so far as to intinate that nephrotomy may have a larger place in the treatment of nephritis. Harrison, in 1886, argued that puncture of the kidney in

¹ *Mitteilungen aus den Grenzgebieten der Medizin und Chirurgie*, 1899, v.

² *Ibid.*, 1900, 639.

³ *Uppsala Läkareföreningens Fort.*, 1899.

Bright's disease would be beneficial through relieving the swollen parenchyma of the tension in which it is held by the capsule. Harrison cited the good effect of iridectomy in glaucoma—relief of tension of the eyeball—as an example of what might be expected of nephropuncture in nephritis. And recently Israel has recorded a case of acute nephritis in which incision of the kidney had a decidedly good effect. The course of nephritis is often favorable, even in severe cases, and it is to be hoped that the results of operations sure to be undertaken in this disease be not vitiated by rashness and ill-considered resort to operative interference.

ALCOHOL AS AN AID TO THE NATURAL PROTECTIVE AGENCIES AGAINST INFECTIONS.

The existence of bactericidal substances in the serum of the blood—the alexins of Buchner—has recently been questioned by Baumgarten and others who would refer the microbicidal action of the serum to osmotic disturbances and plasmolysis of the bacterial cell, caused by the salt present in the serum. In reply, Buchner¹ points out that bacteria perish in salt solutions, distilled water, etc., principally because of the lack of nourishment. Active serum added to reliable and good culture-media may destroy bacteria inoculated on such media; serum loses this action when heated to 55 C., when placed in the ice-box, and even when left at the room temperature; and then it becomes a good medium for bacteria. Hence blood-serum must contain distinctly bactericidal substances, and Buchner does not hesitate to advocate the treatment of local infections by means of increased supply of blood to the part.

Buchner holds that the blood is the great antibacterial power of the body. While some bactericidal substances are present probably in nearly all or all cells, yet the blood-serum is the great storehouse for them. The leucocytes furnish alexins to the serum, and take up bacteria, but they do the latter rather by way of absorption than as phagocytes in the sense of Metchnikoff.

The bactericidal substances are regarded as enzymes; the antibacterial action of the fluids of the body is simply a form of digestion. The leucocytes contain proteolytic enzymes which dissolve tissue, as seen in abscesses even when their contents are sterile, and absorb catgut and other digestible substances introduced into the tissues; undoubtedly the bactericidal and proteolytic substances are closely related; in fact, Buchner regards them as identical.

It is on the basis of the experimental and theoretic considerations just referred to that Buchner proposes to use the blood in greater measure than Nature does in the struggle against infectious processes. This method of treatment has already been recommended by Bier and others, an artificial passive hyperemia being the plan proposed. Buchner lays stress on the greater advantage of an increased active flow of blood through the affected part, believing that a continuous change of the blood

will insure more pronounced antibacterial action. The beneficial action of hot air in chronic rheumatism and other examples are cited as illustrations of what may be accomplished, but Buchner lauds especially the healing action of alcohol. Alcohol has been used to advantage in the treatment of phlegmonous and erysipelatos processes. Its direct disinfecting action when so used is of but little import; it is the vascular dilatation and hyperemia produced by alcohol that explain the good effects following its use. Buchner shows, by means of numerous experiments, that out of a long list of substances alcohol is the most powerful local vasodilator. The application of a dressing of 96 per cent. of alcohol to the forearm is shown, by some of Buchner's pupils, to very decidedly increase the arterial pressure. The result is an increase of the amount of blood passing through the part in a given period of time.

Buchner calls attention to the surprisingly good results that follow brushing of the teeth and the gums with 45 per cent. alcohol twice daily. He reports striking results obtained with alcohol dressings in the treatment of articular tuberculosis. He advocates alcohol dressings in the treatment of syphilitic gummata, on the score that the ferments in the serum not only destroy the specific germs but also hasten the removal of the pathologic products. Laryngeal tuberculosis and peritoneal tuberculosis are also mentioned as suitable conditions for alcoholic dressings. Inhalation of alcohol in phthisis and alcohol gargles in angina and diphtheria are suggested. It now remains to test, in clinical practice, the theory of the curative action of hyperemia produced by the application of alcohol.

NORMAL APPENDECTOMY.

A contemporary¹ has devoted a recent issue to a sort of symposium on the propriety of the prophylactic removal of the appendix in infants. This was tentatively suggested in 1890 by Burt G. Wilder, and the idea seems to have taken root sufficiently to call out these expressions of opinion ten years later. The opinions on the subject are apparently given in response to a circular letter of inquiry addressed to leading surgeons, and are of interest in showing the trend of surgical opinion on this point. Out of about 90 who gave their views, only 4 or 5 gave even a qualified approval to the procedure at the present time, and only 3 or 4 ventured to hint that the time might come when it would be recognized and adopted by the profession. One was non-committal, several objected to the measure because of the danger from laparotomy in unskilled hands, which would be inevitable if the practice became general, and quite a number condemned it in the strongest terms as "absurd," "folly," "pernicious and little less than criminal," "crazy," etc. One surgeon goes into an elaborate calculation to show how large a number of lives would be sacrificed by adding to the normal death-rate the minimum mortality of the operation as estimated—.5 of 1 per cent.—and although there is an error in one of his

¹ The Medical Review, St. Louis, Mo., March 17; see also Current Medical Literature department in this week's JOURNAL.

calculations the others make a very formidable showing. Several make a point of examining the appendix in laparotomies for other causes, and remove it if any abnormality is found; one or two think it justifiable to remove a normal appendix under such conditions. The discussion covers the whole subject of the surgery of appendicitis and one prominent surgeon says that he now operates on very few patients, while formerly it was the exception when he did not operate. He believes the majority can be cured without operation; one or two others practically agree with him. Another compares our knowledge of the possible functions of the appendix with that we possessed a few years ago as to that of the thyroid and suprarenal glands and, for reasons that can be readily deduced, objects to its removal unless necessitated by actual disease. These all show the wide range of opinion on the subject, together with the overwhelming majority in favor of conservative as opposed to radical measures. There is a tendency for every new or striking surgical procedure to have, at some time or another, what one may call a "boom," and appendectomy has followed the fashion in this respect. Whether the extreme conservatism of the one or two surgeons above mentioned will in time prevail may perhaps be doubted, but it seems reasonably certain that the opposite extreme advocated by a few is very unlikely to be accepted by any proportion of the profession. The future of normal appendectomy—if it has any—is certainly in the very dimmest distance, if not altogether out of sight.

"THE TREATMENT OF AMERICAN MEDICAL WRITERS BY A CONTEMPORARY."

Under the above title a contemporary indulges in a most undignified and uncalled-for criticism of this journal and its management. Our first intention was to ignore the matter, but on reflection it occurred to us that possibly some might accept as correct the assertions made. The writer of the editorial in *THE JOURNAL* which forms the main basis of the criticism is a gentleman above reproach, a scientific physician who is recognized as an authority, and one who does not need to plagiarize or stoop to such methods as are implied by the editor of the *Philadelphia Medical Journal*. The following letter from him will satisfy any impartial reader:

To the Editor:—On comparing the editorial entitled, "Syphilis of the Stomach," in your issue of March 24, 1900, with the remarks in an editorial headed "The Treatment of American Medical Writers by a Contemporary," in the *Philadelphia Medical Journal* for March 31, 1900, the following facts will appear: The bibliographic references are not drawn wholly from Einhorn's article in the *Philadelphia Medical Journal* of February 3, as claimed in its editorial of March 31. Einhorn makes no reference to the contribution of Cesaris-Demel, which is extensively referred to in the editorial in your issue of March 24, and for the good reason that Cesaris-Demel's article appeared almost simultaneously—but a little earlier than Einhorn's. The fact is that the beginning of the editorial on "Syphilis of the Stomach" was written before Einhorn's article appeared, the writer of the editorial being fairly familiar with the literature on the subject by reading Chiari's, Flexner's, Fraenkel's, Aristoff's and other articles on the subject.

In the second place every statement in the editorial directly or indirectly suggested by Einhorn's article is

credited to Einhorn, whose name occurs no less than four times in the editorial. The *Philadelphia Medical Journal* errs when it says that "no reader could guess when Dr. Einhorn's article appeared," because at the bottom of page 755, of *THE JOURNAL* of March 24, the reference to Einhorn's article is given correctly, and credited to the *Philadelphia Medical Journal*. As a further illustration of conscientious effort to do all writers quoted full justice, may be mentioned that on page 756 of *THE JOURNAL* of March 24 appears the reference figure 5 after Einhorn's name, the figure referring again to the *Philadelphia Medical Journal* of February 3, 1900, but the reference to which the 5 refers—*loc. cit.*—and which should appear at the foot of the page, was omitted in the makeup. This, however, is immaterial, as it gave the same reference as the one under the figure "4" on the preceding page.

From what has been said there can be no doubt that Einhorn's work has been fully recognized and credited.

THE AUTHOR OF EDITORIAL IN QUESTION.

We do not care to notice the other insinuations, as we consider it beneath the dignity of a scientific journal to stoop to childish methods.

THE PATHOLOGIC CHANGES IN THE DIGESTIVE TRACT IN PERNICIOUS ANEMIA AND SO-CALLED INTESTINAL ATROPHY.

Faber and Bloch¹ describe four cases of typical pernicious anemia. A complete or a considerable diminution in the gastric functions was observed, chymification was feeble, there was no free hydrochloric acid, and the total acidity was much reduced in three of the patients. In two the microscopic examination of the stomach showed a chronic inflammatory process of varying intensity, most marked near the cardiac end and diminishing toward the pylorus, the duodenum being normal. The process is best described as a progressive, atrophic, interstitial gastritis. As regards the atrophic changes in the intestines, on which there has been laid so much stress, some even going so far as to attribute the origin of pernicious anemia to them, Faber and Bloch find themselves constrained to assume a decidedly critical attitude. In the first case the intestinal changes appeared to correspond closely to those described as atrophic, but it seems that part at least of the alterations are of cadaveric origin. In two subsequent cases a solution of formol was injected into the peritoneal cavity immediately after death; the intestine was found but moderately distended, there was no real cadaveric meteorism, and microscopically the various layers were found to be well preserved; even the epithelium of the villi was perfect. In those parts, however, in which there had been some distension, the wall seemed thin, the submucous coat was free from folds, and the glands of Lieberkühn appeared to be few and far between, the whole resembling the appearances described as caused by atrophy. This observation led to experiments on human and animal intestines, and sections of the artificially distended intestine were compared with those of the contracted one. It was found that the mucous membrane is thrown into folds by contraction, and flattened out by distension; further, that the glands of Lieberkühn are pressed nearer together in

¹ Nordiskt Medicinskt Arkiv, 1899, x.

contraction and widely separated in distension; the glands become short, thick, somewhat convoluted when the bowel is distended at the same time as the villi are rendered shorter and broader at the base, while the coats become thinner. The authors therefore conclude that there was no real atrophy in the intestine of their cases of pernicious anemia, and that the changes described by others, especially German writers, as the result of atrophy, are the result of cadaveric changes and distension. Hence the theory of intestinal atrophy in pernicious anemia can not be upheld.

THE PATHOLOGIC EXHIBIT AT ATLANTIC CITY

The certainty that a pathologic exhibit will be given in connection with the coming meeting of the AMERICAN MEDICAL ASSOCIATION prompts the observation that practical pathology has recently made rapid progress among the rank and file of the profession. Beginning a few years ago as an elective study in the colleges, it now takes rank in the curriculum with anatomy and physiology. The prolific multiplication of medical societies has also contributed to the diffusion of pathologic knowledge, and the introduction of the pathologic exhibit, as a feature of the annual medical gatherings, gives promise of valuable results. In the larger cities are organizations devoted exclusively to the consideration of pathologic questions, or more frequently an occasional evening or a part of the regular session is given over to the presentation of pathologic specimens and kindred matters.

The exhibit contemplated for the Atlantic City meeting can not be viewed as experimental, as the plan was tried by the Indiana State Medical Society last year, at Columbus, with a gratifying degree of success. The national movement has not been officially authorized by the ASSOCIATION, but most certainly the scientific spirit and better judgment of the membership will uphold the President in his action in appointing an "Unofficial Committee" to carry on the work. Although the chief aim will be the collection of gross pathologic specimens, photographs of interesting cases, etc., the utmost liberality will be shown in scope and character of the exhibits. Practical scientific demonstrations of diverse character will be made. The object will be purely educational and illustrative of the latest advances in medical science. The exhibit will prove an interesting and instructive digression from the monotony of the conventional program. We are informed that the plan of securing contributions has been chiefly through the state medical organizations, some of which have well-selected committees, actively engaged in collecting and preparing material. A number of public hospitals, colleges and laboratories will send exhibits on their own account. The large number of well-known pathologists who are giving generously of their time toward the furtherance of this laudable undertaking should stimulate reciprocal effort from the profession throughout the country.

FRENCH TEMPERANCE METHODS.

The French temperance societies have ways that are different from those in vogue here, and which seem to us somewhat odd, as compared with those of cis-Atlantic temperance workers. The theory on which they appear

to work is that abstinence is a positive, not a negative, virtue; in other words, they put the line of temperance rectitude down to about what would here be called moderate drinking, and consider any extra self-denial in this regard as worthy of special praise and reward. We read, therefore, of bestowal of temperance medals on abstainers and the greater the temptation the more meritorious the resistance. Thus we hear of a special reward to a teetotal saloonkeeper who, when his customers insisted on treating him, drank water for white wine and colored syrups for "Amer Picon." This looks to American eyes like rewarding the devil for not eating the apple himself but only tempting Eve, though it may have its utility in France. In this country we fear a bartender with a temperance badge would hardly be taken as a temperance object-lesson, but would be thought a good joke on the temperance people. In spite, however, of all these praiseworthy efforts, intemperance appears to be on the increase in France, and to be assuming new and damaging phases, especially in some sections. France has long been considered one of the most highly civilized nations, but it is from there that we receive most suggestions of truthful James's query, "Is our civilization a failure and is the Cascaean played out?"

DIET OF TYPHOID FEVER.

By reason of its long duration, its pyrexia and the character of its lesions, typhoid fever may be considered a wasting disease, and when death occurs, barring complications, it is most commonly due to asthenia. This result may be due in part to the insufficiency of the diet usually employed, and the tendency to remove this source of danger that has manifested itself of late in various places would seem to be a natural one. The impairment of appetite, the deficiency in secretion and the interference with the digestive functions resulting from the pyrexial process, as well as the state of the intestine and the presence of diarrhea, will as a rule contraindicate the administration of solid or semisolid food or even of liquid food in large amounts, but in not a small number of, and perhaps in most, cases at some stage of the disease these deterring factors are not present, and under such circumstances an amplification of the customary diet would seem justified. The dangers to be feared from such a course of procedure are the induction of diarrhea, hemorrhage, perforation or relapse. Extensive observations relating to these points are wanting, but the results obtained in a series of 200 cases of typhoid fever in which a more liberal diet was permitted are reported in a recent communication by Marsden.¹ All of the patients received milk only at first, but in mild cases, without contraindication, bread and butter with custard, fish with mashed potatoes, chicken, bread and butter, and finally minced meat were given on successive days until convalescence was well established. In severe cases peptonized milk alone or together with meat-juice, etc., was continued into the period of convalescence. The patient's wishes were accepted as a guide, in so far as they could be determined to be genuine, and in no instance was solid food forced on a patient. No injurious consequences were observed, while recovery appeared to take place rapidly. The risk of surreptitious feeding

¹ *The Lancet*, January 13, p. 80.

with possible harmful substances was diminished, and the tendency to bolt food without proper mastication was lessened, as was also that to asthenic complications such as post-typhoid anemia, gangrene, etc.

CONTRACT PRACTICE IN MASSACHUSETTS.

Massachusetts is just now the storm-center of club practice, and Springfield the immediate focus of the disorder. The secret and benefit societies, representing some four thousand members, including three thousand heads of families, are said to have found five physicians who are willing to go to Springfield under the inducements they offer. These are the salary of about \$800 from the membership fees, and the prospects of what can be made from practice in the families of members who are not entitled to free medical treatment. It is estimated, by the societies, that this will amount to \$3000 a year in addition to the sum above mentioned, but they are careful not to guarantee this much. In view of the fact that these society directors will not be able to call any of the regular physicians in consultation, and that they will, or ought to be, ostracised by reputable physicians, it is quite likely that they will regret their action before long. It is not likely that every one in the three thousand families will willingly submit himself solely to the five selected with no chance of the benefits of any superior skill. If the members of the profession stand together it will be only a question of time when these societies will disintegrate from their own defects at least so far as their medical practice feature is concerned. In Pawtucket, R. I., some society contract physicians who have been refused consultations have already begun to find their situation intolerable and have announced their intention of withdrawing from contract practice. This is not "trades unionism," it is simply the elimination of contract commercialism from medical practice by the professional non-recognition of those that indulge in it. The physician who puts himself at the beck and call of any one who pays a dollar a year cheapens himself and degrades his profession, and professional non-recognition is only his desert. So far as it appears from the newspaper accounts that have reached us, no physicians of any standing have accepted these positions, which fact is creditable to our Massachusetts confrères.

NITROGENOUS ELIMINATION AND DIAPHORESIS IN CONNECTION WITH DISEASES OF THE KIDNEYS.

The utility of sweating in the treatment of chronic parenchymatous nephritis has not been admitted by all clinicians. In fact, there are some who consider diaphoresis unnecessary in this connection, and under some conditions not unattended with danger. It is suggested that in the process of sweating considerable water, but relatively little nitrogenous matter, is eliminated through the skin. In this way, it is thought, there results an increased concentration of the blood, which disappears in the course of a few hours. In the course of this readjustment nitrogenous fluid is taken up from the tissues by the blood, and this may be a source of danger when nitrogenous elimination is deficient. Clinical experience, however, is not always in consonance with this view. Although uræmic attacks have been observed immediately after forced sweating, their occurrence is not the rule and the widespread employment of this procedure would

seem to indicate that the danger is not considerable. It has been pointed out, further, that the retention of nitrogenous matters is not responsible for the uræmic attack and, conversely, that free elimination of nitrogenous matters does not prevent the development of such attacks. With the view of reaching an impartial opinion on such a subject, Köhler¹ undertook a study of the literature, which he supplemented by a series of experimental observations in four cases of renal disease. He was unable to demonstrate any increase in nitrogenous elimination during the sweating period, possibly, he points out, because the bath was not continued long enough. The amount of sweat varied greatly in the individual patients, although the amount of fluid ingested was the same in all. In no case was the bath attended with or followed by uræmic attacks. The elimination of nitrogenous matter in the feces varied little in all of the cases. It was slight in comparison with nitrogenous ingestion, so that probably absorption and assimilation were active.

METHEMOGLOBINEMIA FROM CERTAIN DRUGS.

There are a number of drugs—some oxidizing, some reducing agents and others of neither character—capable of converting the oxyhemoglobin of the blood into methemoglobin and thus exerting a distinctly injurious influence. This condition is indicated spectroscopically by a band in the red portion of the spectrum between the lines C and D. This becomes the deeper and the more pronounced the greater the amount of methemoglobin present, while it disappears on addition of alkalis or on strong dilution with water. Two other bands appear in the green portion of the spectrum between the lines D and E, and these are supposed to be of quantitative value. To determine the influence on the blood in this connection, of two of the more recently introduced antipyretics, acetanilid and phenacetin, Dennig² undertook a series of spectrophotometric observations and found that these substances introduced into the stomach or the bowel of the dog speedily induce changes in the blood indicative of the formation of methemoglobin. This latter advances progressively hand in hand with the destruction of oxyhemoglobin. The changes in the blood may persist for a considerable length of time—from 24 to 48 hours—so that the possibility of a cumulative action is to be thought of, as elimination takes place slowly. When two-thirds of the oxyhemoglobin of the blood is replaced by methemoglobin, death occurs. The bodily temperature has rather a declining tendency, although hyperthermia may be present. The respiratory frequency and the depth of respiration are variable. In severe cases the pulse becomes frequent and arrhythmic. When the methemoglobinemia is not excessive, evacuation of the stomach and administration of anodynes will suffice, but when the former reaches 50 per cent. or more transfusion of blood is indicated. Making allowance for the fact that the results of experiments on lower animals are not directly applicable to similar conditions in human beings, the outcome of the investigation is believed to furnish a safe therapeutic guide in cases of intoxication with the antipyretics named.

¹ Deutsches Archiv. f. Klin. Med., B. lxx, H. 5 u. 6, p. 542.

² Deutsches Archiv. f. Klin. Med., Bd. lxx, H. 5 and 6, p. 324.

Medical News.

A. J. NEWTON, Lord Mayor of London, has donated \$10,000 toward defraying the expenses of the hospital ship *Maine* in its beneficent work in South Africa.

THE HALF-CROWN equipment fund being raised by the editor of the *British Medical Journal*, in connection with the South African war, now amounts to something over £335.

AN ABSURD rumor was circulated last week to the effect that Dr. Richard Dewey, of Wauwatosa, Wis., was insane. It may be needless for us to say that the rumor is groundless.

THE MUNICIPAL Council of Paris has decided to put up signs prohibiting expectoration on the floors and sidewalks. The *Figaro* observes that no attention will be paid to the admonition unless a penalty is attached.

A SCULPTURED tablet of great beauty was unveiled at the Military Hospital at Rome, March 18, to the memory of the members of the profession killed in the campaigns in the Crimea, in Italy and in Africa, 1818-1898. There are thirty names inscribed on it. At the base is the inscription: "The Colleagues, 1899."

ACCORDING to new regulations in regard to vaccination, enforced in the German Empire, no physician is allowed to vaccinate unless he has certified that he has attended at least two public *Impfungsterminen* or vaccination courses, and has the requisite knowledge in regard to the production and preservation of the lymph.

WE LEARN from the *British Medical Journal* that on the first day of the congress against tuberculosis, to be held in Naples this month, a dinner will be given by the Neapolitan Committee of the Italian National League Against Tuberculosis, to 1200 of the poor of the city. Each will also be presented with a linen shirt.

SIR WILLIAM GAIRDNER, professor of medicine at the University of Glasgow, has presented his resignation, to take effect after the summer graduation. The *British Medical Journal* says his decision in this matter is due to his failing eyesight rendering it difficult to read the enormous literature of his subject or to verify the statements of others by personal use of the microscope.

FOR THE information of those whom it may concern, and especially state health and examining boards, THE JOURNAL wishes to say that the "Metropolitan Medical College," of Chicago, is practically the old, fraudulent "Independent Medical College" under a new name. This identity is acknowledged by it in claiming as its graduate a Wisconsin irregular, a diplomate of the old concern, whose legal standing is now before the courts of that state.

GERMANY'S MEDICAL DEGREES.—The degrees in medicine, conferred by the German universities during the academic year 1898-1899, numbered 1050, according to the *British Medical Journal* of March 24. Berlin gave 87, Bonn 22, Breslau 30, Erlangen 47, Freiburg-in-Baden 60, Giessen 32, Göttingen 31, Greifswald 10, Halle 23, Heidelberg 32, Jena 34, Kiel 86, Königsberg 24, Leipzig 55, Marburg 28, Munich 134, Rostock 14, Strassburg 43, Tübingen 46, and Würzburg 147. These universities conferred 1208 degrees the previous year and 1268 for 1896-1897.

PROGRESS OF THE PLAGUE.—In Bombay City, during the last six days of February, the deaths from plague were respectively 103, 101, 110, 121, 116, and 122, and

for the week ending March 1, the total plague mortality was 765. Calcutta shows a steady increase in the disease, both in extent and virulence. On February 28, Karachi reported 12 new cases with 8 deaths. In Sidney, New South Wales, another death from plague was reported March 19, with 2 new cases, and up to this date 5 deaths occurred in Adelaide, South Australia. In Mauritius, during the week ending March 16, 5 new cases occurred with 2 deaths. The *British Medical Journal* of March 24 says there is no news of any existence of the disease in the South African quarters, and that it has not appeared in Cape Colony.

NEW YORK.

DR. HENRY'S bill for shorter hours for drug clerks in New York City has finally been passed by the Senate.

THE MANAGERS of the Hudson House of Refuge have chosen a woman physician as superintendent of the hospital. They have also appointed a woman resident physician.

ON MARCH 29 the State Senate passed the bill appropriating \$150,000 for the establishment of a state hospital in the Adirondacks, for treatment of incipient pulmonary tuberculosis.

FIRE FOLLOWING FUMIGATION.

Several mild cases of scarlet fever having broken out in the Clinton Liberal Institute and Military Academy, at Fort Plain, the local board of health, with the assistance of four students, proceeded to fumigate the building with sulphur, but a fire resulted and, owing to the dense fumes produced by the sulphur itself, was not noticed until it was too late to do much, and most of the students lost their effects.

New York City.

THE SITE of a new municipal hospital for Harlem, which has long been a necessity on account of the wretchedly inadequate accommodations of the present one, has been decided on.

REV. GEORGE BAKER, superintendent of St. Luke's Hospital, having given the best years of his life to the work, has retired. The Board of Managers has appointed Dr. Baker pastor emeritus of the hospital at a salary of \$2000 a year. Dr. Baker has spent twenty-three years in the hospital, all but one having been in the position of pastor and superintendent.

A MEMBER of St. Bartholomew's Church has given \$250,000 for the erection of a suitable building for the clinic which is now held in a dingy one adjoining the parish house. The fact that the clinic has been run by an endowment from the Vanderbilts led to the rumor that this donation came from them, but this is positively denied.

PRIZE AWARDED.

SOME months ago Dr. Louis Livingston Seaman, who was major-surgeon of the First United States Volunteer Engineers during the Spanish-American War, offered a prize of \$100 in gold, or a medal of that value, for the best thesis on "The Ideal Ration for an Army in the Tropics." The papers sent in were submitted to a committee consisting of Col. John E. Weston, acting commissary general, U. S. A.; Lieut.-Col. Charles Smart, deputy surgeon-general, U. S. A.; and Lieut.-Col. William E. Dougherty, Seventh U. S. Infantry. On March 27 the prize was awarded to Capt. E. L. Munson, assistant-surgeon, U. S. A.

A NEW SWINDLE.

ONE of the latest frauds practiced on physicians and dentists is one in which the victims have been those professional gentlemen who are not averse to occasionally placing a small bet on horse races. The scheme is for two "horsey" fellows to call on the doctor and explain to him that, having heard of him through a mutual acquaintance, they wish him to attend professionally to a certain jockey in whom they are interested. They give him to understand that money is no object, and then, as they are just about to leave, it occurs to them that it would be no more than proper to put "Doc" on to "a good thing." They then explain how he can place a little bet in such a way as to make big money, and, as they are short, offer to part with a certain ticket at "what it cost them." These tickets are worthless.

ORANGES FOR CHARITY.

About a year ago New Yorkers sent a carload of oranges for charity, and sent the proceeds—\$2000—back to California to aid the Los Angeles Home for Indigent Children. This generous response so pleased the Californians that the fruit growers there recently sent a carload to be sold in New York, the proceeds to go to St. John's Guild to extend its work with the floating hospital. The fruit was handled free from producer to consumer, railroads, express companies and auctioneer all contributing their portion to charity. The first box of oranges brought \$270, and many sold from \$50 to \$100. There were 362 boxes in the carload and they brought on an average \$13, the total amount realized being \$4631.75.

NEW JERSEY.

DR. WILLIAM H. SHIPPS, Bordentown, has been chosen physician of the township board of health.

AN EXTENSIVE building erected by Frank A. Magowan, Trenton, N. J., which originally cost \$250,000, will hereafter be used as an infirmary for nervous diseases.

TWO WOMEN dressed as Franciscan nuns were recently arrested in Trenton charged with using fraudulent means for obtaining money for the relief of an orphan asylum in New York. As no one wished to appear against them they were released.

PENNSYLVANIA.

THE BOARD of Health of Norristown, Pa., has passed a resolution prohibiting the distribution from house to house of sample drugs and patent medicines.

BRIDGETON'S Board of Health has become indignant over the belief that meat infected with tubercle bacilli has been sold in that city. It is proposed to appoint an inspector.

Philadelphia.

ANOTHER man was arrested during the past week for distributing circulars to pedestrians on the street. He was fined \$20.

DR. W. C. HOLLGETER, March 30, tendered a banquet to several members of the faculties of the Medico-Chirurgical and Jefferson medical colleges.

PART of a residuary estate of the late Mrs. Sophia E. Chaill, amounting to \$13,900, has been left the St. Agnes Hospital.

THE DAVIS Obstetrical Society of the Jefferson Medical College gave its annual smoker on the evening of March 30.

DR. HENRY CADWALADER CHAPMAN recently gave a banquet to the students of the Jefferson Medical College composing the Chapman Physiological Society.

DR. SIMON FLEXNER, of the University of Pennsylvania, has been elected a corresponding member of the Medico Societa Chirurgica di Bologna.

THE KENSINGTON soup house, which was opened for sixty-four days during the past winter, announces that during that time there were distributed 52,400 pints of soup, and 27,727 loaves of bread, to 216 families.

THROUGH the bequest of the late Mahlon H. Dickinson, \$5000 has been given the following named institutions for the endowment of free beds: Episcopal, Presbyterian, German, St. Mary's and the Jewish hospitals.

SINCE THE accident which occurred adjacent to the Jefferson Medical College (see last week's JOURNAL), it has been urged that some steps should be taken providing for the purchase of the entire plat of ground between Sanson and Walnut Streets, thus placing the property entirely within the control of Jefferson.

A COMMITTEE of the Philadelphia County Medical Society, consisting of Drs. A. V. Meigs, James Tyson and S. Weir Mitchell, recently presented to the mayor a resolution requesting that the present plan of posting signs on the houses in cases of contagious disease be discontinued, or modified.

GERMANTOWN ALMSHOUSE.

The total receipts for the year amounted to \$34,422.39, the total expenditures \$32,291.69. The house physician made 315 visits, and the physician to the out-patient department made 903. Dr. Thomas L. Buckman has been chosen president, Dr. George H. Burgin is house physician, and Drs. Ernst H. Clout-

ing and George Lewis Smith physicians to the out-patient departments.

CARE OF PATIENT.

A man suffering from a nervous affection, while being cared for by another inmate in a hospital here, sustained a fracture of the arm, and soon afterward died from heart disease. It is believed that death was hastened by the above injury, and the coroner's jury brought in a verdict of censure for permitting patients to wait on one another.

MARYLAND.

A BILL before the House of Delegates of Maryland, to authorize castration for rape, has been unfavorably reported, the Senate concurring.

THE DAIRY bill, providing for creation of a dairy commissioner for inspection of dairies and appropriating \$5000 annually for expenses, has been killed in the House, on the ground that the state is too poor to stand any further appropriations.

DR. EDWARD M. SCHINDEL, democrat, was re-elected mayor of Hagerstown, March 26, over his republican opponent, Dr. Jephtha E. Pitsnogle, by a large majority.

MEDICAL PRACTICE LEGISLATION.

IT IS believed that the Medical and Chirurgical faculty's medical practice bill, now before the legislature, will meet with disaster. There is a strong lobby at work at Annapolis, from the colleges in Baltimore, determined to get rid of the clause requiring their graduates to take the examination of the State Medical Examining Board before license. They have not forgiven the Board for its rejection of their men in May, 1897, when so many "violated the pledge that assistance should be neither given nor received." On that occasion they wrote the Board a letter "demanding to know the methods employed" by the latter in determining the fact of violation, and threatening that unless the position of the Board was modified "a revolt is invited against your authority into which the medical schools of this city will most surely be drawn." This threat is now, it is understood, being carried out. It is a repetition of the experience of 1839, when the "Thomsonians" secured the repeal of the medical examination provided for in the charter of the faculty, and which it had been exercising without question ever since its institution in 1799. As a prominent member of the profession here said to the writer: "If our law is taken from us, what a dumping-ground for medical students from other states Maryland will become." He was wrong in supposing that exempting the Maryland graduates from the provisions of the law meant virtually its repeal.

Baltimore.

DR. WILLIAM OSLER has decided to decline the call he received to the chair of medicine in Edinburgh University in succession to the late Prof. T. Grainger Stewart, the attractions and advantages of Baltimore proving superior to those of the Scotch capital. Dr. Osler is having quite a serious time with la grippe.

DR. THADDEUS W. CLARK, chief of the Neurologic Clinic, University of Maryland, has been appointed assistant quarantine physician of Baltimore. He was assistant-surgeon of the Fifth Maryland Regiment during the Spanish War and had charge of the infectious disease hospital of that command, in Florida.

FOR THE week ended March 24, there were 56 deaths from pneumonia, 36 from consumption, 15 from Bright's disease, 14 from heart disease, 9 from bronchitis, and 12 from old age in this city. The rate per 1000 was 22.10, being 18.30 for whites and 44.66 for colored.

MEDICAL REGISTRATION ACT.

Judge Henry Page, at Annapolis, has written the opinion in the case of Ferdinand M. Scholle vs. State of Maryland. The appellant was indicted for unlawfully practicing medicine and surgery in Baltimore without being registered. The validity of the medical practice acts, 1892, chapter 296; 1894, chapter 217, and 1896, chapter 199, was involved. [These are the acts at present controlling medical practice in this state, and under which all candidates for practice must have had a three years' course of instruction, and must stand an examination before one of two separate boards—a regular medical board appointed

by the Medical and Chirurgical Faculty of Maryland, and a board appointed by the Homeopathic Medical Society! Several amendments to the act are now before the legislature, one requiring a four years' course of instruction, championed by the Medical and Chirurgical Faculty; another exempting, from the examinations, the graduates of Maryland medical colleges conforming with the requirements of the Association of American Medical Colleges.] These statutes, the court says, are the final results of a series of successive enactments which have created a well-defined system for the regulation of medical practice in the state. The act exempts from its operations, "commissioned surgeons of the United States Army, Navy or Marine-Hospital Service; physicians or surgeons in actual consultation from other states, or persons temporarily practicing under the supervision of an actual medical inspector." The appellant held these exceptions to be unreasonable, and that they rendered the whole act void under the fourteenth amendment to the Constitution of the United States as an infringement to the right of equality. The Appellate Court finds the act valid, and finding no error in the rulings below, affirms the judgment of the criminal court in favor of the State.

ILLINOIS.

DR. GEORGE N. KREIDER has been appointed house-surgeon to the Wabash Hospital, Springfield.

DR. W. F. HARRIS, Ferris, is a candidate for state senator from the twenty-eighth senatorial district.

DR. Z. ROLEAU, Manteno, has been elected president of the Kankakee Board of Pension Examiners.

ACCORDING to the report of the secretary of the Quincy Board of Health the mortality during the month was 47.

Chicago.

DR. OTTO SIMON, superintendent of University Hospital, Heidelberg, and Dr. Ernst Lobstein, visited this city last week on a tour of investigation of American hospitals.

EASTER offerings in all the Presbyterian churches of the city will be devoted to the needs of the Presbyterian Hospital. It is desired to raise \$20,000 for the benefit of this institution.

DR. DANIEL R. BROWER has accepted the invitation of the Faculty to deliver the address to the graduating class of the medical department of Georgetown University, D. C., on May 21, 1900.

THE MEDICAL inspectors of schools examined 5593 pupils the past week. Of these, 300 were excluded on account of being infected with contagious diseases. The total examinations for the month were 24,924, total exclusions for the month, 1333.

MORTALITY STATISTICS.

According to the weekly bulletin of the Health Department the mortality for the month of March, notwithstanding the great increase in the number of deaths during the last two weeks, is only 304 in excess of the corresponding month of 1899, computed on the Department's minimum estimate of population, to wit, 1,750,000, the death-rate is 1.45 per 1000 of population—equal to an annual rate of 17.12 per 1000.

REORGANIZATION OF RUSH MEDICAL COLLEGE.

The following faculty changes have been made in addition to those noted in THE JOURNAL of March 24, p. 760: Henry M. Lyman, M.D., becomes vice-president; Elmer R. Irwin, M.D., is appointed assistant in the department of anatomy; Edward P. Lyon, Ph.D., of the Bradley Polytechnic Institute, Peoria, to be assistant professor of physiology; Frank Hacking, M.D., Ernest L. McEwen, M.D., and Oscar T. Roberg, M.D., assistants in the department of chemistry; Arthur R. Cushman, M.D., University of Michigan, professor of pharmacology and head of the new department of pharmacology and materia medica; Charles A. Wade, M.D., reappointed associate, Fred T. Hollenbeck, M.D., promoted to associate, and F. A. Sprague, M.D., appointed assistant, and Chas. J. Rowan, M.D., reappointed fellow in the above department; H. Gideon Wells, M.D., promoted to an assistantship, and Theodore Ticken, M.D., appointed to a fellowship in the department of pathology. Bertram W. Sippy, M.D., is promoted to an assistant professorship, F.S. Churchill, M.D., to an instructorship, and James A. Harvey, M.D., assistant to an associateship in the department of medicine. D. W. Graham, M.D., is promoted to an assistant clin-

ical professorship, E. J. Senn, M.D., to an instructorship, and Albert B. Keyes, M.D., to an associateship in the department of surgery. C. E. Paddock, M.D., is appointed assistant clinical professor, Henry F. Lewis, M.D., is promoted to an associateship, and Palmer Findlay, M.D., made an assistant in the department of obstetrics and gynecology. Otto P. Freer, M.D., is promoted to an instructorship, Joseph F. Dolanore, M.D., and George A. Terrison, M.D., to associateships, and John C. Williams, M.D., is appointed to an associateship in the department of diseases of the chest, throat and nose. Cassius D. Wescott, M.D., and William H. Wilder, M.D., are promoted to assistant professorships. Elmer A. Lawbaugh, M.D., assistant to an associateship, and Robert A. MacArthur, M.D., to a clinical associateship; L. E. Schwartz, M.D., Cassius C. Rogers, M.D., and George E. Shambaugh, M.D., are appointed to assistantships in the department of ophthalmology and otology. Frank Hugh Montgomery, M.D., assistant professor, is promoted to an associate professorship, and Alfred Schalek, M.D., is appointed to an associateship in the department of diseases of the skin, genito-urinary and venereal diseases. The position of anesthetizer to the surgical clinics is established, the incumbent of this position to have the rank of an instructor.

OHIO.

AN ANTI-EXFECTORATION crusade has been inaugurated in Hamilton.

THE ANNUAL report of the health officer of Mount Vernon shows that there were 72 deaths during the year.

A BILL has been introduced in the legislature requiring that instruction in physical culture, with especial reference to the effect of alcoholic stimulants on the body, shall be given in the public schools of the state and at teachers' institutes.

YOUNGSTOWN'S SMALLPOX.

The last smallpox patient was discharged from the Youngstown isolation hospital March 26. For nearly four months the Mahoning Valley Hospital and the pest-house have been in quarantine on account of smallpox. During this period twelve patients were treated, with no fatalities.

Cincinnati.

THE BETHESDA Hospital and Deaconess Home has received \$2000 of interest-bearing stock from an unknown donor.

HEALTH ORDINANCE.

At a recent meeting of the City Council, an ordinance was passed prescribing additional duties for the several district physicians. They are required to report to the health officer all cases affecting the health of the city, and act as deputy health officers in enforcing all laws relating to the sanitary condition of the city.

MEXICAN PHYSICIAN VISITS THE CITY.

DR. R. H. L. Bibb, Saltillo, Mexico, chief surgeon of the Mexican National Railroad, is in the city in the interests of the Mexican Government. It is the intention of the government to erect four large, modern hospitals in connection with their railroad system, and Dr. Bibb is making a tour of the larger American cities for the particular purpose of studying the construction and administration of the municipal and private hospitals. The Doctor is American-born.

Cleveland.

DURING the four weeks ended March 24, there were 85 deaths from pneumonia.

A NUMBER of physicians have inaugurated a movement to secure a new hospital to be located on the west side of the city.

DR. CHARLES H. CLARK, of Stark County, has been appointed to the staff of the Government Hospital for the Insane.

KENTUCKY.

Louisville.

THE ANNUAL commencements of the Louisville Medical College and the University of Louisville were held on the 26th ult. There were eleven graduates from the former and thirty from the latter's medical department.

THE LOUISVILLE College of Dentistry will, after the conclusion of the present session, sever its connection with the Hospital College of Medicine, these two schools being the medical

and dental departments of Central University. The College of Dentistry will be run as a separate institution.

THE CLASS of 1894, medical department of the University of Louisville, has just held a most successful reunion. The president of the class is Dr. Vernon Robbins, and the Secretary, Dr. Leon L. Solomon, both of this city.

MASSACHUSETTS.

BOSTON CITY HOSPITAL.

The annual report of the superintendent of the south department of the Boston City Hospital shows that 2677 patients were treated in that institution during the year. It is recommended that a separate pavilion for the treatment of measles be established as there are at present no means for the isolation of such cases in the hospital.

PROPOSED LABORATORY.

The Lynn Board of Health is considering the establishment of a bacteriologic department with a well-equipped laboratory and a trained chemist. Under the present system the board pays nearly \$1000 a year to outside parties for bacteriologic examinations. It is thought that the Board would be better able to guard against disease at a smaller expenditure with a laboratory of its own.

CONNECTICUT.

ON ACCOUNT of the decreased ice crop, the health authorities of the state have made preparations to protect consumers against dishonest dealers, and are planning a campaign against impure ice.

DELAWARE.

THE ANNUAL report of St. Michael's Day Nursery and Hospital shows that the receipts were \$3653, and the expenditures \$3441 for the year.

DELAWARE HOSPITAL.

According to the annual report of Delaware Hospital, Wilmington, 462 patients were treated there during the year. The receipts were nearly \$11,000, and the expenses about \$9000. The sum of \$10,000 is needed for the erection of a new building, of which \$9000 has been subscribed.

WISCONSIN.

DR. EDGAR C. BARNES, Ripon, has been promoted from the rank of first lieutenant to that of captain, in the National Guard of Wisconsin.

SCARLET FEVER EPIDEMIC.

A meeting of the Racine Board of Health was held March 26, for the purpose of investigating the cause of a sudden scarlet fever epidemic in which twelve cases appeared simultaneously in a certain locality. It was learned that two children of a dairyman had been ill with the disease, and that he had supplied milk to eleven of the families where the disease had appeared.

IOWA.

COMMENCEMENT EXERCISES.

The commencement exercises of the medical department of the Iowa State University, Iowa City, were held March 28. There were eighteen who received the degree of M.D. Dr. George H. Simmons, Chicago, delivered the faculty address. After the exercises a banquet was served, on which occasion a handsome chair was given by the faculty of the medical department to the Dean, Dr. W. D. Middleton, in commemoration of the completion of his thirty years' connection with the medical department of the University. The Board of Regents passed a resolution raising the time necessary for attendance for the M.D. degree, after 1902, to four years of nine months each. At the present time it is four years of seven months each.

KANSAS.

KANSAS MEDICAL COLLEGE.

The tenth annual commencement of the Kansas Medical College was held in Topeka, March 22. The general address to the graduates was delivered by the Governor, W. E. Stanley, and the faculty address by Dr. B. D. Eastman. After the exercises

the faculty tendered a banquet to the 27 members of the graduating class.

LOUISIANA.

New Orleans.

THE COMMENCEMENT exercises of the medical department of Tulane University will be held Wednesday, May 2. Dr. J. Birney Guthrie will deliver the valedictory.

DR. JULES LAGARD has been appointed demonstrator of anatomy, New Orleans College of Dentistry, vice Dr. L. Perrilliat, resigned.

GEORGIA.

THE AUXILIARY association of the Grady Hospital at Atlanta has inaugurated a movement toward the erection of a home for nurses in connection with that institution.

COLORADO.

ASSOCIATION WITH CONSUMPTIVES.

The Denver Board of Health is distributing, throughout the city, circulars of advice for the benefit of those suffering from tuberculosis. The circular states that "consumptives may be associated with as freely as though they were well, if they take due care; it is not the consumptive, but the careless consumptive, who is the source of danger.

UTAH.

DR. J. E. KING, health commissioner of Salt Lake City, has issued a circular relative to scarlet fever, for the information of parents and children, in order that they may exercise greater caution in preventing its spread, by prompt isolation and quarantine.

CALIFORNIA.

ARRANGEMENTS are being made for a new hospital building at Pasadena. Six capitalists under the lead of P. D. Armour, have donated \$12,000 toward the enterprise.

AN ORDINANCE has been passed by the San Francisco Board of Supervisors, making it unlawful to inter bodies within the city and county limits after Aug. 1, 1901.

THE SAN JOSE veterinary inspector has issued a notice to all dairymen supplying milk within the city limits that all cows must be inspected and tested for tuberculosis. Inspectors will be appointed and the work will begin at once.

HOME FOR CONVALESCENTS.

By the will of the late Anna S. C. Blake, Santa Barbara, her home place is to become a home for convalescents. She also bequeathed \$80,000 for its maintenance. It will be under the direction of Dr. Philip King Brown of San Francisco, who will make monthly visits, and, during his absence, under the supervision of Drs. C. E. Vaughn and Robert MacKinlay of Santa Barbara.

LEPER IN LOS ANGELES.

A Chinese leper having been discovered in Los Angeles, as noted in these columns last week, the Board of Health—as it is impossible to properly isolate and care for such persons at either the city or county hospital, as most of the patients have contracted the disease in other countries, and as the facilities for caring for lepers are better in the Hawaiian Islands than can be provided in this country—has passed a resolution in which the "Board urges and requests the Senators and Representatives of California to secure the enactment of legislation by Congress which shall provide for the transportation of lepers from this country to the Hawaiian Islands, and for their maintenance there at the expense of this Government.

SAN FRANCISCO PLAGUE.

The animals inoculated with cultures obtained from the bodies of the last three suspected cases in the Chinese quarter have all died, but as these bodies were all in a rather bad state of decomposition at the time they were found, the specific germ could not be satisfactorily isolated from the putrefaction germs which were found as the result of the inoculation. Cultures were made from these animals and others inoculated from these cultures. [Telegraphic advices as we go to press, April 4, announce that these all died, and, owing to mixed infection,

the post-mortem results were vague. The Board of Health thinks the first of these three cases was one of plague, but is doubtful about the others. There are no more suspected cases to date. A most rigid sanitary inspection is being made of the Chinese, and also of the Latin, quarter of the city, which is contiguous to it.—Ed.

CANADA.

THE NATIONAL Sanitarium Association will erect at Gravenhurst, a building for patients who are unable to provide for their own support.

THE ONTARIO Government will equip a laboratory at Gravenhurst for the investigation of tuberculosis.

IT IS expected that the Dominion Government will shortly equip and dispatch a field-hospital to South Africa.

MONTREAL has been having an experience with la grippe. The epidemic is of a mild type, but quite extensive in its prevalence.

ANOTHER osteopath has been unearthed in Toronto; and "Dr." Dillabough will stand trial at the coming session of the assize court for practicing medicine without a license.

IN A PAPER read before the N. S. Branch of the British Medical Association, Dr. George L. Sinclair, late superintendent of the Nova Scotia Hospital for the Insane, reported observations on thirty-one cases of hematoma auris, eight occurring in female inmates. His observations extended over many years.

THE CAPE BRETON Medical Society recently passed a resolution calling for a general vaccination in that section of the Dominion.

LEGISLATION has been introduced into the local parliament of Nova Scotia providing for an expenditure of \$15,000, toward the erection of a provincial consumptive sanatorium.

IT IS understood that the Ontario Government will bring in legislation providing for the establishment of sanatoria for consumptives throughout the province, and will also grant aid to those municipalities that deem it necessary and wise to establish these institutions.

CONTRIBUTIONS to the proposed free consumptive sanatorium for Toronto have not been coming in very fast. Only about \$1500 has thus far been received. The promoters have been asking the city for 50 cents a day for each patient for six months, but the medical health officer has reported adversely to this and also to the building chosen for the hospital.

MEDICAL MATTERS, MILITARY.

The militia orders, issued March 30, require the following qualifications as necessary for appointment to the army medical staff: Officers who have been in charge of a permanent unit for ten years or over; officers who have obtained proficiency certificates at one of the following training schools: 1. The Royal Army Medical Corps Depot, Aldershot, England. 2. The Volunteer Ambulance School of Instruction, London. 3. The Canadian Militia Army medical training schools. Officers who have served in the army in the field, as medical officers, may also be considered eligible. Instructions are also issued in regard to the annual drill of bearer companies.

CONCERNING ONTARIO PROVINCIAL UNIVERSITY.

The excitement concerning the Mackay bill, noted in these columns last week, continued all week. Both the teaching medical faculties in Toronto have held mass meetings of their staffs, graduates and undergraduates; and as a result each has put itself on record before the profession and the public of the province by resolutions, embodying their views. The resolution of Trinity Medical College approves of the bill, while that of the medical department of the University earnestly protests against it, on the ground that it abolishes the medical faculty of the University, that it practically takes the control of the medical examinations of the University and gives it to private corporations teaching medicine; that it disfranchises 1800 graduates of medicine of the University of Toronto and gives representation in the senate only to the private corporations teaching medicine.

MONTREAL CIVIC HOSPITAL.

The present civic hospital of Montreal seems to be in a bad state. During the past four years \$20,000 has been expended on the heating apparatus alone, and last summer another

\$6000, mostly for the same purpose; but it would seem all to no avail. The health officer admits that the institution is not fit to properly house patients, that it is impossible to heat it, and that frequently throughout the winter months the patients had to be removed from ward to ward in order to keep them from being chilled. The hospital authorities could not burn coal enough to keep the place at the temperature it should be. The city has recently arranged for a new civic loan of \$300,000, and it is proposed to enter a request for \$50,000 to be expended on the erection of a new civic hospital on the pavilion plan. The old one has been the cause of more than one hospital scandal through incessantly requiring repairs. Some years ago the city was put to the expense of having plans prepared for a new civic hospital to cost \$200,000. This alone cost the city \$6000, and raised such a row that the proposals were at last abandoned.

Correspondence.

The Reductio ad Absurdum of Medical Legislation in the State of Michigan.

DETROIT, MICH., March 16, 1900.

To the Editor:—For several years past two very definite opinions on the above-named subject have been held and repeatedly expressed by the writer in terms which could not be regarded by any one as ambiguous. One is that a righteous and efficient law to regulate the practice of medicine in Michigan has hitherto been and now is an *unattainable Utopian* consummation the "viability" of which ceases at the stage of "most devoutly to be wished." The other is that the methods, devices and expedients to which members of "the profession" have stooped in their frantic efforts to overtake and seize hold of this "will of the wisp" have been not only futile and vexatiously disappointing but to the last degree discreditable and degrading. In the summer of 1896 I ventured in a short series of open letters in THE JOURNAL, to implore my professional brethren to reconsider their openly-avowed policy of indiscriminate and injudicious coalition, compromise and "unholy alliance," and to assume and maintain an attitude of honest, dignified, resolute independence, trusting to the inherent justice of their cause and to the overwhelming power inevitably derived from the actual results of honest, patient, scientific efforts carried forward under the all-embracing and inspiring moral teachings of the *Code of Ethics* of the AMERICAN MEDICAL ASSOCIATION.

One avowed member of the regular profession, who is also recognized as an active worker in the domain of politics, in reply to my appeal, is on record in your columns as saying, over his own signature: "I am happy to say that it is the overwhelming sentiment of all regular practitioners, of all so-called homeopaths, and of all the quacks of this state that the further influx of charlatans and quacks should be checked." Again, the same individual, as the champion of medical legislation for the protection of the people, etc., commits *felo de se* in the following utterances printed in the same communication: "It will give the young man a chance by preventing competition," and "It makes no difference to Dr. MacLean or myself how many or how few quacks there are in Michigan, but it does make a difference to the *new beginner*" (italics mine).

What was that remark about "The Public," attributed to a late railroad magnate?

While the advocates of a medical law at any price were wrestling with the legislature and the army of quacks at Lansing, I made, through the columns of the *Detroit Free Press* (March 24), a last final appeal for what I deemed the honor and highest interests of scientific medicine. I venture to quote here the closing paragraphs of that appeal:

I yield to no man living or dead or yet to be born in the matter of love and loyalty to the noble profession of which I have the honor to be a humble member, and therefore it is that in all sincerity and in true spirit of devotion to its best interests, I implore my dearly beloved and highly honored brethren to stop now and forever all their efforts in the direction of medical legislation.

Stop bowing the knee to Baal. Renounce now and forever all "unholy alliances," all irregular and quackish methods of curing the professional diseases which at present so cruelly afflict our people. "Better choose the ills we have than fly to others we know not of."

One, and only one, honorable, wise and defensible course is open to true-hearted, humanitarian devotees of the great profession of medicine, and that is to divest our own loins, cleanse our own Augean stables, clear our own skirts, and take to ourselves the scriptural injunction, "Let your light so shine before men that they may see your good works." Devoting all our efforts and aspirations in this direction we will find little time and less inclination for lobbying at Lansing, and our aims and ambitions on behalf of suffering humanity will be achieved more quickly, more certainly and more triumphantly than in any other way. "Straight is the gate and narrow is the way which leadeth unto life."

Any law creating a composite board of state examiners would, in my humble opinion, be found to be a bad law, and if advocated by the "honest doctors" it would surely be bad policy and unpardonable ethics.

If the opinions here declared prove unpleasant reading and unpalatable doctrine to any of my brethren whose interests I have sincerely at heart and whose friendly regard I prize above all earthly possessions outside of my own fireside circle, all I can say is that they were really not volunteered, but urgently solicited, and they are honestly stated.

These and all words of warning uttered in the true spirit of love and loyalty to my brethren in Michigan were disregarded. That heterogeneous, conglomerate, nondescript "curio," the Michigan Medical Legislation League, combining in itself every power of darkness and devilry by which the lives, limbs, health and purses of our citizens are menaced, succeeded in log-rolling a bill through the legislature, and the Governor signed it.

What the net result of all this ill-conceived and misdirected effort has amounted to is set forth by an independent, intelligent and in every way competent eye-witness, in the following editorial (italics mine) from the *Detroit Free Press* of March 13.

A FARCICAL SITUATION.

Every effort being made to purge the medical profession in Michigan of quacks, charlatans and false pretenders is to be applauded. Any output of a "diploma mill" is properly under suspicion and wherever evidences of incompetency or the want of proper credentials appear, the most careful investigation is demanded. The state medical registration board should do everything possible within the scope of its authority to uphold a proper standard of professional worth, even to resolving doubts in favor of the public safety.

Yet the very fact that this is true accentuates the woeful deficiency of the laws bearing upon the attempted reforms. As a rule those attempting to practice medicine without reasonable knowledge of the science to which it pertains, are dangerous and unprincipled men. Otherwise they would not risk human life and commit an occasional murder just as a money-making business.

If the law ousts them from the profession they disgrace they would have no compunction in resorting to some other alleged method of healing. And here the law is without right of interference. They do not pretend to be medical practitioners, do not have to be registered and are privileged to kill or cure as luck may favor them. They may have far less knowledge than a good veterinary, the average nurse or the mother who has raised a family, but they may treat the most deadly maladies in their most acute stages by the laying on of hands, long-distance mummery, incantations, horse-shoe magnetism, telepathy or telephone.

When such a state of affairs is aggravated by the fact that parents are not required to call medical attendance for their children when sick, and when it is remembered how much money Michigan has paid for the making of laws not worth the paper they were printed on, public sentiment can not but be deeply incensed at the inefficiency of those who legislate for the "good" of the state.

Finally, permit me to say that this communication, so far from being instigated by any feeling of triumph, much less of revenge on my part, is written in a spirit of sadness and chagrin, and at the same time in vindication of opinions and acts which, however they may have been misjudged or misrepresented, have in every instance been suggested and animated by that spirit of loyalty and devotion to the welfare of my profession which has been from first to last the guiding

and controlling article of my professional creed. But above all my most vital incentive has been to awaken if possible the scientific doctors of Michigan (in anticipation of the approaching election), to the imperative necessity of guarding against the pernicious morbid influences and tendencies which in the past have brought so much of humiliation and disaster to the precious and holy interests which it is their highest duty and noblest ambition to promote and protect to the best of their ability, and by every honorable means in their power.

DONALD MACLEAN, M.D.

Some Remarks in Reply to Dr. H. A. Kelly's Article on "Ureteral Calculus."

To the Editor:—In THE JOURNAL of March 3, Dr. H. A. Kelly reports, as entirely new, the diagnosis of a ureteral calculus by means of a wax-tip bougie, and he closes with the words: "I am not aware that ureteral calculus has ever been assisted to escape in this way before." I am ready to admit that the removal of a stone from the ureter is not an old practice, that the literature on the subject is of more recent date, and does not cover a great many cases, but the practice is not unique and the case is not a singular one, and I am very much surprised to see the statement propounded by a gentleman as well read as H. A. Kelly. Kolischer presented the first case of this kind to the Vienna Medical Society, about two years ago. The stone was found impacted in the left ureter, several inches above its vesical opening, the impaction and the exact localization of the concrement having been determined by a metal-tipped ureteral catheter. Injection of 20 c.c. of sterile vaselin-oil freed the stone and brought it down into the bladder, from where the woman passed it spontaneously through the urethra after an hour. The second case was demonstrated by L. Casper in the Berliner Medical Society, a few weeks later. This time the obstruction consisted of an agglomeration of uric acid crystals, which were distinctly felt and crumbled by the ureteral sound; the fragment were spontaneously discharged in the urine following the withdrawal of the sound. Both of these cases are described in L. Casper's text-book of cystoscopy, published in 1899. (Handbuch der Cystoscopie, von Dr. L. Casper, Leipzig, 1898, pp. 170 and 194.)

About a year ago Casper presented, before the Berliner Medical Society, his second case of this kind, in which the impaction was followed by reflex anuria and ureter catheterization; vaselin-oil injection removed the obstruction almost instantaneously, followed by a speedy recovery of the patient. (*Berliner Klin. Woch.*, 1899.)

In the meeting of the Chicago Medical Society of March 8, 1899, I exhibited a patient and the stone which I had removed by ureter catheterization. The stone obstructed the left ureter at a distance of about five inches from its vesical end. Immediate relief followed the loosening of the concrement, which the patient spontaneously passed the next day. The accompanying picture illustrates the actual size and shape of the uric acid stone. The case is also interesting, as the configuration of the concrement would rather preclude the possibility of its spontaneous discharge through the male urethra.

As stated before, the literature on this subject is not abundant with cases on record. But just for this reason, every new report is the more valuable on this but recently developed field of bladder and kidney surgery, and it is therefore not only permitted, but also benefiting the advancement of the subject, to ventilate such a report by analyzing and discussing it.

I can not comprehend why Kelly injected 6 c.c. of a 1 per cent. cocaine solution directly into the ureter and into the surrounding tissue through the vaginal wall and on it desired to instillate a eucain solution into the ureter through the cystoscope. If Dr. Kelly believes in the harmlessness of the eucain—the contrary of which is proven by Reclus, Kolischer and others—then I can not conceive what has induced him to inject cocaine, a noted poison, from outside into the tissues, the most dangerous form of its application. Notwithstanding the danger connected with cocaine injection even in mild concentration, it is, particularly in women, not necessary to use local anesthesia

for cystoscopy or ureteral sounding, if one uses the Nitze or Brenner instrument and exercises delicacy in introducing the cystoscope and the ureteral catheter. It is one of the drawbacks of the Pawlik-Kelly cystoscope that it requires the painful dilation of the urethra. I also do not agree with his method of forcible dilation of the vesical end of the ureter where, as it appears from his description, he had found a ureteral stricture simply from the appearance of the orifice. Ureteral strictures, by the way, are extremely rare—spasmodic contractions are frequently pronounced as such—and ought to be gradually dilated by sounds or catheters of increasing caliber.

It is not very plausible that the introduction of a wax-tipped bougie for feeling and localizing the stone as practiced in this case complies with a long-felt want or means a progress. Ureter stones, like bladder concretions, are very often covered with a thick, viscid coat of mucus, pus and blood, so much that the surface becomes perfectly smooth and slippery and consequently will not produce a scratch-mark on the passing wax-tip. It will, therefore, not do to infer, from the non-appearance of the marks, the absence of a ureter stone with certainty without committing a serious mistake when some symptoms suggest the possible presence of it. Such symptoms are the typical pain, blood in the urine, sometimes in abundance, sometimes only in microscopic quantities, anuria of the obstructed, and occasionally of the fellow, ureter.



In which way the proposed mounting of wax particles on the catheter in certain intervals should facilitate the exact localization of the stone is not comprehensible. Scratch-marks appearing on one, two, or all of them will indicate that they have passed over a rough surface, but nothing else. But all these wax particles are unnecessary. In the four cases cited above, and in all the others diagnosed as impacted stones and operated on, the diagnosis and the location of the concrement were accomplished with ureter catheters, or sounds carrying a silver cap on the tip. The sensation communicated to the fingers holding the catheter when the latter meets the obstruction, and the resistance felt when the catheter passes it, taken altogether with all other symptoms, will hardly allow of an error.

In encountering a stricture in the ureter, an extremely rare occurrence, we also feel an obstruction, but the sensation to touch is different and the *unbloody* urine flows through the catheter long before the latter reaches the stricture. In cases of impacted stones the, as a rule, more or less bloody urine, commences to flow after the catheter has passed the obstruction.

The employment of the alligator forceps, to crush the stone, might give satisfaction in very small phosphatic concretions or in small agglomerations of various texture. Every one familiar with litholapaxy knows what powerful instruments are required to crush comparatively small uric acid stones or oxalates and will indorse my opinion about the limited value of the forceps. Notwithstanding this I consider such a procedure in the ureter too serious, on account of the probable and dangerous lesions it is likely to produce. If the stone is located near the renal pelvis, one has to try to push it back into the pelvis, from where its prompt removal by nephrotomy will be possible. If immovable, its location and localization will determine the route an operation has to take. But at any rate, especially when situated nearer to the vesical end, the vaselin-oil injection ought to be tried, to assist the escape of the stone before it is decided to do a cutting operation. For stones in the ampulla, pressing them into the bladder through the rectum in the male sex, through the vagina in women, has been recommended,

also their removal with a forceps introduced through the operation cystoscope.

F. KREISSL, M.D.

Tumors of Mammary Gland.

ANN ARBOR, MICH., April 2, 1900.

To the Editor: The concise statements made in the last two paragraphs of my paper on "Tumors of the Mammary Gland," in THE JOURNAL of March 31, admit of misinterpretation. My meaning is expressed more clearly as follows: The gross differential diagnosis of tumors of the breast in so far as the histologic variety is concerned is extremely uncertain and should not be taken as an operative guide. In a large proportion of cases it is not possible to distinguish the different forms. In nearly every case in which the histologic variety has been diagnosed in the gross, the microscopic examination has shown the diagnosis to be incorrect. The difficulty is obvious when the variety of pictures which one case may present is considered.

It seems reasonable from the data afforded by these eighty cases that the percentage of malignant tumors of the breast is so great as to warrant the statement that the most rational treatment in cases of tumors of this organ is immediate surgical interference.

Fritz Carleton Hyde, M.D.

Marriages.

- BROWN—HILLYER.—Dr. Philip King Brown and Miss Helen A. Hillyer, San Francisco, Cal., March 7.
 DAVIS—JAMES.—Dr. W. S. Davis, Marshall, Ind., and Miss Estella James, Brazil, Ind., March 18.
 DILLY—LEAVITT.—Dr. Frederiek C. Dilly and Miss Mary E. Leavitt, Brazil, Ind., March 14.
 GESSNER—HAYES.—Dr. Hermann B. Gessner, demonstrator of Operative Surgery in the Medical Department of Tulane University, New Orleans, La., and Miss Jessie Hayes, Lake Charles, La.
 HILL—BURT.—Dr. F. M. Hill, Falcon, Colo., and Miss Bettie Burt, Woodland, Cal., March 22.
 SPOONER—FERGUSON.—Dr. Ernest H. Spooner and Miss Mary G. Ferguson, St. Louis, Mo., March 20.

Deaths and Obituaries.

JOHN ALEXANDER LOCKWOOD, M.D., 89 years old, who spent thirty-three years in the service of the United States as surgeon in the navy, died on March 11, at the Newstead, Bourne-mouth, England. He was born in Delaware, and was the eldest son of William R. Lockwood. He was appointed assistant-surgeon on Feb. 8, 1832, was made surgeon on Oct. 13, 1840, and resigned on March 13, 1865. His last duty was at Mare Island navy yard, California.

JOHN COOPER, M.D., Royal College of Surgeons, London, 1873, died at the Seney Hospital, Brooklyn, N. Y., March 29, aged 85 years. He was born in London, and for some time after his graduation he saw much of the British possessions in South Africa, as an army surgeon. For a number of years he was also a member of the New South Wales Medical Board. He settled in Brooklyn, N. Y., in 1858, after having lived in Huntsville, Ala., for about twelve years.

HENRY B. CARPENTER, M.D., died at his home in Rochester, N. Y., March 23, aged 36 years. He was graduated from the College of Physicians and Surgeons, N. Y., in 1886.

ANDERSON MOFFETT NEWMAN, M.D., said to be the oldest male resident of Harrisburg, Va., died there March 29, in his 90th year. He was a native of Shenandoah County, and resided in Harrisburg since 1855. He leaves two children and a large estate. He was a member of the constitutional convention of 1850.

FRANKLIN B. HAZEL, M.D., Philadelphia, died March 28, aged 54. He was a graduate of the Medical Department of the University of Pennsylvania.

HENRY D HARBACHER, M.D., Chicago Medical College, 1875, died at his home in Hortonville, Wis., March 26, aged 53 years.

J. Q. ROBINSON, M.D., the oldest practicing physician in Westmoreland County, died at his home in West Newton, Pa., March 28, aged 83 years.

JOSEPH W. HARMON, M.D., Chicago, died March 29, aged 85. He was graduated from the Albany Medical College in 1845.

WILLIAM WELSH YIBBERT, M.D., died at his home in New York City, from cardiac disease, March 25, aged 27 years. He was a graduate of Trinity College and of the College of Physicians and Surgeons, N. Y.

WILLIAM N. YANDELL, M.D., Gross Medical College, Denver, Colo., 1888, died at El Paso, Texas, March 24. He was quarantine officer at that place and had been long in ill-health.

CHARLES J. HALL, M.D., University of Michigan, 1870, and Bellevue, 1882, died at Glen Cove, Queens County, N. Y., March 29 in his 54th year.

DANIEL N. TAYLOR, M.D., Long Island College Hospital, N. Y., 1884, of Amsterdam, N. Y., died March 29, aged 44 years.

WINSLOW W. SKINXER, M.D., died in Viareggio, Italy, March 29. He was lately a resident physician of Florence, Italy, and formerly of New York City.

FRANK WALLICK, M.D., Iowa College of Physicians and Surgeons, died at his home in Williamsfield, Ill., March 27.

WILLIAM W. RODMAN, M.D., Jefferson, 1844, one of the oldest physicians in Connecticut, died at his home in New Haven, March 30, aged 83 years.

Association News.

Excursion to Atlantic City.—Dr. I. Lawton Hiers, of Savannah, Ga., is arranging to have an excursion party of physicians, for the Atlantic City meeting, from Savannah to New York by ocean steamer.

Florida and National Department of Health.—The following resolutions have been received:

Whereas, There is established in the Agricultural Department of the United States Government, a Bureau of Animal Industry, by which certain of the brute creation is fostered in health, and protected against contagious disease transmission, vast sums of money being yearly appropriated for this purpose, and

Whereas, It is considered both fitting and in accord with progress and demands of the age, that attention should be paid by the General Government to the health of man, in whom the wisdom, intellect and wealth of the Nation resides, to protect against disease inhibition, to lessen mortality, increase longevity, and to environ the human race with all sanitary measures calculated to enhance the happiness and comfort of human life: Be it

Resolved, By the State Board of Health of Florida, that a National Department of Public Health is urgently demanded in the sanitary welfare of the Nation, and that the Board heartily indorses the Ray-Spooner Bill—Senate No. 1440, and House of Representatives No. 6618—now before Congress, as the only practical measure to accomplish the desired results in National Health Legislation; and be it further

Resolved, That the Hons. S. R. Mallory and J. P. Talieffer, Senators, and the Hons. S. H. Sparkman and R. W. Davis, Representatives, of Florida be earnestly and urgently requested to use their best efforts and influence in behalf of this legislation, and that a copy of this resolution be forwarded to our Florida delegation in Congress; and, also

Resolved, That the Governor of Florida be furnished with a copy of this resolution, and that he be likewise requested to favorably indorse and forward the same.

JOS. Y. PORTER, M.D., State Health Officer, Jacksonville, Fla.
Adopted March 22, 1900.

Section on Neurology and Medical Jurisprudence.—In the following program the officers of the Section wish particularly to call attention of the readers of THE JOURNAL to the symposia on Traumatic Neuroses and on Hysteria, and to the unusually large number of papers of practical interest to those physicians not particularly interested in technical neurology and medical jurisprudence. The Hotel Brighton will be headquarters of this Section, and the meetings will be held there. There will be no morning sessions unless necessary for completion of the program.

FIRST DAY.

1. Address of Chairman—Hugh T. Patrick, Chicago.
2. Report of Seven Operations for Brain Tumors and Cysts—Herm. H. Hoppe, Cincinnati, Ohio.
3. Diagnosis of Apoplexy Without Motor Paralysis—William N. Bullard, Boston.
4. Case Resembling one of Raynaud's Disease, With Microscopic Examination—William G. Spiller, Philadelphia.
5. Legal Responsibility of Degenerates not Insane—David Inglis, Detroit, Mich.
6. Travel Therapeutics in Nervous and Mental Maladies—Richard Dewey, Chicago.
7. Post-febrile Insanities and Their Treatment—Frank P. Norbury, Jacksonville, Ill.
8. Cranial Injuries and Insanity, with Report of Case—Eugene G. Carpenter, Columbus, Ohio.
9. Medicolegal Relations of Opium Inebriates and Necessity for State and Interstate Statutes—T. D. Crothers, Hartford, Conn.
10. Morphinism from Standpoint of General Practitioner—T. J. Happel, Trenton, Tenn.

SECOND DAY.

11. The Nervous Diseases Caused by Trauma—Chas. W. Burr, Philadelphia.
 12. Nature and Symptomatology of Traumatic Neuroses—Harold N. Moyer, Chicago.
 13. Traumatic Neuroses from the Standpoint of a Railway Surgeon—Arthur Dean Bevan, Chicago.
 14. Medicolegal Relations of Traumatic Nervous Affections—Landon Carter Gray, New York City.
 15. Analysis of Cases of Traumatic Neuroses with Special Reference to Prognosis—James J. Putnam, Boston.
 16. Prognosis and Treatment of Traumatic Neuroses—Wharton Sinkler, Philadelphia.
- Discussion to be opened by James Hendrie Lloyd, Herm. H. Hoppe, and Francis X. Dercum.
17. Treatment of Neurasthenia—Daniel R. Brower, Chicago.
 18. Certain Means for Relief of Neuralgia—W. J. Herdman, Ann Arbor, Mich.
 19. Modern Treatment of Loconotor Ataxia—Curran Pope, Louisville, Ky.
 20. Subject Unannounced—Francis X. Dercum, Philadelphia.

THIRD DAY.

21. Diagnosis of Hysteria from Organic Disease of Brain—Chas. K. Mills, Philadelphia.
 22. Diagnosis of Hysteria from Organic Disease of the Spinal Cord and Peripheral Nerves—Frederick Peterson, New York City.
 23. General Treatment of Hysteria—B. Sachs, New York City.
 24. Technique of the "Rest Cure," with Indications and Contraindications for Its Use—John K. Mitchell, Philadelphia.
- Discussion to be opened by C. W. Burr, John Punton and William G. Spiller.
25. Differentiation of Chorea and Disorders Simulating It—A. A. Eshner, Philadelphia.
 26. Prophylaxis of Chorea—J. Madison Taylor, Philadelphia.
 27. On a Certain Routine Treatment for Gouty Conditions—Frank R. Fry, St. Louis, Mo.
 28. Combined Sclerosis of the Putnam-Dana Type Accompanying Pernicious Anemia—F. W. Langdon, Cincinnati, Ohio.
 29. Aphasia: Report of Case—Guy Hinsdale, Philadelphia.

FOURTH DAY.

30. Subject Unannounced—J. Hendrie Lloyd, Philadelphia.
31. Migraine, with the Consideration of Heredity—D. J. McCarthy, Philadelphia.
32. True Epilepsy with Symptoms of General Paresis Engrafted Thereon: Report and Presentation of Case—E. Ferree Witmer, Philadelphia.
33. Involutional and Evolutional Types of Nervous Diseases—Ed. E. Mayer, Pittsburg, Pa.
34. Presentation of Some Specimens of Brain Tumor—Albert E. Sterne, Indianapolis, Ind.
35. Paranoia, with Report of Case—Chas. S. Potts, Philadelphia.

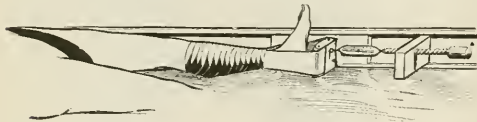
36. Hereditary Color-blindness—F. Savary Pearce, Philadelphia.
37. Pathophobia as an Element of Nervous Diseases and Its Treatment—John Punton, Kansas City, Mo.
38. Post-Anesthetic Paralysis—C. C. Hersman, Pittsburg, Pa.
39. The Insanities—William Francis Drewry, Petersburg, Va.
40. The Simplest Explanation of the Functions of the Nervous System—G. W. Drake, Hollins, Va.
41. Drug Habits—A. J. Pressey, Cleveland, Ohio.
42. A Study of Cerebral Syphilis, with Report of Case—Jas. H. McBride, Pasadena, Cal.
43. Case of Combined Aural and Gastric Vertigo, with Comments—G. W. McCaskey, Ft. Wayne, Ind.

New Instruments.

An Improved Lateral Traction Splint for Fracture of Femur in Children.

BY WM. W. GOLDNAMER, M.D.
CHICAGO.

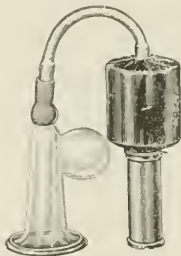
In the treatment of fracture of the femur in children, we are often confronted with the fact that there is a necessity of a change of scene for those little patients that will keep them more contented during their enforced confinement in bed, and also by the frequent changes prevent the liability, especially in hot weather, of pressure ulcerations, etc. The objection to the lateral splints that I have heretofore used is that the



amount of traction in a given case was not known, so I have introduced between the traction screw—which is a long wooden screw from a joiner's "set-screw"—and the block of wood—to which is fastened the two adhesive strips which extend from the lateral sides of the leg—a small pair of spring balances, such as are found in nearly every household, for weighing packages, thereby having an indicator to measure the amount of force desired. The ease and accuracy with which it has worked has been my excuse for this report. There is no reason why this can not be used in adults as well as children, when such treatment is desired.

Breast-Pump and Nipple Developer.

We present an illustration of a new breast-pump—The Hoover Breast-pump and Nipple Developer—which seems to offer many advantageous qualities. It is small, the pure gum rubber tube shown in the illustration being but 2 inches in length. There is a small coil of brass wire in the tube to



prevent collapse when strong pressure is necessary. The tube connects the glass portion of the pump with the air-chamber, and at the distal end of the latter a small exhaust pump, 2 inches long, is attached. The air-chamber is 1 inch long, and the rubber tube $\frac{1}{4}$ inch in diameter. The breast-pump complete measures 9 inches in length.

Miscellany.

A Question of Ethics.—The Code of Ethics, adopted by nearly all the medical societies of our country, is founded upon honor, the honor of the individual practitioner and his honorable relations with reputable men and with the community. In this code there is no absolute command that one shall do or not do certain things. It considers man a free moral agent and so appeals to his manhood, his sense of honor with greater certainty of obedience to its tenets than if such obedience were the result of compulsion or dogmatic assertion. This spirit of integrity should therefore and does infuse our souls with professional pride and dominate our lives in an endeavor to maintain that respect and dignity which will lead the profession to live up to its noblest ideals. When one or several members of the profession in any community disregard this law by degrading his body, or mind, or his honor or that of his profession by public or private acts, it is the duty of the profession either individually or as an organized body to deprive that individual or individuals of all the rights, emoluments and respect that he has thereby forfeited. During the last ten years many cases of this character have occurred in our midst, and, that we may be explicit and impartial, we shall confine ourselves to those cases where the offense has been notorious, of a public character and where the punishment has been made public and been meted out not by individuals, but by bodies lawfully organized for the purpose of protecting our professional integrity. These several offenses are common property and the actors well known. The code of ethics of the profession requires that its adherents shall not consult with or meet in a professional way men who are not reputable and have therefore by their conduct forfeited the honor and respect of the profession they should love and cherish. It is to be regretted that many in our community have seen fit to so seriously violate the requirements, imposed by this code, that they can no longer be considered worthy and reputable physicians. Meeting these men in practice or consulting with them is therefore strictly forbidden to the regular profession. It is humiliating and degrading to know that men highly honored by the profession and the state are in daily communication and consultation with those, who have been censured by the state and local societies. This practice is growing common and is a serious wrong. We have often wondered how men can be so inconsistent as to preach and swear by the code on one occasion and in the next breath consult with those who have lost all rights to respect. In many cases no doubt the voices and votes of these very men have helped to condemn these physicians and yet they do not hesitate to mingle with them on all occasions both social and professional. As far as the social function is concerned they should be treated courteously and with due respect, but it is a matter of no idle moment when they meet with them professionally in the sick-room and the hospitals. Is there seemingly any reason therefore, why the average public should not look with some show of discourtesy and contempt upon the average physician? Can the advertiser and the quack be seriously blamed for the patronage conferred by an indiscriminating public while men are willing to debase and lower themselves? Shall the honor of our profession be daily impugned by the arrant and flagrant advertiser, even the worst class of abortionists, who are being allowed in our hospitals, public affairs, etc., where they must meet the members of our profession? Shall the code of ethics, our morals and dignity continue to be laughed at and booted at by the quack of the community? This is not only degrading to our honor, but it is technically criminal that men of ability and of good standing should ever be ready to assist and help out of embarrassing positions those who in many cases are practicing medicine unlawfully. Is it possible that our sense of honor is gone and that the greed for money alone is left to stir and guide us on our way? Will not those in authority take some step to see that this degradation shall cease? Is there no means of preventing this shameful hypocrisy? Better have no code and no honor and make no pretensions of honor if this is to be slurred at by physician and quack alike. Why punish a few for public advertising, when many lower themselves and the profession by overt acts equally reprehensible?

For this unfortunate condition there is but one remedy, self-respect. This is an obligation each one owes himself and his profession. A little encouragement of this attribute will tend to educate the people to appreciate the worthy and those endeavoring to uphold the professional standing on the highest plane. Such conduct as is here depicted is worse and far more flagrant than public advertising. It destroys the soul and honor of the professional body and the confidence demanded from the public, whom we are bound to honestly and faithfully serve.—*Occidental Med. Times*, San Francisco, March 1.

BOOKS AND PAMPHLETS RECEIVED.

Acknowledgement of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review as dictated by their merits, or in the interests of our readers.

BOOKS.

THE YEAR-BOOK OF THE NOSE, THROAT AND EAR. Edited by G. P. Head, M.D., Professor of Laryngology and Rhinology in the Post-Graduate Medical School of Chicago, and Albert H. Andrews, M.D., Professor of Otolary in the Post-Graduate Medical School of Chicago. Price, \$1.50. Chicago: Chicago Medical Book Co., 1900.

SCATTERED LEAVES FROM A PHYSICIAN'S DAIRY. A series of satirical sketches from real life, reflecting more or less on the men who control it. By Albert Abrams, A.M., M.D., (Heidelberg), F.R.M.S., San Francisco, author of "The Antiseptic Club," etc. Paper, pp. 60, with frontispiece. Price \$50. St. Louis, Mo.: Fortnightly Press Co.

CLINICAL STUDIES IN VICE AND IN INSANITY. By Geo. R. Wilson, M.D., Medical Superintendent, Marysbank Asylum. Price \$3. New York: The Macmillan Co., 1899.

PRESCRIPTION BOOK OF INFANT DIETETICS FOR HOME MODIFICATION OF MILK. By A. B. Spach, A.M., M.D., Chicago. Paper. Price \$50. Chicago Medical Book Co. Chicago.

Queries and Minor Notes.

PIGEONS AS MEDICAL MESSENGERS.

ELIZABETH, ILL., March 29, 1900.

To the Editor.—To new readers of THE JOURNAL, who have country practice, it may be of interest to know that I have found, during three years' use, that homing pigeons as medical messengers can be made of great practical benefit. Two letters on this subject, published in THE JOURNAL, will be found in xxx, xxxii, and xxxiii. To those not having access to these, I will be pleased to mail reprints published by THE JOURNAL, on receipt of request, with a stamp. PHILLIP ARNO, M.D.

THE "MAD-STONE."

FORT WORTH, TEXAS, March 9, 1900.

To the Editor.—Will you please tell me what is known about the "mad-stone" and its use in hydrophobia; its size and history? What are its therapeutic powers? Upon what principle does it work? Is it psychic or non-psychic? Respectfully,

J. E. P.

ANSWER:—The "mad-stone" is a rather indefinite article, according to our knowledge. It is an absorbent stone. Sometimes, we are told, it is a concretion, gastric or otherwise, which is placed over wounds with the idea that it will suck out the poison. The question as to its therapeutic powers is involved in the answer to the last two questions. The principle it acts on, we believe, is suggestion. No educated physician believes in its genuine therapeutic powers.

"CHRISTIAN SCIENCE."

BOSTON, March 24, 1900.

To the Editor.—Having read in some medical journals about "Christian Science," its history, "Mother Eddy's" history, etc., I intend to write a correspondence article for a European medical journal, on this subject. I can not, however, find the articles in my ASSOCIATION JOURNALS, and take the liberty to ask you to send me the copies in which you have something on the subject. I think I read the articles in the AMERICAN MEDICAL JOURNAL, which I am studying most thoroughly. Very truly yours, K. H.

ANSWER:—There is a good exposé of "Christian Science" in the book, "Christian Science, an Exposition of Mrs. Eddy's Wonderful Discovery, Including its Legal Aspects. A plea for children and the helpless sick," by Wm. A. Purrington. (E. B. Treat & Co., New York, 1900.) It can be had through any book-seller. Other articles to be consulted are those of H. C. Dresser and Mrs. Josephine C. Woodbury, in the ARCHIVES for May, 1899; that of Dr. Edmund Andrews, in this JOURNAL, March 18, 1899; with others scattered through medical journals, magazines, and newspapers too numerous to mention.

GERMAN AND FRENCH PUBLICATIONS.

UNION SPRINGS, ALA., March 29, 1900.

To the Editor.—My son, recently from the College of Physicians and Surgeons, New York City, is desirous of keeping up his knowledge of French and German acquired in his university course, and we desire to subscribe for two medical journals, one published in Paris, the other in Berlin, preferring that they shall be monthlies, devoted as nearly as may be to general medicine. We shall want also a French-English and German-English medical dictionary. Will you advise us both as to the medical journals and the medical dictionaries, and where we may subscribe for and obtain them. C. H. F.

ANSWER:—The leading French and German journals are not monthlies, but there are one or two French ones that might meet the requirements, such as the *Archives Generales de Médecine* and the *Revue de Médecine*. The German journals on general medicine, that are not weeklies, are more apt to appear in parts or irregularly. For a German monthly, we would recommend *Schmidt's Jahrbuch*, which appears twelve times a year and contains abstracts of most of the current important medical literature of the continent of Europe, together with critical digests of the literature, etc., on certain subjects, in each volume. The latest German-English and French-English dictionaries, and probably therefore the best, are Treves and Lang for the German and De-Merit for the French. These are not expensive, being small. The French and German monthly journals are rather expensive.

PRACTICE IN WISCONSIN.

CHICAGO, March 26, 1900.

To the Editor.—Kindly inform me through THE JOURNAL how to register in Wisconsin and to whom to send my diploma.

Fraternally, SUBSCRIBER.

ANSWER:—The following is taken from the section on registration in the Wisconsin law, providing for a State Board of Medical Examiners. "All persons commencing the practice of medicine or surgery in any of their branches, shall apply to said board at the time and place designated by them, or at any regular meeting for license so to do, and shall submit to an examination in the various branches in medicine and surgery, or to present to said board a diploma from a medical college that requires at least three courses of not less than six months each before graduation. And after the year 1904 at least four courses of not less than six months each before graduation, no two of said courses to be taken within any twelve months. The examination in materia medica, therapeutics and practice of medicine shall be conducted by the members of said board representing the school of medicine which the applicant desires to follow. The fee for examination is \$10, but \$5 when an examination is not required. The fee shall be paid by the applicant to the treasurer of the board. Any practitioner of medicine holding a certificate from any other state board imposing requirements equal to those established by the Wisconsin board, on presentation of the same with his diploma, may be admitted to practice without an examination, at the discretion of the board, on the payment of the fee. The secretary, to whom applications for forms, blanks, etc., should be sent, is H. M. Ludwig, M.D., Richland Centre, Wis.

The Public Service.

ARMY CHANGES.

Movements of Army Medical Officers under orders from the Adjutant General's Office, Washington, D. C., March 16-22, 1900, inclusive.

Peter J. A. Cleary, lieutenant-col., deputy surgeon-general, U. S. A., relieved from further duty at Fort McPherson, Ga., to report at San Antonio, Tex., as chief surgeon of the Department of Texas.

Edward T. Comegys, major and surgeon, U. S. A., from the medical supply depot, Savannah, Ga., to San Francisco, Cal., and thence to Manila, P. I., for duty in the Department of the Pacific.

Charles L. Helzmann, major and surgeon, U. S. A., from duty as chief surgeon, Department of Texas, to San Francisco, Cal., and thence to Manila, P. I., for duty in the Department of the Pacific.

The following acting ass't.-surgeons have been directed to proceed to San Francisco, Cal.: Frank C. Baker, from Washington, D. C.; Leonard P. Bell, from Indianapolis, Ind.; Caspar R. Byars, from Columbus, Tex.; Joseph A. Collic, from William's Bay, Wis.; Robert M. English, from New Haven, Conn.; Bower E. Himes, from Fort Sheridan, Ill.; Luther P. Howell, from Washington Court House, Ohio; George L. Marion, from Elgin, Ill.; John N. Merrick, from Columbus, Ohio; John L. Norris, from Washington, D. C.; Cona E. Ouliger, from Canton, Ohio; Randall C. Stoney, from Charleston, S. C.; Henry H. Stromberger, from Washington, D. C.; Robert M. Thornburgh, from New York City; Edwin M. Crook, from Marion, Ind.; Josiah M. Ward, from Newbern, N. C., station for special temporary duty.

NAVY CHANGES.

Changes in the Medical Corps of the U. S. Navy for the week ending March 24, 1900.

Surgeon J. D. Catewood, detached from the *Lancaster*, and ordered to the Bureau of Medicine and Surgery, Navy Department.

Pharmacist F. Wood, retired from active service, March 20, 1900, Ass't.-Surgeon E. Thompson, detached from the *Celtic* and ordered to the *Nashville*.

Ass't.-Surgeon M. N. Johnson, detached from the *Nashville* and ordered to the *Austria*.

Ass't.-Surgeon W. B. Grove, detached from the *Brooklyn* and ordered to the *Scindia*.

Ass't.-Surgeon F. L. Benton, detached from the naval hospital Yokohama, Japan, and ordered to the naval hospital, Cavite, P. I.

Ass't.-Surgeon J. S. Taylor, ordered to the *New Orleans*.

MARINE-HOSPITAL CHANGES.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital Service for the 7 days ended March 22, 1900.

Surgeon George Phrince, granted leave of absence for fifteen days from March 22 to April 6.

Surgeon A. S. Glenan, to proceed to Port Townsend, Wash., as inspector of quarantines.

Ass't.-Surgeon M. J. White, to proceed to Reedy Island quarantine Hospital Steward Chas. W. Stephenson, to proceed to Chicago, and report for duty and assignment to quarters.

APPOINTMENTS.

W. Theo. Wans, apolluted acting asst.-surgeon for duty at Fernandina, Fla.
Chas. W. Stephenson, of Ohio, appointed hospital steward.

HEALTH REPORTS.

The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon-General, U. S. Marine-Hospital Service during the week ended March 31, 1900.

SMALLPOX—UNITED STATES.

Illinois: Aurora, March 3-17, 7 cases; Chicago, March 17-24, 3 cases.
Indiana: Evansville, March 17-24, 6 cases.
Kansas: Wichita, March 17-24, 8 cases.
Kentucky: Covington, March 17-24, 14 cases.
Louisiana: New Orleans, March 17-24, 71 cases, 14 deaths.
Maine: Portland, March 17-24, 1 case.
Michigan: Detroit, March 17-24, 2 cases, 1 death.
Minnesota: Albert Lea, March 20, 2 cases; Anoka County, March 20, 15 cases; Butterfield, March 20, 1 case; Freeborn County, March 20, 15 cases; Lesueur County, March 20, 1 case; Northfield, March 20, 7 cases; Minneapolis, March 20, 42 cases; Rice County, March 20, 1 case; St. Paul, March 20, 6 cases; Watonwan County, March 20, 2 cases.
Nebraska: Omaha, March 17-24, 1 case.
New York: New York, March 17-24, 2 cases.
Ohio: Cincinnati, March 17-23, 1 case, 1 death; Cleveland, March 17-24, 10 cases.
Pennsylvania: McKeesport, March 17-24, 1 case, 1 death.
South Carolina: Greenville, March 17-24, 2 cases.
Utah: Salt Lake City, March 17-24, 6 cases.
Virginia: Albemarle, March 16, 12 cases; Portsmouth, March 17-24, 1 case, 1 death.
Washington: Spokane, March 17-24, 2 cases.
Wisconsin: West Salem, March 21, 3 cases.

SMALLPOX—FOREIGN.

Austria: Prague, March 3-19, 3 cases.
Belgium: Antwerp, March 3-19, 3 cases, 1 death.
Brazil: Rio de Janeiro, Feb. 29, 25 cases, 22 deaths.
Canada: Montreal, March 26, 1 case.
Cuba: Santiago, March 11, 1 case, 6 deaths.
Egypt: Cairo, Feb. 18-25, 3 deaths.
England: Birmingham, March 3-10, 2 cases; London, Feb. 24 to March 3, 7 cases, 1 death.
France: Lyons, Feb. 24 to March 3, 1 death.
Greece: Athens, March 3-19, 3 cases, 6 deaths.
India: Bombay, Feb. 13-20, 228 deaths; Calcutta, Feb. 3-10, 24 deaths; Kurrachee, Feb. 11-18, 12 cases, 6 deaths.
Mexico: Cihauhua, March 10-17, 3 deaths; City of Mexico, Feb. 25 to March 4, 68 cases, 24 deaths; Vera Cruz, March 10-17, 4 deaths.
Russia: Moscow, Feb. 25 to March 3, 6 cases, 1 death; Odessa, March 3-10, 7 cases, 1 death; St. Petersburg, Feb. 17 to March 3, 47 cases, 12 deaths; Warsaw, Feb. 17-24, 3 deaths.
Spain: Malboro, March 3-10, 1 death; Madrid, Feb. 24 to March 3, 7 deaths.
Straits Settlements: Singapore, Feb. 3-10, 1 death.

YELLOW FEVER—FOREIGN.

Brazil: Bahia, Feb. 17 to March 3, 2 cases, 1 death; Rio de Janeiro, Feb. 29, 16 deaths.
Colombia: Barranquilla, March 3-10, 2 cases, 2 deaths; Panama, March 3-20, 2 cases, 1 death.
Cuba: Havana, March 11-17, 1 death.
Mexico: Lazcana, March 4, several cases, 1 death.

CHOLERA.

India: Bombay, Feb. 13-20, 1 death; Calcutta, Feb. 3-10, 40 deaths.

PLAGUE—FATAL POSSESSIONS, U. S.

Hawaii: Honolulu, March 22, 1 death, 1 suspect.
Philippine Islands: Manila, to Feb. 13, 160 cases, 90 deaths.

PLAGUE—FOREIGN.

India: Bombay, Feb. 13-20, 641 deaths; Calcutta, Feb. 3-10, 106 deaths; Kurrachee, Feb. 11-18, 4 cases, 1 death.

CHANGE OF ADDRESS.

Dr. R. Bettman, from London, England, to 2322 Michigan Ave., Chicago, Ill.
Dr. G. Blech, from 1434 Michigan Ave. to 103 State St., Chicago.
Dr. C. Booth, from St. Louis to Cairo, Mo.
Dr. J. L. Byrne, from 923 Powell Street to Station D, St. Joseph, Mo.
Dr. A. L. Cowden, from Kansas City, Mo., to Olathe, Kansas.
Dr. C. C. Chapman, from Kansas City to Shelby, Mo.
Dr. W. E. Currie, from Popple to Sterling, Kansas.
Dr. E. A. Crull, from 120 Barr St. to 4 E. Columbia St., Fort Wayne, Ind.
Dr. I. J. Dunn, from 13 E. 8th St. to 810 Peach St., Erie, Pa.
Dr. L. Fischer, from 187 Second Ave. to 65 E. Ninth St., New York.
Dr. A. Frieke, from 235 N. Sixth St. to 4724 Hazel Ave., Philadelphia, Pa.
Dr. T. A. Guntlebar, from Winnsboro to Balesburg, S. C.
Dr. H. D. Gray, from Iowa City to Newton, Iowa.
Dr. J. P. Gray, from St. Louis to Wheeling, Mo.
Dr. J. M. Gedge, from 108 Stockton St. to 406 Sutter St., San Francisco, Cal.
Dr. A. R. Hill, from Deononowoc, Wis., to Sharon, Iowa.
Dr. F. Hitts, from Kansas City, Mo., to Humbolt, Kansas.
Dr. M. H. Horn, from Topeka to Morrowville, Kansas.
Dr. S. D. Hosford, from 3411 W. 32d Ave. to 3419 W. 21st Ave., Denver, Colo.
Dr. A. B. Jensen, from Kookuk, Iowa, to Chilton, Wis.
Dr. F. A. Knight, from 2836 Chicago Ave. to Masonic Temple, Minneapolis, Minn.
Dr. C. Q. Murrell, from 2324 Pine St. to 1322 Market St., St. Louis, Mo.
Dr. H. W. Morcom, from 701 Jackson Blvd. to 618 W. Monroe St., Chicago, Ill.
Dr. E. W. Moles, from Iowa City to Dyersville, Iowa.

Dr. M. H. Mack, from 690 W. Madison St. to 3000 Indiana Ave., Chicago, Ill.
Dr. E. S. McKee, from 33 to 639 W. 7th St., Cincinnati, O.
Dr. L. M. McSwald, from Nocatee to Bartow, Fla.
Dr. I. J. Sexton, from 348 Ogden Ave. to 294 S. Marshfield Ave., Chicago, Ill.
Dr. X. Olsen, from Kansas City, Mo., to Green, Kansas.
Dr. A. O'Donnell, from 1212 Harrison St. to 704 Oak St., Kansas City, Mo.
Dr. W. T. Swink, from Nashville to Jackson, Tenn.
Dr. F. H. Stucker, Jr., from 121 E. College St. to 124 W. Chestnut St., Louisville, Ky.
Dr. L. A. Snyder, from Chicago to Chicago Heights, Ill.
Dr. S. P. Vinyard, from 615 E. 8th St. to City Hospital, Kansas City, Mo.
Dr. A. W. Thomas, from Salem to Stayton, Ore.
Dr. J. A. Townsend, from St. Louis to Unionville, Mo.
Dr. A. D. Van Dyke, from Marysville, Pa., to Union Station, Baltimore, Md.
Dr. A. L. Woodruff, from Alton to 2805 W. Broad St., Columbus, O.
Dr. H. M. Williams, from Kansas City, Mo., to Emporia, Kansas.

THE JOURNAL OF THE
AMERICAN MEDICAL ASSOCIATION

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MEMBERSHIP IN THE AMERICAN MEDICAL ASSOCIATION.

The qualifications for membership require that the applicant be a member, in good standing, of a state or local medical society entitled to send delegates to the annual meeting of the AMERICAN MEDICAL ASSOCIATION. A list of these societies will be sent on request. Applications must be accompanied with a certificate showing that the applicant is a member of a recognized society, and should be sent with the annual dues—five dollars—to the treasurer, Dr. Henry F. Woodruff, 100 Washington Street, Chicago. Members receive the JOURNAL free. Subscribers to the JOURNAL may become members of the ASSOCIATION without expense if they are members of medical societies recognized by the ASSOCIATION, and those desiring to have their names transferred from the subscription to the membership lists should send certificates as above with a receipt for their subscription to the JOURNAL, covering the current fiscal year.

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The fiscal year of the AMERICAN MEDICAL ASSOCIATION is from January 1 to December 31, and the annual dues paid by a new member cover only the fiscal year, no matter at what time of year the membership is obtained. Those who pay their dues and join the ASSOCIATION at the annual meeting in June, for instance, pay only for the fiscal year which ends with the December following, and the annual dues for the following fiscal year are payable the succeeding January, at which time the treasurer sends a statement to each member. Such members, however, are entitled to the JOURNAL for the full year, even though the membership be not continued.

PAPERS READ AT THE ANNUAL MEETING.

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NEWS.

Our readers are requested to send us items of news of a medical nature, also marked copies of local newspapers containing matters of interest to members of the medical profession. We shall be glad to know the name of the sender in every instance.

ORIGINAL PAPERS.

Articles are accepted for publication with the understanding that they are contributed solely to this journal, unless a definite understanding be had to the contrary.

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CHANGE OF ADDRESS.

In ordering a change of address it is important that both the old and new address be given.

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The Journal of the American Medical Association

VOL. XXXIV

CHICAGO, ILLINOIS, APRIL 14, 1900.

No. 15.

Original Articles.

REPORT OF A SUCCESSFUL CASE OF EXCISION OF THE CECUM, WITH END-TO-END ANASTOMOSIS.*

BY FREDERICK HOLME WIGGIN, M.D.

PRESIDENT OF THE NEW YORK COUNTY MEDICAL ASSOCIATION;
VISITING GYNECOLOGIST TO THE NEW YORK CITY HOSPITAL;
SURGEON TO ST. ELIZABETH'S HOSPITAL, ETC.
NEW YORK CITY.

On February 5, I was called by Dr. D. R. Rodger, Woodbury, Conn., to see G. S., a married woman 54 years of age who gave a history of having had recurring attacks of appendicitis covering a period of ten years. About six weeks previously the patient and her physician stated that she had had a more severe attack than on any of the other occasions, the abdominal pain being greater, and the constitutional symptoms more marked than formerly. Since that time the patient had been unable to take nourishment, even in a liquid form, without suffering pain in the right iliac region, accompanied by severe and persistent nausea. Consequently she had accustomed herself to abstain from taking nourishment in any form for as long a period of time as possible. She was emaciated, was suffering from marked mental depression, her gums and tongue were much swollen and red, and there were various ecchymotic spots all over her body. At this time, her pulse-rate was 74 and her bodily temperature 99.4 F. On bimanual examination a tumor attached to the uterus and broad ligament, and extending up into the right inguinal region, was found. Operation was advised, and as soon as the necessary arrangements could be made, with the assistance of Dr. Rodger, of Woodbury, and Dr. A. A. Crane, of Waterbury, laparotomy was performed.

The incision was made over the right rectus muscle, the fibers of which were separated and the peritoneal cavity entered. The tumor proved to be contained in the cecum and appendix. The adhesions which bound this portion of the gut to the uterus and broad ligament and parietal peritoneum were carefully broken up and the portion of the intestine containing the tumor was brought outside the abdominal cavity, which was shut off by gauze pads. There were no enlarged mesenteric glands, but fearing a possibility of malignant disease it was thought best to divide the bowel on either side, some distance from the tumor. The mesenteric attachment was clamped off before the vessels were divided, after which the clamp was replaced by the operator's fingers, and the vessels were caught by means of forceps and ligated with little loss of blood, probably not over 1½ ounces being lost in the entire operation, including the abdominal incision. After the tumor had been removed the cut edges of the bowel were washed with a small quantity of a solution of hydrogen dioxide—12½ vol.—

and the cut edge of the ileum was united to that of the descending colon by means of stitches passed from within the bowel through all the coats, and then through the bowel of the opposite side from without in, the knots being tied on the inside of the bowel, and thus bringing together broad surfaces of the peritoneum. The stitch used was the one whose utility was demonstrated by Maunsell. These stitches were placed about ⅛ of an inch apart, and carried all the way around, attaching the entire cut edge of the ileum to the colon. The caliber of the colon being greater than that of the ileum, a slit was left which was nearly closed by means of the same sutures as those which had been employed to unite the colon to the ileum, but finally a few Lembert sutures were employed to close what remained of the opening. A few Lemberts were also placed at different points over the line of union of the colon with the ileum, to insure the contact of the peritoneal coats at all points. The suture material used to unite the bowel was horse hair, and a No. 5 milliner's needle was employed. Before the bowel was returned to the peritoneal cavity the line of union was washed with a solution of hydrogen dioxide—12½ vols.—and then the abdominal cavity was washed out and filled with saline solution, and the wound in the abdominal wall was closed by means of sutures placed in layers.

The patient was returned to her bed in good condition at 5 p.m., and at 6:25 p.m. her pulse-rate was 72 and bodily temperature 99.7 F. Following the operation no morphia was given, as the patient was free from pain. She slept more or less during the night, and at 6 a.m., having no nausea, 3 ounces of milk and lime-water was given, and this was repeated an hour later. At 7 a.m. she was catheterized and a large amount of urine drawn off. On account of her bad general condition it was advised that an enema of one pint of saline solution be given twice daily. Her bowels moved twenty-seven hours after the operation, and the convalescence as far as the abdominal operation was concerned was uneventful, with the exception of a stitch abscess, but was prolonged and complicated by the bad general constitutional condition from which the patient was suffering, which was prior to operation and analogous to scurvy, as was demonstrated by the occurrence of a bloody vaginal discharge which began on the second day following the operation and continued for some time, and by the patient also having trouble with salivary glands, lungs, etc. Large quantities of foul fecal matter were passed by the patient during the convalescence, which from its decomposed odor must have been retained in the intestines for a long period of time.

In a letter dated March 14, Dr. Rodger informed me that the patient was looking well, eating and digesting her food satisfactorily, that her mouth and tongue had resumed their normal condition, and that she was up and about.

The tumor, which completely occluded the bowel, was referred to Prof. E. K. Dunham, of the New York Uni-

*Read before the New York County Medical Association.

versity, Bellevue Hospital Medical College, for pathologic examination, and his report was as follows: "Sections of the specimen you brought here to-day, Mrs. G. S. show a chronic inflammatory process, but I can find no evidence of malignant growths. The muscular tissue of the intestine is infiltrated with round cells—and the portions of the specimen which do not contain smooth muscular tissue are composed of a dense fibrous (cicatricial) tissue which is also the seat of focal round-cell infiltration. In many places the vessels show chronic endarteritis partially obliterating the lumina. A small lymph node included in one of the sections gives evidence of chronic inflammation, but there is no indication of invasion with cells from a neoplasm."

The chief points of interest in the case are: 1. the history of recurring attacks of appendicitis covering a long period of time, ten years; 2, the general condition of the patient, which indicated great bodily depression analogous to scurvy, due to the lack of proper nourishment, and to the retention for a long time of a large quantity of fecal matter; 3, the method of suture employed; 4, the small amount of blood lost by the patient during operation; 5, the early and constant use of saline enemias to improve the general condition of the patient; 6, the early administration of nourishment to the patient in considerable quantity; 7, the character of the tumor.

55 West Thirty-sixth Street.

REMARKS ON SERUMTHERAPY.*

BY EDWARD K. DUNHAM, M.D.

NEW YORK CITY.

I conceive it to be my function in this discussion to lay before you some of the theories advanced in explanation of the facts on which the practice of serum-therapy is based. It seems, at the present time, quite impossible to assign to any of these theories the value of well-established fundamental principles, but they are of use as working hypotheses which correlate numerous facts and enable the mind to include many details in a single general conception. It is through the employment of such general conceptions, suggestive in character, that experimental investigation is most easily furthered. They are a necessary part of the inductive method of exploring the unknown, but it is needless to say that the utmost caution must be exercised not to regard them as expressions of invariable natural relations until the most extended observation and experimentation have demonstrated that they possess this character. Only then can we assign to these working hypotheses the dignity of natural laws. I am, then, not in a position to present a statement of laws governing the phenomena which have led to the use of serumtherapy in the treatment of disease. I can only rehearse some of the ideas which have been advanced in explanation of those phenomena by investigators who have devoted themselves to their study.

The study of serumtherapy is primarily based on the observation that animals and man may possess or may acquire resistance to a given infection or intoxication. Bacteria or poisons which are capable of producing symptoms in some species or individuals, may entirely fail to produce such effects in other species or other individuals of the same species. In some cases this immunity is inherent to the species, being manifest in greater or less degree in all individuals. In other cases it must be acquired. This fact leads to a distinction between "natural immunity" and "acquired immunity." In addition to

this distinction we must also separate resistance to infection from an insusceptibility to the action of poisonous substances.

In disease due to bacteria, it is generally believed that the symptoms occasioned are chiefly, if not wholly, due to toxic substances produced through the growth of the bacteria, either in some circumscribed part of the body or within the circulating fluids. The study of immunity is, therefore, in great measure, concentrated on the relation of the organism to poisons: a chemical problem.

The transfer of the study of many of the facts concerning immunity, from the domain of simple biology to that of biologic chemistry, renders some of the earlier explanations of immunity inadequate. Thus, the idea that by their growth bacteria consume all of certain food-stuffs necessary for their continued life (the "exhaustion" theory of immunity) was rendered untenable by the fact that immunity may be conferred on an animal by the injection of the poisonous products elaborated by the same bacterial species. This observation led to the "retention" theory, of immunity, in which the products of bacterial growth were believed to accumulate and prevent a further development of the bacteria.

This hypothesis had, in turn, to be abandoned when it was shown that these products were eliminated with a rapidity out of proportion to the duration of the immunity, and that their presence in the blood did not prevent the growth of the corresponding species of bacteria.

Another biologic explanation of immunity is based on the fact that many cells of the body, but chiefly the leucocytes, incorporate foreign particles within their cytoplasm and, in many cases, destroy them. The idea that bacteria gaining access to the tissues were destroyed by the devouring activity of such phagocytes, and that immunity depended on this activity, has long been the subject of somewhat bitter controversy. The weight of evidence appears to show that, while phagocytosis may be a factor in the destruction of bacteria, it is highly improbable that cells are capable of incorporating virulent bacteria and working their destruction. The preponderance of evidence favors the idea that phagocytosis takes place only after other influences have acted injuriously on the bacteria. The blood and lymph of the body are known to frequently exert such an influence, especially when freshly drawn. Although the point is still undecided, it seems not improbable that this influence depends on enzymes or ferments which have a solvent effect on the bacterial cell and its envelope, and that this action is closely related to the phenomenon of agglutination on which, for example, the Widal test as an aid to the diagnosis of typhoid fever is based.

The most philosophic theory of immunity that has as yet been advanced is Ehrlich's so-called "side-chain" hypothesis, which is based on a chemical theory of the action of poisons.

We know that the protein molecule is one of great complexity; that by its decomposition a vast number of organic substances can be obtained, some containing nitrogen, with others in which it is not present. The decomposition products derived from protein not only depend on its chemical constitution, but also on the character of the influences bringing about its cleavage.

The chemist expresses the constitution of such complex molecules by means of formulæ containing a nucleus of closely united atoms, to which he conceives other atomic combinations, or "radicles," to be more loosely attached. These radicles, when themselves of complex constitution, are designated as "side-chains," and are

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connected in various ways with the central nucleus which binds all the radicles together into a single, complex system of atoms. Since the side-chains themselves may be composed of central, compact, atomic groups, combined with numerous radicles, enormous molecules of almost any conceivable degree of complexity may be represented in this manner, the constitution, or arrangement of the various atoms being such as to express the value of their reciprocal affinities. Into any one of these radicles, new combinations of atoms may be introduced, affecting the properties of the whole system, provided they can replace some of the radicles or atoms of the original molecule; or the molecule may suffer cleavage, splitting it into simpler combinations of chemical nuclei or radicles, and the directions of such cleavages, and, therefore, the nature of the resulting products, will depend on the conditions under which the splitting takes place.

Ehrlich's side-chain theory of immunity assumes the existence of such complex molecules within the cells of the body, that they are necessary for the normal function of the cell, and that the nutritive processes within the cell are charged with their maintenance. Substances which act as poisons enter into combination with certain definite side-chains forming a part of the molecule, and thereby affect its value in the cells, the functional activities of which are embarrassed. This occurrence does not necessarily destroy the vitality of the cell, nor does it of necessity occasion clinical symptoms, although the latter phenomenon is a frequent result. It does, however, affect the metabolism within the cell, and this calls forth nutritive efforts to replace those side-chains which have been rendered useless by union with the poison. At this point Ehrlich applies a general biologic principle expressed by the term "functional hypertrophy." Under ordinary circumstances the various active tissues of the body possess a certain reserve of organized material which can be called on in case of sudden additional demand. When that stock is drawn on, it is not merely replaced, but an additional store is laid up. Ehrlich supposes a similar occurrence to take place when molecular side-chains are rendered functionally useless by combination with poisonous substances. The nutritive processes within the cell are directed toward the production of an excess of side-chain radicles, beyond the immediate functional needs of the cell. This excess is eliminated from the cell and appears in the circulating fluids as an antitoxin. The production of this excess does not necessarily arrest a further elaboration of these side-chains, for we may conceive of a continuation of the cellular embarrassment due to the poison in spite of an abundant supply of side-chain radicles. Hypothetical as is this theory, it serves to correlate many of the phenomena that have been observed in experiments on immunity.

We must now briefly consider some of the varieties of immunity: first with reference to poisons. An animal may be naturally immune to the influence of substances that are poisonous to other animals. Examples of this "natural immunity" are familiar to us all. Rabbits are not affected by atropin. Fowls are not susceptible to the toxins produced by the tetanus bacillus. These poisons are either eliminated from the body or are burned; they are not neutralized. According to Ehrlich's theory, natural immunity would be a necessary result of the absence of side-chains having an affinity for a particular poison. The blood of naturally immune animals would contain no antitoxin because the conditions for its production did not obtain.

"Active immunity" is that which results when gradually increasing amounts of a poison are introduced into

the organism. It is not essential for its establishment that toxic symptoms should be produced, but the rapidity with which the immunity is acquired bears some relation to the amount of toxin introduced within a given time, and it is therefore more rapid when toxic symptoms are developed. On the other hand, it is essential that the toxic dose should not exceed a certain tolerance, otherwise irreparable damage may result. An explanation of these relations, in accordance with Ehrlich's theory, is exceedingly simple. An excessive dose of toxin would so greatly interfere with the chemical structures in the cell as to arrest its nutritive functions. If, however, the dose be smaller, the cell has opportunity to produce side-chains similar to those affected, not only to replace them but also to create an additional store in response to the unusual demand. But the theory includes more than this. It makes it evident that the antitoxin produced must bear a definite chemical relation to the poison that has called forth its production. No such simple explanation of the specific relation between toxins and the antitoxins produced after their introduction into the body has been hitherto given.

There are still other facts connected with active immunity to which this theory is applicable. Among these is the observation that usually those animals which are particularly susceptible to a given toxin yield a correspondingly great amount of antitoxin when successfully immunized. Side-chains, which constitute the chief factor in susceptibility when they are constituent parts of a cell, become the principal agents in immunity when freed from that connection and dissolved in the circulating fluids. Furthermore, it does not follow that all the cells of the body are equally affected by a given poison. The toxic effects may be localized. This appears to have been verified in the case of tetanus, where the central nervous system, especially the brain, contains the only tissues that seem to be directly affected by the poison. Where this localization obtains, the particular side-chains having an affinity for the toxins must be confined to the tissues susceptible to the poison; in the case of tetanus they should be found only in the central nervous system. But, in that case, those tissues should be able to neutralize, at least to some extent, the toxins. Experiments with tetanus have shown this to be the case, particularly in those animals markedly susceptible to tetanus toxins. An emulsion of brain in a fluid containing those poisons has a neutralizing action on the toxins, subsequent injection of the mixture into susceptible animals not producing tetanus. The other tissues of the body do not have this power. According to the theory, they are, therefore, without side-chains having affinity for these particular toxins.

Similar experiments tend to show that the side-chains affected by the toxins of diphtheria are situated in the lymphadenoid tissues; the bone marrow, spleen and lymph-nodes. But, in this case, they do not appear to be sufficiently abundant in the normal tissues to exert much antitoxic action when the tissues are emulsified with the toxins, or, possibly, they are so bound within the cell after its death that they are inactive under the conditions of the experiment. If, however, the animal has been even partially immunized, these tissues have a distinct antitoxic value. It is as though the production of free or loosely combined side-chains had been induced by the toxins used for immunizing.

An exceedingly interesting fact is that other complex proteid poisons besides the toxins of bacterial origin produce effects very similar to the latter and can induce the production of toxins.

Let us pass to the third, or "passive" variety of immunity. It is this which has hitherto given the greatest impulse to serumtherapy. We have seen that the actively immunized animal produces antitoxic substances which are present in the blood in solution. These antitoxins remain in the serum after the clotting of the blood, and it is essentially this serum which is used in passive immunization or in serumtherapy. These antitoxins retain the specific character, possessed by them in the actively immunized animal in which they were produced, but passive immunity differs from active immunity because in the former the free antitoxins introduced into the blood are not constantly replaced by a fresh supply, but are gradually eliminated.

Experience seems to demonstrate that in order to obtain a curative result from the use of antitoxins, it is necessary to use much larger quantities than are required to confer passive immunity. This has its analogy in other chemical reactions, where a reagent in greater concentration can bring about combinations which it can not affect in a more diluted state. It seems possible that a toxic radicle may leave a side-chain, which is already partially satisfied by union with a central nucleus, to unite with similar side-chains when they are present in sufficient abundance and in a free state.

Up to this point, we have considered only the antitoxic character of immunity and have barely touched on the question of immunity to infection. Although closely related, the two conditions are distinct. An animal may be inoculated with a given species of bacterium and not suffer, because the bacteria are killed or can not develop, and yet the animal may be susceptible to the toxins produced by that same bacterial species. A natural immunity to infection is not necessarily associated with immunity to the corresponding intoxication. An interesting experiment in this connection, which, perhaps, requires confirmation, tends to show that, in diphtheria, the serum obtained from animals actively immunized through the agency of diphtheria toxins or dead broth cultures of that bacillus possess both anti-infectious and antitoxic properties; while that from animals immunized with dead bacteria freed from adherent toxins has a germicidal action on the bacillus, but does not neutralize its toxins, i. e., it is exclusively anti-infectious.

When an animal has a natural or acquired immunity to a given bacterial infection, the bacteria which gain access to the body either simply fail to multiply and die, or they become swollen and rapidly killed. In either case, they fall a prey to phagocytes, which complete their destruction. Whether the failure to multiply is due to lack of appropriate nourishment, to a sudden change of environment, or to a direct germicidal and bacteriolytic action exerted by substances within the tissues and fluids of the body are still matters of controversy. It is possible that the final result is not always brought about by exactly similar processes. It is not quite germane to the present discussion to pursue this very interesting line of inquiry, and I shall therefore leave it without entering into further particulars.

In preparing this brief prelude to a series of papers that must necessarily prove much more highly interesting and instructive, I have chosen for the thread connecting my remarks the theory which appeared to me to include in a single conception the greatest number of details concerning a very complex subject. We are not yet in a position to assert that a given poison when introduced into the system will necessarily provoke the production of antitoxic substances. All the theories relating to the subject, however suggestive, are still on trial,

and we remain dependent on observation and experiment for those data which may prove of clinical value to the practicing physician and surgeon.

TUBERCULINS AND THEIR USE.*

BY E. A. DE SCHWEINITZ, M.D.

DEAN, COLUMBIAN UNIVERSITY MEDICAL SCHOOL.
WASHINGTON, D.C.

During the past years two different preparations have been used under the name "tuberculin" for the treatment of tuberculosis. They have been distinguished by the names "old tuberculin" and "T. R." As they are not the same in their composition, a word or two in regard to the methods of their preparation may be in place.

The old tuberculin is prepared by using a culture-medium containing beef broth, salt, peptone and 5 to 7 per cent. glycerin. The sterilized medium is inoculated with the tubercle bacilli and the cultures then allowed to grow in the thermostat for several weeks, until the germs are well developed. When the development of the germ has advanced sufficiently the flasks containing the well-grown cultures are placed in the sterilizing oven and heated for about one-half hour at a temperature of 120 C. They are then removed from the oven, the contents of each flask heated to the boiling point, and while boiling filtered through good folded filter paper. The filtrate from these germs, which is the material called "tuberculin," is then concentrated by evaporation on the water-bath, and can be diluted to any desired strength. For further purification, if desired, this filtrate may be passed through a Pasteur or other suitable porous filter, in order to remove any germs that might perchance be still present in the solution. It would, however, be impossible to find a live tubercle bacillus in this liquid, as it has been heated for at least an hour far beyond the temperature at which the tubercle bacillus is destroyed. The old tuberculin, then, so prepared, contains in solution the material which was used in the preparation of the culture-media, namely, the nitrogenous bases of the meat, peptone, salt, etc., those products of the growth of the germ which have passed into solution during their development, and also those which have been retained within the cell walls and extracted from the germs in the process of preparing the tuberculin.

The so-called "new tuberculin" or "T. R.," however, is prepared by cultivating, according to Koch, a *virulent* germ on media similar to that used for the old tuberculin, either liquid or solid media, taking the growth from the surface of the media, as free as possible from all adherent material, and extracting the cells, after drying and grinding, by means of water and glycerin. The broken and unbroken cells are removed from the solution by means of a centrifuge. It will be seen, therefore, that in this method of preparation none of the materials which enter into the composition of the culture-media are contained in the final product, but only the cell contents which have been produced by the growth of the bacilli and have not passed through the cell wall into the media on which they were developed. When the tubercle bacillus grows on artificial media, whether the media above described or a medium of mineral salts and glycerin, on which the germ will also grow, and also when it develops ordinarily in the animal body, several different substances having different properties and different effects on the organism are produced. Some of these, as already noted, are easily soluble, and pass

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quite readily through the cell wall of the germ into the culture-media, just as is the case with the poisonous substances produced by the diphtheria germ. Other of the substances produced by the growth of the germ being less soluble can not pass so readily through the cell wall, and hence can be obtained in solution only when the cells have been disintegrated. This disintegration may be accomplished by different methods, by the rubbing or grinding of the bacilli or by the application of considerable pressure. I use an adapted milk-shake machine as extractor, to advantage. Another reason why the products of the growth of the tubercle bacilli pass into solution with such difficulty, is because there is quite a thick layer of fatty and waxy material in the cell wall, which prevents dialysis.

The old tuberculin, therefore, is a solution of a mixture of a number of different substances, a few produced by the germ, others contained in the culture-media, while the new tuberculin or T. R., or tuberculo-plasmin, as it is sometimes called, is a solution of the substances which have been produced within the cells as the tubercle germs develop. In addition, as the substances in the old tuberculin have in the course of preparation been subjected to high temperature, some of them have undoubtedly been destroyed or chemical changes have been produced which would render their action entirely different from those which take place normally, when the germ develops in the body. The materials in the new tuberculin have never been heated to a temperature sufficiently high to destroy the germs or affect the products.

It is scarcely necessary to refer to the use of the old tuberculin in treating disease either in experimental animals or in men. Although Kitasato¹ reported that the great difference in the life of experimental tuberculous guinea-pigs treated with tuberculin, and the life of tuberculous checks, was so great that there was little reason to doubt that the improvement was due to the tuberculin injections, nevertheless from an experimental standpoint the results have not been confirmed by others. This lack of confirmation may perhaps be due to a difference in the method of treatment followed by Kitasato, and that which has since been used by others, and perhaps also to a lack of patience on the part of the operators.

In a paper read at the Tuberculosis Congress in Berlin, in May last, Brieger, the chief of staff in Koch's laboratory, one who has had much to do in connection with tuberculin work, asserted that the old tuberculin was not without value; that the disappointing results were due largely to the individuals who used it and also to a lack of care in selecting the cases to be treated. Many cases could be cited in which, according to the different doctors, good results had been secured by the use of tuberculin, and just as many cases in which bad results were secured.

One author, Feigel,² in 1891, claimed that the injection of tuberculin caused an injurious influence on the life of the tubercle bacilli. He noted a characteristic change in the appearance of the germ in the animal after treatment with tuberculin, a shrinking of the germ, which became thinner and more thread-like in form and less easily colored and finally entirely destroyed.

Dr. McCall Anderson, professor of clinical medicine in the University of Glasgow,³ calls attention to several cases in which he has used tuberculin with considerable satisfaction. He also emphasizes the point that in treating tuberculosis it is always necessary to remember that we have not only the tubercle bacillus itself to fight, but

must also take care of the soil on which the tubercle germ grows. It is obvious, therefore, that in addition to any special agents the best means must be simultaneously employed to change the soil on which the micro-organism flourishes or, in other words, the best attention must be given to the nutrition of the patient.

In general the following conclusions in regard to the use of the old tuberculin seem to be warranted. It apparently has a decided curative action for lupus. It is a valuable diagnostic agent both in animals and man, and it should be used very much more extensively than heretofore in diagnosing incipient cases.

Beck⁴ reports that during the years 1891-97, out of 1254 patients admitted to the institute for infectious diseases in Berlin, 2508 received tuberculin injections; of these, 1525 reacted. If we deduct from these a total of 371 cases which include phthisis, bone tuberculosis, and lupus cases that could easily have been diagnosed without the tuberculin, there remain 1154 cases in which the diagnosis was determined by the use of tuberculin. Such results certainly warrant the belief that tuberculin should always be used in skilful hands in diagnosing tuberculosis and further should always be used in determining whether the disease has been arrested or cured.

We have already noted that in the growth of the tubercle bacilli some readily soluble substances are produced in small quantity, and experiments which have been conducted, it seems to me, indicate that this readily soluble product of the growth of the tubercle bacillus is perhaps one of the most important in the beginning of the disease and also in causing the secondary changes which are very frequently, probably incorrectly, attributed to the action of foreign micro-organisms as streptococci, staphylococci and the like.

The writer⁵ and Dorset have described the isolation of a substance from tubercle cultures, which substance in very minute quantity produces congestion and characteristic necrosis of tissue, noted in tuberculosis.

One year later⁶ Auclair described the effect, on guinea-pigs, of injections of an ether extract made from the tubercle bacilli. He noted that this extract, when injected, produced characteristic congestion and necrosis, and further, that small quantities, from 10 to 60 mg., of this same extract injected into the trachea caused a characteristic secondary pneumonia so often observed in tuberculosis. In using this crude ethereal extract of the germs Auclair probably had the specific substance which we described in 1897, but mixed with it a considerable quantity of foreign matter which ordinarily, in the animal body, probably never enters the circulation until the disease is very far advanced, if at all. The substance, however, which causes the congestion and necrosis is probably the same as the one already referred to, and as this is quite readily soluble and can pass through the cell wall of the germ into the culture material on which the germ is developing, it is probably the specific material which causes the pneumonia. In fact, by the injection of solution of this substance, which we have extracted in a pure form, into guinea-pigs, we have been able not only to produce characteristic necrosis, but also a pneumonic appearance. If our supposition is correct, that by means of this necrotizing substance the tubercle germ can protect itself from the action of the leucocytes, and render the surrounding tissue suitable for the further development of the bacilli, and this supposition seems warranted by the results that have been obtained, then if we can neutralize the action of this one specific and most dangerous poisonous substance, the natural resisting power of the animal cell, if properly supported, can take up and

successfully continue the battle against the further action of the bacilli themselves. The tuberculin—T. R.—already described, may contain this necrotizing substance in very much smaller quantity than the old tuberculin, or may be entirely free from it, depending on whether virulent or non-virulent germs have been used for its preparation. This being the case we might naturally expect different results from the use of T. R. than from the use of the old tuberculin, in producing immunity in animals and men.

Here again, however, there is a great difference in the character of the results reported. In the hands of some workers, as Huber,⁷ the immunization experiments on guinea-pigs and rabbits, with T. R. as prescribed by Koch, gave unsatisfactory results. The animals were treated for several weeks with doses of from 2 to 5 mg. of T. R., finally increasing to 20 to 30 mg. They were subsequently inoculated with virulent tubercle bacilli and after this some of them were again treated with T. R. The checks were inoculated with virulent tubercle material. The results, however, in all cases were the same, as the treated animals without exception, as well as the checks, died, and autopsy did not reveal any improvement in those treated.

Petruschky endeavored to explain these bad results on the ground that in some cases there had been an acute poisoning by a too rapid injection of T. R., in other cases a chronic poisoning produced by the injection of T. R., extending over a long time.

In some human cases reported by Raw and Abram,⁸ 13 in number, 4 appeared to be cured. These particular ones, however, appeared to be especially favorable for treatment, as the disease was localized and the temperature did not indicate mixed (?) infection. In general, however, they did not consider the results any better than those which would be secured with ordinary treatment. So far as lupus was concerned, the results were very favorable.

Bussenius, reporting the results of cases treated with T. R., comes to about the same conclusions as those already mentioned, namely, that the material is very useful in cases of lupus, in some cases of phthisis which are in good condition and free from fever, but that no case can be positively cured. The length of time during which the treatment is conducted and the size of the dose should be regulated by the reaction of the patient.

It would appear, therefore, that in general T. R. has given no better results in the treatment of experimental animals or of men than those which were secured by the use of the old tuberculin, except perhaps that the secondary symptoms have not been so pronounced.

The differences may perhaps be accounted for by the fact that the T. R. was not uniform in character, and contained varying quantities of the necrotic substances produced by the germ.

Babes and Proca⁹ note that if virulent tubercle bacilli are extracted with the serum from an animal that has been treated for a long time with tubercle cultures, a serum supposed, therefore, to contain antitoxin, the extracted bacilli will be found to have lost much of their virulence for guinea-pigs. The serum has apparently neutralized some of the poisons of the germ. The experiments which we have carried on for several years in endeavoring to produce a serum which might have curative properties for tuberculosis have been based on the idea of securing a serum which might have antitoxic or neutralizing properties, for at least the most dangerous of the poisons produced by the tuberculosis germ. We have injected our serum animals, therefore, with a solution of

the germ poisons as free as possible from the fatty matter of the germ. Only after several years of treatment has the serum from these animals shown some apparent neutralizing and curative properties. The length of time required for the treatment of the animals should be especially noted. An English writer has also recently called attention to this point.

Serum from our laboratory has been used in the Loomis Sanatorium and also been tried elsewhere. The results, reported by Dr. Stubbert, are certainly encouraging. While it is difficult always to say how much of a given improvement is due to climatic conditions, and how much to special treatment, the fact that patients who have been apparently cured with serum seem to remain in better condition than others not so treated would indicate that the use of the serum has been of value. While the serum treatment of tuberculosis must be regarded as in the experimental stage, it is well deserving of further study.

It seems to me, therefore, that the results obtained with the old tuberculin and T. R., and a careful study of the poisons of the tuberculosis germ, indicate that in incipient stages, the disease may perhaps be arrested and immunity secured by injecting the products of the bacilli freed from the necrotic principle, or by treating the patient with a serum which will neutralize the necrotic poison and a subsequent use of the products of the bacilli free from the necrotizing agent. A solution of these poisons free from the necrotic principle may be obtained from *attenuated cultures*.

In any method of treatment it must always be remembered that we can at present hope to neutralize only certain of the poisons of tuberculosis germs, and that the natural immunity and resistance of the animal cell must be relied on for assistance. Therefore the best of nutrition in addition to scientific medication is absolutely necessary.

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USE OF ANTIPNEUMOCOCCUS SERUM.*

BY ALEXANDER LAMBERT, M.D.

NEW YORK CITY.

In presenting a short summary of the clinical use of antipneumococcus serum we will confine ourselves to the consideration of its use in pneumonia, not that its use is necessarily limited to this form of pneumococcus infection, but because the processes which we designate as pneumonia are brought about by the agency of this germ in probably 90 per cent. of all cases of this disease, and also because, although the pneumococcus infection is protean in its manifestations, pneumonia is the form with which we most frequently come in contact. Before considering the clinical use of this serum we can form a better judgment of its value as a remedy if we consider for a moment the problems necessarily involved in its curative action.

Comparing the pneumococcus serum with those of diphtheria and tetanus we find it has a different action in

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the body. These two sera we know to be antitoxic, neutralizing a toxin which is absorbed from a localized focus of infection, from which focus the germs do not spread and produce a general bacterial invasion of the body. This serum is not bactericidal, as the pneumococci will grow abundantly in it. It is bacteriolytic and the experiments of Mennes and Cacciopo best explain its action. These observers found that the serum alone had no effect on virulent cultures of pneumococci. Neither did the leucocytes of non-immune nor those of immune animals take up the germs, but where pneumococcus serum and leucocytes from non-immune or immune animals were mixed with cultures, the leucocytes in a short time became filled with the germs. Previous to the engulfing of the germs by the leucocytes, the germs showed changes in form and staining peculiarities. These same changes in the cocci were present when leucocytes were frozen and then thawed, and thus killed and their protoplasm freed and the mixture added to a mixture of pneumococcus serum and culture; thus showing some form of inhibitory action on the cocci by a combined action of serum and leucocyte protoplasm before the phagocytosis occurred. This serum therefore can not alone, unaided, bring the infective processes to a close.

In pneumonia we usually have an extensive exudate, which is within the lung but is practically outside of the body as far as the tissues themselves are concerned. The blood-vessels surround this exudate, in which are growing myriads of pneumococci, and absorb from them their deleterious products. The pneumococcus, moreover, is pre-eminently a septicemic germ and tends constantly to invade the general circulation and produce a general bacterial infection of the entire body. The struggle, therefore, is for the leucocytes and protective substances in the blood to prevent the spread of the infection into the circulation, and at the same time to bring about a degeneration of the exudate and a cessation of pneumococcal growth. The action of all pneumococcal sera which have so far been developed is to act within the blood-vessels and prevent a general septicemia, having apparently but little influence on the exudate. There is a physical limit to the amount of protection any serum will give, and the physical number of bacteria to be overcome is a serious factor in the infecting process. Any pneumococcus left alive has the power to increase in numbers and generate more and more toxin, thus requiring more and more serum. Any given leucocyte can take up and destroy only a certain number of pneumococci. For instance, if a certain leucocyte can engulf and destroy, say, six to eight germs, and can accommodate its life processes to the sum total of the toxins of these germs, it may because of contact take in say ten or fifteen, the sum total of whose toxins it can not overcome, and is itself killed. These germs then live on and grow again. To use a homely expression, the diner on that occasion then becomes the dinner of the occasion. The pneumococcus does produce a toxin, but the endeavors of all investigators so far have failed to separate it in such manner that it can be used to give a true antitoxic quality to the serum. Until this has been done we can not expect the crisis of pneumonia to occur after the injection of the serum, nor can we expect any greater action than the prevention of death from a general pneumococcus septicemia.

This power of the pneumococcus serum to prevent a general septicemia is very strikingly and conclusively shown in the laboratory experiments. The animals used in the laboratory do not succumb to a typical pneumonia, but die from general septicemia, with, however, pneu-

monic foci in the lungs. The investigators who have recently done most work with the pneumococcus serum are Eyre and Washburn in England, and Pane and his assistants in Italy, and the writer, who has been working constantly on this subject for the last three years in the laboratories of the New York Health Department. Pane now furnishes a serum obtained from turkeys, which he finds will protect against 3000 fatal doses of a very virulent culture. Washburn has confirmed this for Pane's serum, and finds that this serum is active against most pneumococci. Of five specimens of pneumococci it was active against four. Against one it failed to protect. The writer's experience with Pane's serum was unfortun-ate, as the serum failed to show any protective action whatever. This was due probably to the age of the serum, as it had been drawn four months previously and must have deteriorated. The culture used in the writer's experiments had a marked virulence for rabbits, one two hundredth millionth c.c. being surely fatal when injected subcutaneously. This dilution, plated out, showed but two to three germs. Hence the culture seemed to have the power to develop and kill when a single germ was injected. The serum the writer has used clinically was prepared by him from horses, and would invariably protect any rabbit when .1 c.c. was mixed with .001 c.c. of culture and injected subcutaneously. Using Pane's method, 1 c.c. of the serum injected intravenously simultaneously with, or twenty minutes after subcutaneous injection of the culture, would protect against .5 c.c. of the culture, that is, according to Pane, against one hundred million fatal doses. However, that is but juggling with figures and sounds startling, while it does not convey the real truth. In measuring diphtheria or tetanus toxins you have a substance in solution evenly distributed throughout the whole solution, and any definite amount means a fairly definite amount of substance which will not increase in the body. But in dealing with living germs you have particles in suspension, not in solution, and each particle is a living organism with power to grow and to multiply. As long as any definite dose of culture, which always kills in a certain time, is taken, various amounts of serum can be gauged and any variations in the strength of different sera measured with sufficient accuracy. The relative strength in animals and the necessary amounts for therapeutic use can be accurately calculated. The serum in the laboratory would invariably protect an animal against a subsequent dose of culture not too overwhelmingly large. But if the pneumococci were already in the blood in sufficiently large numbers to be proven by cultures, even large doses of the serum given for several consecutive days would not save the animal. It would prolong life but not save it.

The limits of this paper forbid any further discussion of the facts leading up to the clinical use of pneumococcus serum, and we will now consider the various sera used in pneumonia, and the results obtained. Lara has used both rabbit and dog serum in 10 cases of pneumonia, and obtained recovery in all. He noticed, after the use of dog serum, a nervous excitement, and after the use of rabbit serum, general agitation and a temporary aggravation of the disease. In 7 cases there was a gradual reduction of the temperature, in 3, none. The crisis, however, occurred on the third to the fifth day. Bozzolo used rabbit serum in 5 cases with 4 recoveries and 1 death. He obtained a rapid fall of temperature in all. De Rienzi has also used rabbit serum in 10 cases, and although all were severe, all recovered. Wiesbecker has used human serum obtained from patients convalescing from pneumonia, and he claims to have obtained a

striking improvement in the general symptoms, but no crisis occurred.

Pane's turkey serum has been used extensively in Italy, and many physicians have reported favorable results. The temperature has been lowered by it, the pulse improved and the actual number of deaths has been lower than these same physicians were able to obtain by any previous method of treatment. Massalongo, for instance, is very positive that Pane's serum prevents the extension of the pneumonic process and assists resolution. He tried it in 7 cases and states that in alcoholic patients and those suffering from nephritis and endarteritis, the serum will save many patients who otherwise would die. Bordoni used the serum in an epidemic of pneumonia, and says he was able to obtain a lower death-rate than he previously had been able to do. He believes that the serum acts more on the general condition than on the local process. De Rienzi has injected 200 c.c. in twenty-four hours, with no ill effect; the usual dose has been 10 to 20 c.c. twice a day. In 32 cases he reports 29 recoveries and 3 deaths. In 7 the serum has been injected intravenously. Dr. Antonio Fanoni, of this city, last August reported (*N. Y. Med. Jour.*) 6 cases of pneumonia treated with Pane's serum. He obtained 5 recoveries and 1 death. The improvement noticed was in the general condition and feeling of the patients, a lowering of the temperature and an improvement of the pulse. The disease ran the usual course of six to ten days, and the temperature came down by lysis. Dr. Fanoni firmly believes in the efficacy of the serum and that the patients showed distinct improvement after its use. The patient who died recovered from her pneumonia but died of a complicating pericarditis.

Many others might be quoted in Italy, who have used the serum, but this must suffice as giving the general consensus of opinion. Those who have expressed opinions there against it seem to have done so on theoretic grounds, or have used it in only minute doses and have not given it a fair trial.

The writer's own experience with his own serum has been confined to 12 cases of pneumonia, with 9 recoveries and 3 deaths. Summarizing the impressions obtained, the serum seemed to cause a slight reduction of temperature and an improvement in the pulse. It did not cause a crisis in any case, nor seem to cut short the pneumonic processes. It did cause the disappearance of the pneumococci from the general circulation in one patient, although it did not prevent the development of an empyema, and the patient made a good recovery. Another patient with double lower pneumonia complicated with a furious delirium tremens recovered, relapsed with a double upper and right middle lobe pneumonia and recovered. The serum in this patient seemed to be of decided benefit, and the patient showed improvement after its use. In two of the patients who died, both alcoholics, the serum had absolutely no effect. The leucocytosis was not influenced by the serum except in one patient, in whom it was increased by 10,000 an hour after the injection. It had fallen again by the next day. I have not persisted in the use of the serum because I could not see that it shortened the duration of the disease nor held in check the pneumonic processes within the lungs. In one or two patients I honestly believe it did marked good; in others it was useless.

The pneumonia serum at present does not seem to shorten the duration of the disease, nor cut short the pneumonic processes in the lungs, nor bring about the desired "crisis." But it does seem, in certain cases, to

prevent a general pneumococcus septicemia, and thus in these cases it may save life.

There are problems in obtaining pneumococcus serum which at present baffle and puzzle us, and whether these can be solved can not be answered yet. This is no cause for discouragement, but simply one for continued work. Until we can obtain a serum which will distinctly cut short the disease processes, the antipneumococcus will be limited in its use and its usefulness.

125 East Thirty-sixth Street.

USE OF DIPHTHERIA ANTITOXIN IN THE TREATMENT AND PREVENTION OF DIPHTHERIA.*

BY WILLIAM H. PARK, M.D.
NEW YORK CITY.

The final test of the value of diphtheria antitoxin in diphtheria is the results derived from its use. The difficulty, however, of knowing what would have been the course of a case, if antitoxin had not been used or had been used, is so great that it is well to gather proofs from other possible sources, as well as from personal experience. Therefore, I will consider certain facts derived from laboratory experience and from statistics.

Is the diphtheria bacillus capable of growing in the human throat and there producing poisons, which when absorbed and brought in contact with the cells of the body excite processes which we call diphtheria? The truth of this is established. Personally I know of three instances in which the virulent bacillus we use in our laboratory was sucked into the mouth by mistake. In two severe diphtheria developed within sixty hours, and in the third no harm resulted.

Almost countless investigations have shown that in undoubted cases of what we would call real diphtheria, the diphtheria bacilli are present in the local lesions and can be detected there when properly sought. I believe that all who know about this subject agree with this.

Are there any diseases which simulate diphtheria in which other micro-organisms than the diphtheria bacilli are the exciting factors? Certainly there are diseases due to other bacteria, whose local lesions or general symptoms closely resemble those of certain types of true diphtheria. By this I do not mean that these other diseases even have all the characteristics of well-developed, true diphtheria, nor that one who is experienced can not tell in most instances clinically whether a well-developed case is or is not due to the diphtheria bacillus, but I mean there are cases of "croup" or "tonsillitis" in the exudate of which no man can say, from merely looking at it, what bacteria are growing and producing their poisons. This is true of the diseases of other regions. Very often it is impossible for a physician to say whether a pneumonia is due to the pneumococcus or to the influenza bacillus. Or again, there are drug and serum rashes which can not be differentiated from atypical cases of scarlet fever. No one would say that a serum rash and a scarlatina rash were due to the same infection, or that the after-effects or the danger of communication were in both equal.

Perhaps some are thinking: "What difference does it make, anyway, so far as treatment goes, what bacteria are the exciting factor?" It makes every difference, for we are here dealing with bacteriologic remedies, and the different antitoxins act only, or at least chiefly, on one bacterial poison. Thus diphtheria antitoxin completely

*Read in a symposium on Serumtherapy, before the New York County Medical Association.

neutralizes the poisons produced by diphtheria bacilli, and so far as we know those only.

Let us dwell a moment on the action of diphtheria antitoxin on the diphtheria toxins. When a minute quantity of diphtheria antitoxin is mixed with a large amount of toxin, it neutralizes the poison completely in about twenty minutes, so that the mixture, when injected in an animal, is an inert substance. Recent investigation seems to prove that the antitoxin acts in the body also on the diphtheria poison. We see, therefore, why we have to inject the antitoxin early in the disease, for its action is to render harmless the toxin circulation in the blood, but not to cure nor even help the injuries already suffered by the cells.

One other bacteriologic fact must be noted before considering the practical results of the use of antitoxin. The body at the same time may be invaded by more than one micro-organism. Clinically, we all recognize that we may have a scarlet fever and a diphtheria together. Less clearly, probably, we recognize that an otitis media, a pneumonia or a septicemia occurring in the course of diphtheria is usually really just as much, as in the example just given, the addition of one or more diseases to one already existing, i. e., in bacteriologic language, an invasion of the body by more than one variety of bacteria at the same time. Now, against the poisons of these other micro-organisms the diphtheria antitoxin is helpless. This is another reason for using it early, as these secondary pneumonias and septicemias come as a rule only when the diphtheria poisons have paved the way by their cell injuries. Of those who feel that the advocates of the diphtheria antitoxin treatment mislead themselves by their desires, I would ask why it should be that we believe so strongly in the value of diphtheria antitoxin and yet at the same time believe that no other protective serum has shown great value? Is it not because the evidence of years in diphtheria is for the serum treatment, while in other diseases the evidence is for the serum being of either little or no appreciable value. In diphtheria everything is favorable, for we have a strong antitoxin and we can diagnose the disease before constitutional poisoning has developed. In tetanus we have an equally strong antitoxin, though we can not make our diagnosis on the appearance of the wound, but only after development of general symptoms due to the cell poisoning.

Let us now turn to a few statistics, which I shall give as fairly as I can:

TOTAL NUMBER OF DEATHS FROM DIPHTHERIA FOR THE PAST 20 YEARS IN NEW YORK CITY (MANHATTAN AND BRONX BOROUGHS).

A study of diphtheria statistics in New York will show that the actual number of deaths from diphtheria before 1895 did not vary much for a number of years. The influence of the increase in population was counteracted by our better knowledge of how to handle the disease. About every sixth year the deaths would mount to 3000, and then diminish gradually to about 2000. Thus for the fifteen years previous to the introduction of the use of antitoxin, the average number of deaths per year from diphtheria and croup was 2373; highest number 3287 (1881), lowest 1653 (1883). In the year previous to the beginning of the use of antitoxin (1894) the deaths were 2870. In the past four years, during which antitoxin has been quite generally used, the deaths have averaged 1341 a year, more than 1000 less than the average of the previous fifteen years. During the past two years the average deaths number 1005, or 600 less than the smallest number in any year since 1880.

In Boston, Dr. McCullum has informed me, previous

to 1894 there died yearly, from diphtheria, from 15 to 18 persons in every 10,000 inhabitants. In the past four years the average number has been 7, and in the past two years less than 4 (3.6).

The great reduction in the number of deaths from diphtheria in almost every place in the world since the general introduction of the antitoxin treatment may not be entirely due to the effects of the diphtheria antitoxin, but certainly the fact is so striking that it rightly tends to make us believe that a large portion at least of this saving of life is due to its use.

Let us turn a moment now to consider the results in cases actually treated with antitoxin. We will first take up cases of diphtheria among the poor of New York, injected with free antitoxin by department of health inspectors and by physicians, from Jan. 1, 1898, to Jan. 1, 1900. The total number amounted to 2528, of which 302 died, a mortality of 11.9 per cent. All of these had diphtheria (clinically) and all showed diphtheria bacilli in the cultures made. Considering the nature of the cases I believe that without antitoxin the mortality would have been at least doubled. Of these 2528 cases, there were 802 in which the larynx was affected; 185 died, a mortality of 23 per cent.; 191 were intubated and 69 of these died, a mortality of 36.1 per cent., certainly not a bad result when you consider the conditions; 70 per cent. of the 2528 patients were under 5 years of age.

One word as to the important point of the day of disease on which treatment was begun: Of 319 injected on the first day, 13 died, a mortality of 4 per cent.; 850 were injected on the second day, and 57 died, a mortality of 6.7 per cent.; 573 were injected on the third day, with a mortality of 12 per cent. The value of the early injection is apparent. These figures, as before stated, include all cases injected; some died within a few hours of being seen, the antitoxin only being administered because the physicians desired it. Many had complicating diseases, e. g., 25 had scarlet fever.

IMMUNIZATION WITH DIPHTHERIA ANTITOXIN.

The department of health inspectors immunized, from Jan. 1, 1895, to Jan. 1, 1900, 6506 cases, of which 28 developed evidences of diphtheria within twenty-four hours; all recovered. After twenty-four hours and within thirty days, 27 cases of uncomplicated diphtheria developed, and all these recovered. The only one of these patients dying within one month was one with scarlet fever and diphtheria, who died on the second day of illness. We have, therefore, among 6506 persons, mostly children and mostly exposed directly to diphtheria, no fatal cases of diphtheria developing within thirty days, with the exception of the one having scarlet fever.

About 3 per cent. of the persons injected showed rashes, and about .5 of 1 per cent. more or less febrile disturbance. In several the symptoms were quite distressing for from twenty-four to seventy-two hours, but in no case, however, did any permanent injury, so far as we could detect, result. For the use of the above statistics I wish to thank Drs. Biggs and Billings.

The high mortality at the Willard Parker Hospital is due to the condition of the children sent there. A great many come there late in the disease, when septic or exhausted from prolonged obstruction to their breathing. These are unsuitable for any treatment, especially for that of antitoxin, which must be given early to exert its beneficial effects.

In Boston, where the hospital is centrally situated, instead of regarding it as a last resort the people endeavor to gain entrance to it, so that last year more than one-

half of all the cases were treated there. For the past two years their mortality percentage in the hospital has only been 12.5 per cent., nearly as good as that obtained among the poor in their homes by our own inspectors.

STATISTICS OF DIPHTHERIA WARDS OF WILLARD PARKER HOSPITAL.

Year.	ALL CASES ADMITTED.			INTUBATION CASES ONLY.		
	Number.	Died.	Mortality.	Number.	Died.	Mortality, Per cent.
ANTITOXIN NOT USED.						
1898	343	108	31.48			
1894	699	204	29.33	47	40	85
ANTITOXIN USED.						
1895	778	180	24.42	154	114	74
1896	823	205	24.91	143	101	71
1897	844	214	25.36	130	92	70
1898	593	109	18.38	115	46	40
1899	758	192	24.24	150	90	60
1900, Jan. and Feb.				45	25	55

Average mortality before use of antitoxin, 30.41 per cent.

Average mortality since use of antitoxin, 24.46 per cent.

Mortality six months previous to use of antitoxin in intubation, 85 per cent.; for last two years, 52 per cent.

A very interesting test of the value of antitoxin in diphtheria, even under the conditions met with at the Willard Parker Hospital, was tried a year ago last summer. For six weeks only every alternate case received antitoxin. Dr. Winters looked after the treatment of those not receiving it, and Dr. Berg, I believe, those receiving it. I carefully watched both series of cases, and the difference was very marked in favor of the antitoxin series. Even Dr. Winters did not ask to have the test prolonged. Before 1892 no culture examinations were made and all suspected cases were admitted. In 1892 culture examinations were made after admission to the hospital, but all cases were kept. Thus, in 1892, 492 were admitted, and 113 died, a mortality of only 23 per cent. Of those containing diphtheria bacilli the mortality was, however, 34 per cent., the others having a mortality of only 3 per cent. In 1891 the mortality in all cases of suspected diphtheria was 26.32 per cent.

ADMINISTRATION OF ANTITOXIN IN DIPHTHERIA.

The serum should be clean looking and sterile and not over six months old. It may or may not have in it a small percentage of trikresol or carbolic acid. Our own has no antiseptic added. Diphtheria antitoxin is measured in units, not grains. A unit is the amount of antitoxin which protects a guinea-pig from 100 fatal doses of toxin; all the physician needs to remember is the number of units to employ.

Antitoxin is put up in different grades, the lower grade having 100-300 units in each c.c. of serum, the higher having 400-600 units. Other things being equal, the higher grades are better and more convenient than the lower ones. In the laboratories of the New York Health Department we have, until recently, striven for a serum which had the greatest possible amount of antitoxin in each c.c. In the future our effort will be to get the highest grades of serum which will not produce rashes, for we find that the serum extracted from the blood from different horses, and even from the blood of the same horse, at different times, varies not only in the amount of antitoxin it contains, but also in the amount of substances which cause rashes, fever, etc. A serum should therefore first be chosen because it has proved not to be irritating, and then only because of its grade. Samples of all bleedings will be used first in a few mild cases and then only those serums which pass this test without giving rashes will be used. In the course of a few months we hope that we will have no serum at the stations, or in

use by our inspectors, which will produce rashes or other deleterious results in any except a very few extremely susceptible persons, and even in these that no serious effect will be noticed.

AMOUNT OF ANTITOXIN TO BE ADMINISTERED AND THE NUMBER OF INJECTIONS IN A SINGLE CASE.

There is still some difference of opinion among competent observers as to this. Our practice is the following: Patients seen early, in whom the onset is mild, 1000 units; those seen early in whom the onset is severe, either as shown by local signs such as swelling, hyperemia or, extent of exudate or by constitutional symptoms, 2000-4000 units, according to severity; those seen after the disease has progressed so far that its local extent can be guessed, mild cases, 1000-2000 units according to size, moderate ones 2000-3000 units. Severe, showing necrosis, swollen glands, laryngeal stenosis, receive 3000-4000 units.

The effects to be expected are that the local disease should not extend, that the swelling and hyperemia should lessen and the constitutional symptoms abate. If these changes have not begun to clearly manifest themselves twelve hours after the injection it should be repeated. If in twelve hours more no decided improvement occurs, which rarely happens excepting in cases already very severe when first injected, still a third dose should be given; some even advise a fourth. The extent of the disease rather than the size of the patient guides the dosage; still, size should be considered somewhat, and I should not advise, in a child under 1 year, more than 3000 units at a single injection, and under 6 months, not over 2000. If the cases are severe, injections should be repeated just as in larger children. In adults attacked with malignant diphtheria, the largest doses mentioned should be used and fearlessly repeated. With the serums as now used, both ours and those of other manufacturers, these large doses have produced, in a small percentage, very disagreeable, but in so far as I know no dangerous, results, namely, rashes, fever and, in a few, joint inflammation. In the hospital, in some of the severe laryngeal cases the course of the disease has undoubtedly been unfavorably influenced by the development of rashes, fever, desquamation, etc. Most of these, the majority seeing the cases, believe to have been a complicating scarlet fever. They looked in every way like it. Others believe that it was antitoxin.

Whether some samples of serum may or may not cause, along with their beneficial effects, really serious deleterious effects is a question; still, we know that many samples of serum produce practically no disagreeable results. I have seen 60 patients treated with but one rash resulting. I have also seen twenty treated with ten rashes developing. To select good serum and throw away the irritating is only a matter of expense. At present I see no other way of eliminating rashes and other deleterious effects from substances in some sera.

In closing let me simply say that from my own almost constant observation of diphtheria during the past eight years, that is both before and since the introduction of antitoxin, I believe that the early use of antitoxin does great good in diphtheria, and that it should be used immediately in all patients where the onset is active without waiting for cultures. In mild cases already fully developed or on the mend when first seen the use of antitoxin is a matter of minor importance, as they will do well anyway. Let me also recommend its use in all suitable cases for immunization. It gives us a guarantee of at least two weeks of safety, and this period can be lengthened at will by repeating the dose.

REMARKS ON THE BACTERIAL THERAPY OF YELLOW FEVER.*

BY CHARLES B. FITZPATRICK, M.D.
NEW YORK CITY.

Dr. A. H. Doty, health officer, who was to have addressed you to-night, has asked me to take his place and say a few words in a non-technical way on the general subject of the bacterial therapy of yellow fever. This perhaps will be best accomplished by taking a few extracts from a report which I am preparing on the bacterial treatment of yellow fever, and adding thereto the observations of other investigators.

Our experience with the bacterial therapy of yellow fever embraces: 1, the use of the blood-serum prepared from the bacillus *icteroides* of Sanarelli; 2, the use of the toxin of the bacillus *icteroides* employed as a vaccination fluid, and 3, the use of a prophylactic fluid prepared, according to Haffkine's methods, from this bacillus and the colon bacterium found at autopsy in the liver and heart blood of yellow fever patients.

The serum prepared from the bacillus *icteroides* was used on 4 patients with yellow fever at the Swinburne Island Hospital, 8 at Vera Cruz and 1 at Havana. The Vera Cruz cases were diagnosed and injected by Dr. Barnard, of Charleston. The results of the observations on the first case—that of Mr. Lackey—appeared to indicate a curative effect due to the serum, but the results as a whole indicate that the blood-serum prepared from the bacillus *icteroides* does not cure nor modify the course of the disease in any way. The above cases were selected ones, i. e., not too far advanced. The serum employed was prepared by me and 5 to 10 c.c. were required to cure a guinea-pig, weighing 250 gms., which had been injected with a fatal dose of the culture. This was the strength of the serum obtained by Sanarelli and employed by him.

Sanarelli¹ reported 22 cases of yellow fever treated by his serum, with 6 deaths, a mortality of 27 per cent. He claims that these results prove his serum to be curative. He also reports having used it with success in immunizing the inmates of a prison.

Dr. Archinard, of New Orleans, treated 11 patients with Sanarelli's serum, and could trace no modification nor cure of the disease due to the serum. The serum employed by Dr. Archinard was imported from South America, where it had been prepared under Sanarelli's direction. Dr. Wasdin, of the United States Marine-Hospital Service, also used the imported serum on 3 patients and noted no curative effects. I have endeavored to make the serum stronger, but have not succeeded. Professor Lutz, of Santos, Brazil, also states that the serum is not effective. The above results do not agree with Sanarelli's and indicate that the serum of the bacillus *icteroides* is not curative in man.

Dr. B. Baker, acting under instructions from the New York health officer's department, injected a number of yellow fever convalescents at Vera Cruz with 1 c.c. of the toxin of the bacillus *icteroides* (San.). The reaction caused by this injection in 6 cases showed Faget's pulse and temperature, namely, a rising temperature with a falling pulse. This pulse and temperature is held by Faget and others to be diagnostic of yellow fever. This observation is very interesting in its relation to the bacillus *icteroides* being the specific cause of yellow fever, but is by no means conclusive. If the bacillus *icteroides* be the specific cause of yellow fever, this observation

tends to show that the acquired immunity of the disease is only a partial immunity, i. e., it may protect against the infection, but does not protect against the toxin.

The use of the prophylactic fluid prepared according to Haffkine's methods, from the bacillus *icteroides* and the colon bacterium obtained from the blood of yellow fever patients, has given favorable results in animals but has not as yet been employed on man.

Dr. Agramonte, of the U. S. Army, has recently tried serum obtained from the veins of yellow fever convalescents on 4 patients with yellow fever, on or before the fifth day of the disease, and states that he succeeded in modifying the course. This method has been used before and, apart from the difficulty of obtaining enough serum, has not given very promising results.

To summarize: The serumtherapy of yellow fever is still in the stage of investigation and does not appear to warrant any conclusions other than that the blood-serum of the bacillus *icteroides* does not cure nor modify the disease, and that further investigation is necessary.

Criminal Court Building.

ANTIRABIC SERUM IN THERAPY.*

BY ROBERT J. WILSON M.D.
NEW YORK CITY.

Up to this date attempts to inaugurate a serum treatment for rabies have not, so far as we know, proved successful. Tizzoni and Centanni, following in the lead of Vali, succeeded in immunizing animals with a virus attenuated by peptonization, and from such immunized animals obtained a serum for which they claimed both a preventive and a curative value. Briefly, their method was to give the animal to be immunized seventeen injections in a period of twenty days, each injection representing .25 gram of virus for every kilogram of the weight of the animal being immunized. After twenty-five days the animal was bled and the serum collected in the usual way. The immunizing dose of serum was represented by one part of serum for every 25,000 parts of body weight.

The report of their work showed a high degree of protective action in the serum. The method of inoculation of their test animals, however, is open to criticism and can not fail to cast a doubt in the mind of the reader as to whether the protective effect of the serum was rather apparent than real. This doubt is emphasized when we find that the serum is to be used only in conjunction with the already recognized effective preventive inoculations. There is a class of cases, however, where the serum, although of only doubtful value, might be used, that is, in cases where a long time has elapsed between the time of infection and the commencement of treatment.

As is well known, the Pasteur method of preventive inoculations is wholly without effect after the advent of symptoms, and it is in just such cases as these that the serum, if it has any value at all, might do good. For if it has the curative action claimed for it, even in a low degree, it might retard the period of invasion of the disease and thus allow the preventive inoculations to become effective.

The serum, unlike the attenuated virus, which depends on certain changes in the organism after inoculation to procure immunization, gives its protective action immediately on administration.

352 West 117th Street.

*Read in a symposium on Serumtherapy, before the New York County Medical Association.

1. Annales de l'Institut Pasteur, May, 1898.

*Read in a symposium on Serumtherapy, before the New York County Medical Association.

ANTISTREPTOCOCCUS SERUM.*

BY HOWARD LILIENTHAL, M.D.

NEW YORK CITY.

Three years ago I reported my impressions of the efficacy of antistreptococcus serum based on experience with 5 or 6 cases. In some of these the presence of the streptococci in the wound-discharges had been demonstrated, and in others staphylococci had been found both in the discharges and in the blood on culture. At that time my conclusion was that the serum rarely if ever did harm, and that in desperate cases the patient should be given the benefit of this treatment in connection with other and better known therapeutic measures. Further acquaintance with the subject has not caused me to modify the views I then held, though the percentage of recoveries due, apparently, to the employment of the remedy has not been encouraging.

Several cases in which there were clinical symptoms of the severest type of sepsis seemed to yield to the serum treatment instituted before it was possible to make an accurate diagnosis; but they one and all turned out to be either staphylococcus infections, or local streptococcus infections with constitutional symptoms but with no bacteria in the blood. No patient whom I have observed has ever recovered when streptococci have been clearly demonstrated in the blood stream. Recovery, however, is by no means uncommon when staphylococci—even in the blood—are the offending germs.

In my earlier cases the dose of the serum was, probably, far too small. If the fluid as usually prepared is to have appreciable effects, not less than 20 c.c. at a time should be given, while the toxic dose is, so far as I am aware, unknown.

Troublesome urticaria has a number of times followed the use of the serum, and has been regarded by me as one of its untoward effects. Abscesses containing streptococci appeared at the site of the injections in one case where the germs had been previously demonstrated by blood culture. The serum in this instance was obtained from the laboratory of the New York Board of Health, where it had been carefully tested and proved sterile. The injections, perhaps acting as traumatisms, seemed to cause places of lessened resistance which were directly attacked by the bacteria from the blood. The abscesses became very large before they caused noticeable local symptoms, though they were diffuse and even phlegmonous in character. The patient finally died. The case was one of general sepsis following amygdalitis with secondary cervical abscess. From two to three doses of 20 to 40 c.c. were given daily for eight days. The only fairly constant effect of each dose seemed to be a temporary lessening of the delirium.

I would outline the indications for the use of the antistreptococcus serum in the following manner:

Whenever there is severe sepsis with a visible cause, the first thing to do is to remove or thoroughly drain the contaminating focus or foci. The sediment of the urine, carefully drawn by catheter, should be stained for bacteria and examined. The discharge from the wound should be smeared on a slide, stained and examined with the microscope. Cultures should be made from the wound-discharges and from the blood.

If the urinary sediment contains streptococci the prognosis is extremely bad and treatment by the serum should at once be instituted in addition to energetic efforts by other means in the direction of general and local antiseptics.

If the patient's condition is extremely serious and streptococci are found in the smear from the wound the serum should be used.

If streptococci are found in the wound-discharge but not in the urine, and if the general condition in spite of elevation of pulse and temperature is not decidedly alarming, it is better to await the result of the blood-culture test, meanwhile treating the patient on general principles.

If no streptococci are found by these examinations, and the patient's condition is not truly desperate, the result of the cultures must be awaited, resorting to the serum treatment if the disease becomes alarming in the meantime. Blood culture is sometimes annoyingly slow, a negative examination perhaps becoming positive at the expiration of from three to seven days.

As a final word it must be admitted that the efficacy of the remedy as now prepared has not been proved.

Treatment by the antistreptococcus serum is most strongly indicated in the presence of systemic infection by living streptococci, but the prognosis still remains bad. Antistreptococcus serum may be used in any case of grave sepsis when the exact bacteriologic diagnosis is in doubt, but never to the exclusion of other rational therapy.

679 Madison Avenue.

THE MIXED TOXINS OF ERYSIPELAS AND BACILLUS PRODIGIOSUS IN THE TREATMENT OF SARCOMA.

BY WILLIAM B. COLEY, M.D.

ATTENDING SURGEON TO THE GENERAL MEMORIAL HOSPITAL,
(NEW YORK CANCER.)
NEW YORK CITY.

In a paper before the Academy of Medicine March 1, 1900, I gave a brief résumé of the cases of sarcoma thus far treated by myself with injections of mixed toxins. In the few minutes allotted to me this evening it will scarcely be possible to do more than give a short abstract of these results. My recent experience has given me no reason to change the conclusions already expressed in earlier papers; I still find the round-celled sarcoma is much less susceptible to the inhibitory action of the toxins than the spindle-celled, and the melanotic is even less affected. In regard to the method of preparing the toxins, the technique and administration, I have nothing new to add. The preparation which I still believe to be the best is the mixed unfiltered toxins of erysipelas and bacillus prodigiosus made from cultures grown together in the same bouillon and sterilized by heating to 58 C. In children and in patients much reduced in strength it is safer to use the filtered toxins. The toxins, to be of value, must be made from very virulent cultures, the virulence being kept up by frequently passing the cultures through rabbits.

The dose depends very largely on the vascularity of the tumor and the condition of the patient. The initial dose should seldom be larger than 1½ minim. and the injection when possible should be made directly into the tumor itself. Strict aseptic precautions should be taken, since the administration of the toxins increases the liability to infection from other organisms if pathogenic germs are present.

In regard to the duration of the treatment, fortunately we are able to in most cases tell within three or four weeks whether or not the toxins are likely to prove beneficial. If no improvement is noted at the end of this

*Read in a symposium on Serumtherapy, before the New York County Medical Association.

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time, it is seldom worth while to continue the injections. In most of the successful cases marked improvement has occurred within a week after the first injection. If improvement occurs, the toxins should be continued until the tumor has either entirely disappeared or until it has become evident that the controlling influence of the toxins has been lost, as shown by further increase in the size of the tumor. The question, how long toxins can be safely given is an important one. That they may be given for very long periods without harm to the patient, we may consider now proved. In one patient they were given for $2\frac{1}{2}$ years, two or three times a week; in another, with eight-times-recurring spindle-celled sarcoma of the chest wall, toxins were administered with occasional intervals of rest, for three years. It was held in check by small doses. The patient, a well-known physician, is at present in perfect health, five and a half years from the beginning and two years from the cessation of the treatment.

In order to properly explain the curative action of the erysipelas and bacillus prodigioidus toxins on sarcoma, I am more than ever convinced that this action can be explained only on the theory that sarcoma is of micro-parasitic and infectious origin. Furthermore, I believe that the action of the toxins furnishes additional evidence in support of the infectious origin of cancer. In view of the steady accumulation of successful cases treated by the toxins, the earlier attempts to explain the disappearance of these tumors on the theory of mistaken diagnosis no longer demands consideration. If these cases are to be excluded, the same reasoning would demand excluding successful cases following operation. Those treated with toxins have been submitted to far more severe tests than usually applied to operative cases, the clinical and microscopic diagnosis having been confirmed by a number of surgeons and pathologists.

After an experience of upward of eight years with this method of treatment, the question may be fairly asked: Has this method any permanent value and, if so, what are its limitations and dangers? The question of the permanent value can best be answered by giving a résumé of the final results of the cases thus far treated. My time will permit only a very brief abstract of these results. I would like, however, to call your attention to one patient whom I had the pleasure of showing at the meeting of the Academy, March 1, of this year, in perfect health more than seven years after treatment. This patient was referred to me in January, 1893, by Dr. L. Bolton Bangs, with a very large spindle-celled sarcoma of the abdominal wall and pelvis. A portion of the tumor was removed for examination and the diagnosis of spindle-celled sarcoma made by Dr. H. T. Brooks of the Post-Graduate Hospital. The tumor was of large size, extending nearly to the umbilicus and growing rapidly. The patient's condition was regarded as hopeless. I began treatment with the mixed toxins, Jan. 3, 1893, at the New York Cancer Hospital. Injections were made directly into the tumor. Treatment, with occasional intervals of rest, was continued nearly six months, at the end of which time the tumor had disappeared. The boy has remained in perfect health up to the present time, and is now a vigorous man weighing 160 pounds.

In January, this year, I presented before the Surgical Section of the Academy the patient who, in August, 1897, was treated with toxins for a recurring, rapidly growing, and totally inoperable spindle-celled sarcoma of the parotid, with secondary involvement of the glands of the neck. The tumor entirely disappeared, and the patient is in perfect health $2\frac{1}{2}$ years after treatment.

A very large spindle-celled sarcoma of the abdominal wall in which the diagnosis was confirmed by Dr. Whitney, pathologist to the Massachusetts General Hospital, and considered inoperable and hopeless by Dr. Maurice H. Richardson, was treated in October, 1894, with the result that the tumor entirely disappeared. The patient remains well $5\frac{1}{2}$ years after treatment.

These patients, though not more important nor more interesting than many of the others, are simply given as types of those in whom toxins have been successfully used. Those who have been traced to the final results now prove that the action of the toxins may be properly called curative. Many of these have already passed the period of time which would be regarded as sufficient to establish them as cures after operative procedures. Of cases treated personally, 13 have passed the 3-year limit. It is but fair to state that 1 of these had a recurrence $3\frac{1}{4}$ years after treatment and died six months later. One is now well seven years after treatment; 3 are well six years; 2, five years; 7, three to five years; 4, two to three years; 3, one to two years; while 3 others have been observed less than one year. Three in whom toxins caused the disappearance of the tumor were followed by a recurrence in varying periods of seven months in 1; two years in 1; and $3\frac{1}{4}$ years in 1. These in a way are of the greatest importance, inasmuch as they establish the correctness of the diagnosis beyond a doubt.

I might mention two other successful cases in which the treatment, though begun in one case, personally, and directed in the other, was carried out by other surgeons. One of these, a spindle-celled sarcoma of the palate and fauces, very extensive and totally inoperable, is well six years after treatment; and the other, an inoperable spindle-celled sarcoma of the breast, in which the diagnosis was made by microscopic examination and confirmed by Dr. W. H. Welch of the Johns Hopkins Hospital, is now in perfect health four years after treatment.

In regard to the type of tumor in which success is most likely to attend the treatment, 11 of my own successful cases were of the spindle-celled variety, and but 4 round-celled. Of others, 3 were mixed-celled sarcoma; in 4 the diagnosis of sarcoma rested on clinical signs aided by the history of rapid recurrences in many cases.

To estimate the success very roughly by the percentage, in about 50 per cent. of the spindle-celled sarcoma, the tumor entirely disappeared, and in nearly all of the mixed variety improvement was noted, while in round-celled sarcoma only about 5 per cent. were successful.

In a former paper¹ I gave a report of 35 cases of inoperable sarcoma treated by other surgeons by the same method, with complete or partial success. In 26 the tumor entirely disappeared, and in 14 the patients were well from two to four years after treatment. It is interesting to note that in 10 of these cases the sarcoma was spindle-celled, and in 10 round-celled. Since the publication of this paper the number of successful cases in the hands of other men has considerably increased.

I believe that with the observance of proper aseptic precautions the risks are *nil*. Including early experimental cases of inoperable carcinoma, I have now used the toxins in 230 cases, with but two deaths, both of which occurred more than four years ago. One of the patients was so nearly moribund that the toxins, although given in very minute doses, should never have been used at all.

In estimating the percentage of cures, or rather, in

¹ THE JOURNAL, July, 1898.

estimating the value of the method by the percentage of cures, it is well to remember that the treatment is advised only in cases in which there is no hope of cure by operation, in other words in entirely hopeless ones. In a number of cases in which the only operation to be considered was amputation, the arm or leg has been saved for the patient by the use of the toxins. In my own series, in a very large number of cases treatment was given only after the disease had reached such an advanced stage that there was practically no hope of more than temporary improvement. The fact that even one case of inoperable sarcoma has been cured would seem entirely sufficient to offset the disappointment of a hundred failures. If instead of saving only 1 per cent. there is a probability of saving more than 12 per cent. of these otherwise hopeless ones, we certainly have sufficient encouragement to continue the method. It is but a short time since 12 per cent. of success after operation for cancer of the breast was regarded as a brilliant result. I believe a most promising field, and one that to the present time has been little developed, is the use of the toxins in small and safe doses directly after operation, as a prophylaxis against future recurrence.

DOSAGE IN CHLOROFORM ANESTHESIA.*

BY A. S. V. MANSFELDE, M.D.

ASHLAND, NEB.

By way of introduction, I quote from one of our honored confrères, a truism, which can not be too strongly emphasized:

"The greatest among us does not lower his dignity when he places the patient on the confines of death, safely holds him there, dead to pain and consciousness, whilst the surgeon wields his knife, and then restores him to life." (R. M. Stone.)

As we go along, it will become convincingly clear to you that "the greatest among us" should approach the responsibility of administering an anesthetic with fear and trembling; he will even insist that his knowledge is far from being comprehensive enough to grasp all the factors concerned in this grave undertaking. To him this is not simply a question of the cessation of respiration, or of the heart's action, or which shall first succumb. He will crave the need of a profound knowledge of what takes place, step by step, to the end of the operation, or the supervention of death. A correct interpretation of what transpires; a knowledge of the best means of preventing what can be avoided, and a reduction to the minimum of danger of what can not be prevented or foreseen, are desiderata of the highest importance.

Anesthesia simply means a stage in the administration of the agent employed, lying on the borderland of death, and so close to it that the slightest mistake on the part of the anesthetist will land his charge on the shores whence no traveler ever returns. Such dangerous navigation certainly requires a skill which no other work demands. No one should give, nor attempt to administer, an anesthetic, who has not acquired the skill by the most careful study of the means employed, their mode of action, their dangers, their avoidance, if possible, and their prompt removal if they occur. He should also possess a familiarity with all the phases of the art, by a most painstaking apprenticeship; in other words, the anesthetist should be a specialist of the highest attainments which scientific medicine can confer.

*A Lecture delivered, by invitation, to the Faculty and Students of the Omaha Medical College, and by request repeated before the Omaha Medical Society, Dec. 7 and 12, 1899.

Does the knowledge of a hospital nurse, a first year's student, or even of a young interne suffice to meet these just demands? I incline to the opinion of a recent writer on anesthesia, that there are those who know "what is what" in all branches of human undertaking and, in consequence, they make a brilliant success of their special work, from a Lawson Tait who, in his marvelous success, exultingly proclaims: "I cut anything except the arch of the aorta," to the man who successfully administers even such an anesthetic mixture as that of Schleich. But we are not all geniuses, and to jump from them to servants and first-year students for our anesthetists, if not ridiculous, comes dangerously near deserving the lamented Tait's criticism: "The whole thing is discreditable to our profession and absolutely servative of any claim it may make as a science." A physician who is to be operated on would take a rather critical look at the person who is to narcotize him, and would most emphatically object to the species I have mentioned. Is not the public entitled to the same safe-guards?

However diversified the opinions as to the relative value and safety of the two great anesthetics, chloroform and ether, one point seems quite observable, the partisan spirit, inimical to scientific approach, which has animated the pros and cons of this great question. Here we will lay aside all prejudices by the simple but effective expedient of barring all comparisons. We are to discuss chloroform anesthesia, and in a still narrower limit the means by which exact dosage may be reached, and the possible benefit to be derived therefrom. Permit me, however, to say that I have taken chloroform to full narcosis twice in one day, three times in one week, and once later on, to such an extent that I was fully saturated with the agent, and in consequence thoroughly poisoned by it; that I have given it several times to those most dear to me in a practice of thirty-two years, have administered it, or had it used for me—in the last half of my professional career almost exclusively by my wife—innumerable times under all phases of surgical work, in all conditions and at all ages of life, with the exception of operations on the eye, ear, nose and throat, and I am still a partisan to chloroform. You will allow that I am cognizant of statistics, which make the danger of chloroform anesthesia 1 death to every 1500 inhalations, also that chloroform is supposed to be five times more dangerous than ether; it certainly is that many times more efficacious as an anesthetic. I am also acquainted with Tallyrand's witty saying: *Messieurs La statistique c'est le mensonge en chiffres*, interpreted as meaning that statistics are a jugglery of figures. To this end I may mention that deaths during ether narcosis occur less often than during chloroform narcosis, but bad consequences, often ending in death, are more frequent after ether narcosis. These deaths should be enumerated in statistics of both agents. Thus conditioned, the statistics of Gurlt, which are overwhelmingly against chloroform, will appear as follows: 11,669 ether administrations with 2 deaths and 8 subsequently, but clearly referable to the narcotic, give 1 death in 1167 administrations; and in 33,083 chloroform narcoses with 16 deaths during administration and 2 afterward, but attributable to it, we have 1 death in 2647 narcoses—half as many as with ether. But this is not all. Very many patients are constantly turned over to the tender mercy of the supposed greater poison, chloroform, because of the known danger of attempting ether narcosis in them. If all these were also subjected to ether inhalation, the

death-rate would increase still more against ether. Besides all this, my partisanship does not allow me to believe that ether ever induced narcosis, unless asphyxia entered as a factor in its production—a weapon rather dangerous to use in most instances. To me there seems not much difference in the method of doing away with the English king's children, and the killing produced by ether inhalations. In justice to yourselves, this divergence was indulged in that you may be in full possession of all factors, to permit you to form such conclusions as my subsequent statements may warrant.

I will ask you to review with me a few physiologic data for the better understanding of our theme. It is well to bear in mind one life manifestation of the heart, i. e., its motion and the means by which this is accomplished. We have an undoubted excitability of the muscle-fibers composing the heart, independent of all innervation, a contractility inherent in all protoplasm, the sarcois substance of muscle-fibers not excepted. The fetal heart in an embryo three months old shows no sign of nerves, and yet it contracts rhythmically even then. Plants are excitable, and yet they have no nerves. It is a very easy matter to put a young plant of the acacia family to sleep with chloroform, and it is perhaps familiar to all how readily the sensitive plant, *Mimosa pudica*, loses all irritability under the vapor of chloroform. The motility of the heart is influenced in the first place by impediment to food-supply, or the reverse of this, as furnished by the coronary arteries, to the substance of the organ, owing to vasomotor influences on these vessels, as well as to the quantity and quality of the blood furnished to them from the general blood-stream, also to the condition of the blood-vessels themselves, and the fibers composing the heart-muscle. Further, we have to take into account the regulating apparatus furnished by the ganglia and their nerves situated in the substance of the heart itself, and which are regarded as the automatic motive centers of the organ; they excite the cardiac movements, and maintain their rhythm. To these must be added the inhibitory nerve apparatus, which acts as a check to the movements of the heart, and is supplied by branches of the vagus and other nerves. Finally the accelerators, which may be likened to spurs stimulating the flagging heart to quicker action. Both the latter have their centers in the brain, and in their functioning are subject to the same laws and conditions which govern other organs, and furnish a third and very prominent part of the heart's motion. Besides all these, it is necessary not to lose sight of the causes which at any time influence the quantity and quality of the blood-stream; this includes the vast blood-vessel system, its anatomic and physiologic anomalies, and the resulting changes in form and function.

A similar elaborate and complex mechanism is presented, by the lungs, which, as the first receptacle of the anesthetic, are surely entitled to as much consideration as the heart, which receives from them the narcotic, and conveys it to all parts of the body. I will, however, mention only the physical points involved, as important to our subject, those pertaining to the capacity of the lungs for air, which in the average man is said to compass 5300 c.c. This quantity of air is divided into the following volumes, which may be in the lungs at the same time:

1. Complemental air, i. e., the air that may be inspired additional to an ordinary inspiration—1600 c.c.

2. Breathing or tidal air, that inspired and expired with each ordinary breath.

3. Reserve air, that which may be expired after an ordinary expiration—500 c.c.

4. Residual air, that which can not be expelled from the lungs by a most forcible expiration—1600 c.c. This is composed of two, almost equal, portions: *a*, the collapse air, which escapes from the lungs when the chest is freely opened, and *b*, the minimal air which remains in the lungs after the thorax is opened.

The breathing or vital capacity is the amount of air which is forced from the lungs after the deepest possible inspiration; it is the sum of the reserve, tidal and complemental air, 1600+500+1600 c.c., or 3700 c.c.

The stationary air is the sum of the reserve and residual air, 1600+1600 c.c., or 3200 c.c., and it is so named because under ordinary circumstances these two volumes of air remain constantly in the lungs.

If now it is assumed that in ordinary breathing, 500 c.c. of air are inhaled, and that 330 c.c. remain and displace the same amount of vitiated air, then the amount of renewal must be the ratio between the air in the lungs *before the inspiration*, i. e., the reserve and residual air (1600+1600 c.c.), 3200 c.c. and the fresh air, 330 c.c. remaining in the lung after each expiration, $330/3200=0.103$ per cent. This has been termed the coefficient of respiration, and in the case given shows that only about one-tenth of the air in the lungs is changed with each breath¹.

What can, and really does happen on the operating-table? Normally, the average patient breathes twenty times a minute and inhales during that period twenty times 500 c.c., or 10,000 c.c., i. e., ten liters. However, external or subjective conditions, or both, may contribute to lessen the amount of tidal air, such as fear and hemorrhage, or the amount may be increased to the consumption of all the complemental air, making the amount inspired 2000 instead of 500 c.c., or four times as great! And this is readily accomplished by the anesthetist, by urging the patient to breathe deeply, or by forcibly compressing the thorax, or by the violent efforts of the patient himself, when excited or irritated by too strong an initial dose of the anesthetic. It will not need much urging on my part to convince you that the dose of so strong an agent as chloroform can not be quadrupled without the greatest danger to the recipient, especially if you bear in mind the fact that from 30 to 40 minims of chloroform in the blood of a man of average weight proves a fatal dose. In this connection, and for the sake of completeness, it may be well to mention the A. C. E. mixture, those of chloroform and ether and the Schleich mixture. All aim toward greater safety by meeting physiologic and chemical requirements; and toward accomplishing this by the greater quantities of one or the other ingredient of the mixture, presuming that the larger amounts will furnish the larger quantities of vapor, as demanded. This much-to-be-desired action, however, is only a happy dream. The boiling point of these agents is very far apart; for ether it is 98.5 F.; for benzine, 122-140 F.; for chloroform, 140-142 F., and for alcohol, 172 F. Thus a gram of ether thrown on an Esnarch mask will evaporate in approximately one minute; the same amount of chloroform in 1½ and a gram of alcohol in twelve minutes. Ether, of the specific gravity of 0.72, and chloroform of the specific gravity of 1.497 will form nearly one volume of chloroform to two of ether, and be of equal weight (66 c.c. of chloroform = 137.2 c.c. of ether). Edgar

¹ Gage, Simon H.: Reference Handbook of Medical Sciences, vol. iv, p. 208.

B. Truman, after showing that the diffusion of ether vapor, to that of chloroform, is as 100 to 78.8, found that by a gentle heat—between 98 and 104 F.—of equal weights of ether and chloroform, a distillation of 100 volumes of ether, to .953 of chloroform takes place in a little less than half the amount of the mixture and in the residue of a little more than half the amount of the mixture, a distillation of 100 volumes of ether to 75 (!) volumes of chloroform ensues. He comes to this result: "These figures show us the inadvisability of using the mixture of ether and chloroform. To give an inhalation, which may vary between 100 of ether and .9 per cent. of chloroform, and 100 of ether to 75 of chloroform at the ending of an inhalation is clearly a most dangerous proceeding." Besides this, these are all poisons of the same kind, and their admixture can simply serve as diluents of the weaker ones, to the more poisonous one, when being served out on towel or inhaler. But from that moment the anesthetist is utterly at sea regarding the quantities of one or the other of the ingredients he may be administering to the patient at any given time. The object of these mixtures is certainly praiseworthy, but the goal will not be reached until the ingredients are thoroughly combined in their gaseous form and reach the patient's blood in their ideal proportions. In the meantime it may be well to study the action of the gases of benzin and alcohol on the patient, separately, and learn their individual behavior before we mix them up with those of ether and chloroform. Indeed, Dr. Charles Bell Taylor, in the London *Lancet*, expresses himself as being convinced that, if the A. C. E. mixture is nebulized in a globe-inhaler, such as Oppenheimer's, or if nitrous oxid is used as the nebulizing agent of ether alone, one will get an ideal anesthetic. And in his masterful work on Operative Gynecology. Howard A. Kelly writes: "The anesthetic of the future will certainly be given in an atmosphere definitely diluted." Little he dreamed how soon actual practice would maké good his assertion.

In regard to the dosage, i. e., the amount to be inhaled in a given time, and the degree of dilution with air when inhaled, the most remarkable differences exist, and many statements are so vague that it is almost impossible to comprehend them. Lord Lister comes to the conclusion that at a temperature of 70 F. the patient would not inhale more than 4.5 per cent. of the anesthetic, even when chloroform—3jss—is poured on a towel. Yet Robert Kirk² finds that an atmosphere of 5 per cent. is one of overwhelming power, that he can not bring his nose and mouth near it, and that it will kill the strongest rat or mouse in from ten to fifteen seconds. H. Kionka,³ in his experiments to determine the quantity of chloroform or ether necessary to produce narcosis, found that anesthesia could be obtained with from 0.15 to 1.3 per cent. of chloroform, and from 2.1 to 7.9 per cent. of ether, varying according to the species of animal. A. E. Sanburn shows⁴ that chloroform—3ss—poured on lint, may give off at the earliest inspiration an atmosphere containing more than 9 per cent. of vapor; a percentage known to be dangerous. And then we are surprised that an overdose will kill! It can not be too strongly urged that a correct knowledge of the percentage of chloroform, or its vapor, in a given amount of air to be inhaled and the time consumed for such inhalation, is the basis of all safe anesthetic efforts. It should be remembered that .5 c.c. of chloroform will expand into almost exactly 150 c.c.

of chloroform vapor, that such an amount of vapor, added to 1000 c.c. or one liter of air, will give a percentage of 13 volume per cent. of chloroform vapor. It is a well-known fact, as proved by the experiments of Paul Bert and others, that air containing one volume per cent. of chloroform vapor, or about four drops of the anesthetic to the liter of air—1.06 U. S. quarts—can be administered for a long time, even for hours, without producing a decided anesthetic effect, but when a 1.5 per cent. chloroform vapor is used, or six drops of chloroform per liter of air, then narcosis will be initiated, and after an increase of, seldom beyond a 2.5 volume per cent. of chloroform vapor, or ten drops of chloroform per liter of air, a perfect anesthesia will be reached, which can be maintained for hours, with the minimum quantity of chloroform, i. e., 1.5 volume per cent. of the vapor or from 3viii to 5ix of chloroform for the first hour. Professor Geppert uses about 12 1-6 c.c. of chloroform, and 6.5 c.c. of ether during the first ten minutes of the administration, when full narcosis is usually reached. The following table will show the amounts of each for the ten minutes.

In 1st minute	1.5 of scale represents	0.5 chloroform	0.25 ether.
1d	1.5	1.0	0.5
2d	1.5	1.0	0.5
4th	1.75	1.166	.583
5th	1.75	1.166	.583
6th	2.	1.333	.666
7th	2.	1.333	.666
8th	2.25	1.5	.75
9th	2.25	1.5	.75
10th	2.25	1.666	.833

For ready reference I append another table containing the volume per cent. of chloroform vapor from .5 volume per cent. to 15 volume per cent., and the amount of chloroform vapor contained in each, both approximately given. The table is given chiefly to emphasize the small amount of chloroform which is necessary to produce anesthesia.

Air +0.02 c.c. or 1.5 drops or 5.8 c.c. =	.5	or	25+	29.
One liter, or 1000 c.c. of	Vol. per cent. of chloroform vapor and air	One liter of a 13 vol. per cent. of chloroform air	Vol. per cent. of chloroform vapor and air	One liter of a 15 vol. per cent. chloroform air.
0.04	2.3	11.5	1.	12+
0.06	3.4	17.3	1.5	14.
0.08	4.6	23.	2.	16.
0.1	5.7	28.8	2.5	18.
0.12	6.9	34.5	3.	20.
0.14	8.	40.3	3.5	22.
0.16	9.1	46	4.	24.
0.2	11.5	57.5	5.	26.
0.24	13.9	69.	6.	28.
0.28	16.	80.5	7.	30.
0.32	18.3	92.	8.	32.
0.36	20.6	103.5	9.	34.
0.40	23.	115.	10.	36.
0.44	25.3	126.5	11.	38.
0.48	27.6	138.	12.	40.
0.50	30.	150.	13.	42.
0.60	35.	180.	15.	50.

This is this difference, however, between the methods of Paul Bert, as modified by Dreser and others, and that of Professor Geppert. In the former, Paul Bert's, a highly diluted chloroform vapor air is furnished, necessitating a large quantity of the mixture and a close fitting mask, so that no additional air can be inhaled, whilst, in Professor Geppert's method, a highly concentrated mixture, but of precise proportion of chloroform and air, is furnished, the dilution being accomplished by the free breathing of air by the patient. In the former case a precisely proportioned chloroform vapor air is furnished to be breathed; in the latter instance, a uniformly proportioned mixture (vapor air) is measured out for each minute of inhalation, to be lessened or increased in quantity as the needs of the case may demand, and this uniformly measured quantity is diluted on entering the respiratory apparatus, in the ratio of the number of respirations per minute, and their air-consuming quality, i. e., their depth. It is safe to assume that from 16 to 24 respirations per minute will cover the extremes—one respiration to every four beats of the pulse—and that 250 c.c. (15 cu. in.)

² British Med. Jour., Jan. 12, 1885.
³ Archiv. f. Klin. Chir. ⁴ British Med. Jour. Dec. 15, 1885.

to 325 c.c. (20 cu. in.) of air per respiration is inhaled, setting a limit to the amount of air inhaled—from four to seven liters a minute. This amount of air therefore, forms the basis of dilution of the anesthetic, in whatever manner it is presented to the air-passage. It is, therefore, not altogether a question of the time allowed to elapse during which the anesthetic, drop by drop, is allowed to fall on the mask, though of very great importance in the consideration of the total quantity used in a given time, but of equal importance is the attention given to the percentage of dilution with air in which these drops reach the air-passages. To my mind the ideal drop method is practiced as follows: The chloroform is allowed to drop on an Esmarch mask, as modified by me, and, combining simplicity, cleanliness, and safety; at first, at greater intervals, with the mask some distance from the patient's face; this is brought down to the patient's face very gradually, with some reassuring remarks by the anesthetist; at the end of the second minute the mask will have reached the face and the chloroform will be dropped, one drop a second, until full narcosis is secured; and afterward, as the more painful measures end, one drop every three or four seconds will suffice to maintain perfect insensibility and immobility. If sutures are to be used, or other more painful finishing touches are needed, recourse to the one drop a second measure may be had for a short time, and finally the anesthetic should be removed gradually, exactly as it was commenced. Its sudden removal in the beginning of the narcosis is especially to be eschewed, as also at the close. It is at these periods when the reflexes are present, but may be deranged, that the danger from neuromyolysis is greatest, and the respiration as well as the circulation requires to be watched with the greatest care. It is at these periods, also, that the interruption of the narcotic is followed by a sudden rise of the blood-pressure, which becomes dangerous in the ratio of the lowness of the pressure, preceding the rise, to the weakness of the heart. Death from cerebral apoplexy, in old patients, has taken place at these critical moments. Again, handling the patient roughly, or the accidental display of instruments in the beginning, or of bloody towels and wrappings at the ending of the narcosis has produced fainting, a condition at no time devoid of danger, but especially hazardous during anesthesia. The drop method, employed as I have just described, and, as has been practiced by me for many years, leaves the least to be feared for the safety of the patient.

To form a correct judgment of the safety or danger of the anesthesia in any given case, it is necessary to fully understand the pathologic changes which may be of importance in the course of the narcosis. The special dangers of the intended operation are of secondary importance. The surgeon should, including these factors, form a prognosis of the narcosis, not *per se* but in its relation to the whole case. The more carefully the existing inferior vitality of the patient, the injury by the operation, and the poisonousness of the anesthetic used are considered, not each one for itself, but each in relation to the other two, the safer will be the prognosis and the less often will unforeseen and disagreeable surprises occur. The scheme of all the existing conditions will appear as shown here.

VITALITY OF PATIENT.

Inroads on Vitality by:

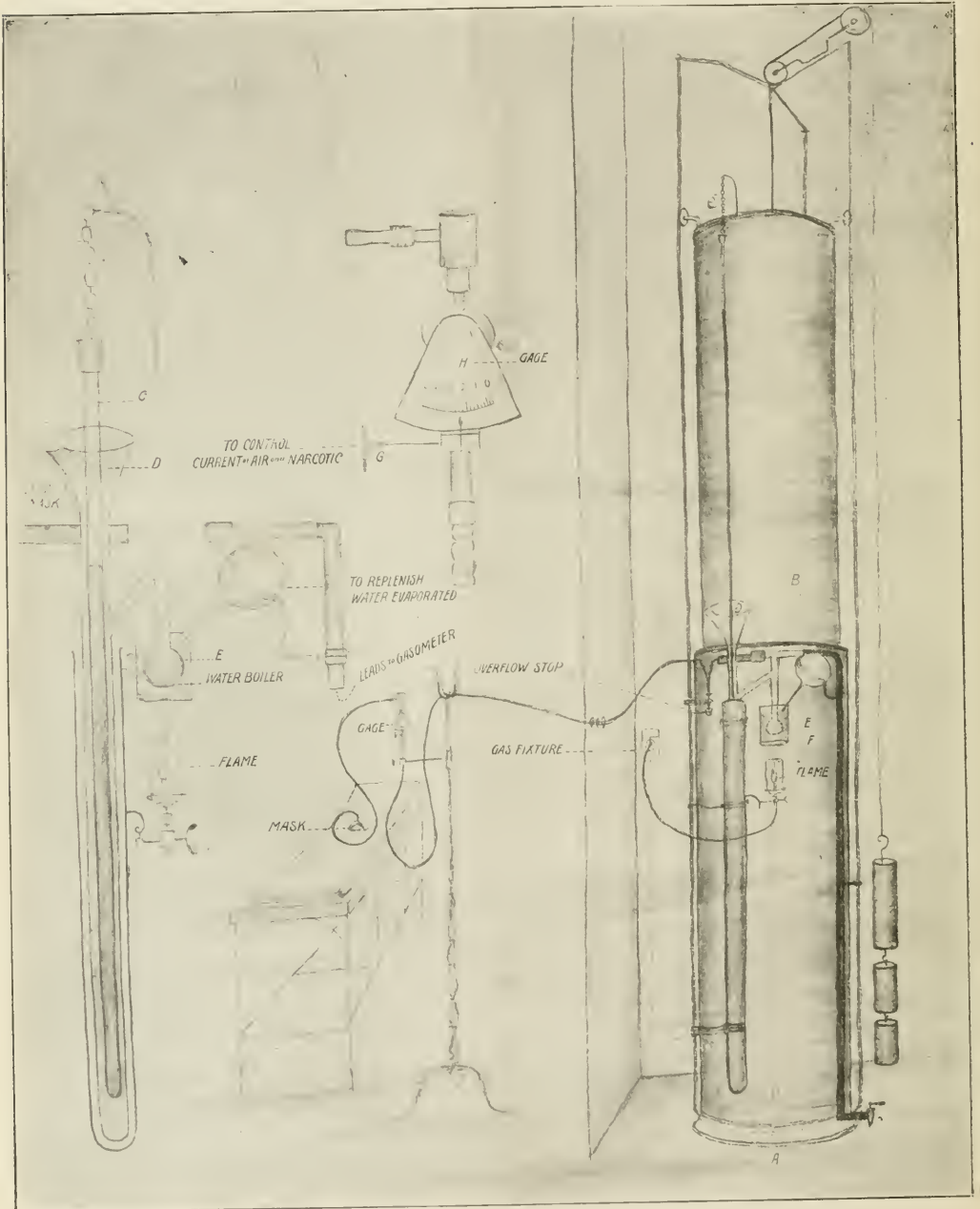
Pathological conditions.	Operation.	Narcotic.	
			O. Witzel.

When the pathologic conditions plus the operation equal the vitality, then it will be understood that the addition to the duo of the anesthetic will make a sorry trio, and the surgeon will have none of it, nor will the anesthetist, for both will very likely meet with disaster. An operation under such circumstances is unjustifiable, unless demanded by humanitarian interests. Again, if the three—disease, or injury, the operation and the anesthetic—equal the vitality, then the interference should be made only for the purpose of giving the patient a chance, and as little injury should be inflicted and as little of the narcotic used as is compatible with the best interests of the patient. Finally, if the vitality greatly counterbalances the trio, then the case should end favorably, unless the pathologic conditions are undervalued, or misunderstood; the operator endangers the case by mistaken measures, or the anesthetist fails to steer free from all difficulties possible to avoid.

To grasp the action of chloroform in its entirety it is very necessary to understand, once for all, that its influence is not exerted on heart or lungs exclusively, but being the organs more fully and directly exposed to the agent, they are likely to show its influence more vividly to the observer. This does not take into account the reflexes, and very often deleterious influence exerted through the Schneiderian membrane and the mucous membrane of the larynx by the trigeminus and vagus. The fact remains that, little by little, all the body, i. e., its minutest parts, is brought under the paralyzing effect of the anesthetic. This includes the fibers of the heart, the cells of the mucous membrane, and the tissues composing the lungs, the cells of the nerves and their centers, the fibers of the muscles, and the cells of the blood, until, one by one, they go to sleep temporarily or forever. This process takes place first in the organs of animal function, and finally in those of the vegetative functions. This happy sequence is what makes chloroform useful; a reverse process would invariably kill before anesthesia is reached. When vapor of any of the anesthetics, in whatever concentration, finds its way into the blood-stream, it tends to spasmic contraction of all cellular elements of the tissues touched or pervaded; the stronger the concentration, the greater the spasm and the longer the time of its existence. During this period the whole of the lumen of all blood-vessels is narrowed and a higher blood-pressure is recorded. The whole system seems to make an effort to resist the inroads of the poison, and yet during the attempt of exclusion, another and more important action of the narcotic commences; the vapor penetrates into the tissues of the heart and its fibers, into the muscle layer of the blood-vessels and their fibers, into the elastic tissue of these and of the bronchial tree, affecting all alike; they become relaxed to the extent of "falling to pieces." This giving way will necessarily take place first where the vapor appears first and is most concentrated and exerts its strongest influence, i. e., in the heart; the organ succumbs to the blood forced into it by the contracted blood-vessels and dilates, often with amazing and deadly suddenness. This dilatation is followed by the same maneuver in the blood-vessels and capillaries, and in their giving way the blood is emptied into them, and the pressure, high till now, rapidly becomes lower and lower, the typical low pressure of chloroform anesthesia, and to some extent of all anesthetics. The heart, overfilled to dilatation, empties itself, and its walls become flabby. This is the moment of the lowest blood pressure, and of the greatest danger. The heart, however, continues to make small spasmodic attempts at

contraction, which attain, only after a time, the dignity of rhythmic contraction, though sometimes this state is never regained; then the patient succumbs in primary syncope, and the total collapse of acute chloroform poisoning takes place, which Sajous thus describes: "The

appearance of a person in a dead faint, or just after a severe accident, is no more than a shade of that which obtains in chloroform collapse. . . . The light seems to fade from the eyes, as does the color from the cheeks and lips. . . . The eyelids fall open, the eyeballs



are fixed, in the upward position, with pupils fully dilated, as under extreme atropinism. At the same time the cornea becomes glazed and sticky, giving an appearance which, once seen, is never forgotten. And sudden and complete blanching of the face takes place, leaving it of a ghastly, grey hue." But, when from any cause, disease of the lungs, disease of the respiratory nerve-center in the medulla, by the use of an exceedingly concentrated vapor, or a too rapid inhalation of such vapor, the primary spasm in the lungs does not quickly dissolve into the relaxation, already described as occurring elsewhere in the body; then asphyxia must necessarily ensue, and if not quickly relieved, death, from stoppage of the respiration, will be recorded. This is correct if it is not forgotten that the spasms of the heart, and the rest of the circulatory apparatus, contributed largely to bring about and magnify the respiratory disturbance.

One more dangerous action of an anesthetic, especially of chloroform, I must emphasize. Our patient has happily overcome the primary spasm of both circulatory and respiratory organs, and the resulting relaxation of them has been safely adjusted by a happy compensation; or all of these dangers have been avoided—and it can be done in most cases by such an administration of the narcotic, that a restlessly sleeping child will not be disturbed by it in the least; neither coughing, gasping, choking nor struggling will appear, for all these are not only signs of an incorrect administration, but really danger-signals, to be carefully heeded—and yet, little by little the patient shows signs of impending danger and death. What is happening? The reflexes, the things that have given us so much annoyance, at first are abolished. The anesthetist, if he is thoroughly competent, steps in to take their place; he knows every sign and its interpretation, and all is well. But, if the calm, disturbed only by the operator, is not rightly interpreted, and the administrator allows himself to be infected by it, he will continue the anesthetic, little by little, until the nerves become insensible and refuse to convey impressions; then the cerebrum stops recording, consciousness is abolished, the spinal cord fails and motion and feeling are things of the past; then the medulla oblongata is invaded and the centers of circulation and respiration are lulled to rest; and finally the very ganglia of the heart substance cease their function. Slowly, step by step, the poison has overcome all the parts of the body, the patient dies from a poisonous dose, accumulatively administered. Thus we are brought face to face with the fact that chloroform or any other narcotic is dangerous to the recipient, be the method what it pleases—and all surgeons anxiously await the coming of a new agent, or of a new method for the administration of the old ones. So far the hope for better things has not been realized. To obtain the full effect of the anesthetic, it is quite necessary that the ingredients be in the form of a vapor, to be inhaled by the patient in exactly measured quantities, in a given time, and diluted to a known strength, with air. This great object, Prof. J. Geppert claims to have attained in the construction of the apparatus here shown.

It will be observed that this apparatus consists of a gasometer (*a*) of known capacity, to the upper chamber (*b*) of which a glass rod (*c*) is attached, which, with the falling of the chamber, as the air escapes from it, drops into a glass tube (*d*) containing the anesthetic. The rod forces the narcotic into a bulb (*e*), which is surrounded by water (*f*) somewhere near, but below, the boiling point. Thus the anesthetic in Geppert's

use—two volumes of chloroform and one of ether or, by weight, 300 grams of chloroform to 70 grams of ether—is gradually forced into the bulb and vaporized, and escapes in known proportions of .4 to .5 c.c. of chloroform and half that quantity of ether to the liter of air, from the larger apparatus, and .6 c.c. of chloroform and .3 c.c. of ether to the liter of air from the smaller apparatus. These definite amounts of air and narcotics may always be measured in exact proportions, as the administrator may desire, by the opening of the faucet (*g*) near the gauge (*h*), which indicates the exact amount of the narcotic evaporated for each minute; so that the patient may inhale, at the commencement of the administration, bare traces of the narcotics, by the admission of great quantities of air from the room, until very gradually, however, he uses up from $2\frac{1}{2}$ to 3 volumes of the compound vapor to every $97\frac{1}{2}$ to 97 volumes of air, a percentage sufficing in most cases for a complete narcosis; this may be maintained for a shorter or longer time with a 1.5 volume per cent. of vaporized air, to the full satisfaction of the operator, and, what is more important, to the greatest attainable safety of the patient during and after the anesthesia.

To make the matter still more clear I will repeat the amounts of the narcotics needed in cubic centimeters. The narcosis will be initiated, as already stated, which can not be done too often or too emphatically, in the most gradual manner, until a strength of the vaporized air is reached which contains for the minute's time $1\frac{2}{3}$ c.c. of chloroform and $5/6$ c.c. of ether, to 2 c.c. of chloroform and 1 c.c. of ether. However, the first amount given is seldom exceeded to attain a complete narcosis; and is reached in about eight to ten minutes. After the use of this quantity of this mixture for a few minutes, when the most severe surgical measures, causing pain and shock, will have been initiated, or concluded, the anesthetist in most cases will be able to return to the dose which, in most animals and also man, will initiate and maintain anesthesia: 1 c.c. of chloroform and .5 c.c. of ether per minute of inhalations.

In women this point may lie just a little below, and in men a little above these figures. Thus, instead of using the narcotics themselves, as in Krohne's perfected method, measuring the narcotics and the air at each inspiration of the patient, the narcotic, in the form of vapor and in exact proportion to the air, is furnished by the apparatus; and all the administrator has to do is to let the patient inhale them, increasing or lessening the quantity as the needs of the case may require, by simply opening or closing the faucet near the gauge, more or less. The apparatus is, so to speak, the scale on which the chloroform vapor is weighed. It exactly marks the dose which is conveyed by it, but it does not prevent the giving of too large a dose; neither does it exclude the need of the administrator's attention to the free and unobstructed breathing of the patient. In fact, it is not a substitute for knowledge and judgment, which the anesthetist himself should have and exercise.

Professor Geppert's method contains the elements of the ideal one of the future, the one which will be robbed of all the terrors of our past experience. I sincerely believe that the apparatus of Geppert is one of the many great inventions of the century.

I acknowledge with many thanks the assistance of Professor White, of the University of Nebraska, in the making of a temporary apparatus of Geppert, for exhibition; and that of Mrs. Jessie Laverty, for the reproduction, in large size, in crayon, of a picture of the apparatus, from the *Deutsche Med. Woch.*, No. 27.

USE OF ATROPIN SULPHATE AS A MEANS OF
DIAGNOSIS IN CERTAIN PERSISTENT
HEADACHES.*

BY OTTO LANDMAN, M.D.
TOLEDO, OHIO.

This paper deals with the determination of the etiology of some forms of persistent headaches. The method under consideration will save time, is coupled with a great degree of accuracy, and requires no special knowledge of refraction and its correction by glasses. It will enable us to exclude other conditions as causes of certain persistent headaches, and consists simply in the use of a solution of sulphate of atropin instilled into the eyes. The method should be employed to determine the cause of persistent headaches.

It is probable that the results obtained are due to the effect of the drug on the innervation of the ciliary muscle, for after the accommodative power returns the headaches often reappear.

Concerning the explanations of headaches we may say that, in general, they are produced by some kind of irritation of the filaments of the fifth nerve, which supplies the dura mater. The following hypothesis is offered to explain the manner in which the eye strain produces headaches. The ophthalmic or lenticular ganglion receives fibers from the fifth, the third and sympathetic nerves. The third nerve, through the medium of this ganglion, furnishes fibers to the ciliary muscle. It can be imagined that any excessive strain thrown on this muscle may, through a close anatomic connection with the fifth and sympathetic, induce, either directly or reflexly, an effect on the final terminations of the fifth in the dura mater, resulting in headache. Be that as it may, we know that some headaches, situated within the calvarium, are relieved, or even cured, by the use of glasses which remove the strain from the ciliary muscles; and, moreover, an analysis of a sufficient number of cases that have come for relief of headaches shows that the use of atropin sulphate, which paralyzes the ciliary muscle, dispels the headaches in just such cases. There is a striking and close analogy between the ultimate effects of glasses and of atropin sulphate on the ciliary muscle.

The headaches which are most frequently produced by ocular defects are situated, as to their frequency, in my observation, in the following regions: supraciliary, occipital, occipitofrontal, vertex and temporal.

When there is a general headache, that is, one equal in all parts of the head, it is due to some general depraved state of the system. I wish to allude to one kind of headache, namely, one situated on the *top of the head*, the vertex, having an area about the size of a silver dollar, circumscribed and associated with *tenderness of the scalp*, which is almost invariably due to eye strain, and often amenable to treatment by the use of glasses. The *clavus hystericus* belongs to this class.

Dizziness, when caused by eye strain, will often be relieved by paralysis of the ciliary muscle with atropin sulphate, and can be permanently abolished by glasses. The conclusion is that when a persistent headache, situated in any of these localities, disappears on atropin being used in the manner directed, the case is probably due to eye strain and can be remedied by properly adjusted glasses. To obtain the result, the atropin must be pushed to the complete suspension of accommodation. The directions for use are simple: A solution of $\frac{1}{4}$ gr. of sulphate of atropin to two drams of water, with directions to drop three drops in each eye, three times a day,

until ten instillations have been made. When, on the return of the patient after the use of the atropin, we find that the headaches have disappeared, then a favorable prognosis for the dissipation of the headaches, through correcting lenses, can be given. There is one general caution to be observed, and that is the careful use of atropin in older persons. In increased ocular tension it should never be used.

230 Michigan Street.

SOME OF THE ASPECTS OF RENAL INADE-
QUACY FROM A NEUROPATHIC
STANDPOINT.

BY H. A. TOMLINSON, M.D.
SUPERINTENDENT ST. PETER STATE HOSPITAL,
ST. PETER, MINN.

(Continued from page 856.)

A. I., a male, farmer, aged 54, Irish, married, was admitted June 22, 1897. Nothing of the family history could be learned, except that the parents and several relatives had suffered from rheumatism, and very little of the life history of the patient could be obtained. He had worked eighteen years in a coal mine, was always in-temperate, and during the last few years after a spree he would be confused, irritable, incoherent and violent, with a disposition to wander away from home. When admitted he was fairly well nourished, weighed 130 pounds, had a fair appetite but slept poorly. He had a shambling gait, there was partial paralysis of the right arm and hand, some paresis of the lower limbs and the patellar reflex was absent. He was depressed, his expression listless and vacant and memory poor. There was paraphasia, he could not tell his name, and he had difficulty in naming simple objects, although he knew their uses. He could not read nor write.

Uranalysis showed 1600 c. c. in twenty-four hours, sp. gr. 1025, yellow, translucent, reaction acid, uric acid .04 per cent., urea 1.09 per cent., indican 3 per cent., phosphates increased, sulphates normal, chlorids 8 per cent.; no albumin, peptone nor sugar. The microscopy showed nothing abnormal. He improved physically, gained in weight, the paresis improved, the knee-jerk returned, and the paraphasia almost completely disappeared. Some time afterward he complained of feeling bad, had a cough and some dyspnea, and a week later these symptoms returned, he had pain in the abdomen and vomiting after eating. Respiration was labored and he became feeble. He became obstinately constipated and there was a slight elevation of temperature. A few days later he became suddenly unconscious, his face was pale, there was marked twitching of the limbs, respiration was rapid and shallow, harsh and difficult, pulse slow, full, regular and of high tension. He perspired freely during the night and was better in the morning, but very restless. The urine was examined with the following results: amount in twenty-four hours, 500 c. c.; sp. gr. 1016; acid; yellow; translucent; uric acid, .06 per cent.; urea, 3 per cent.; phosphoric acid, .25 per cent.; indican, 2.5 per cent.; sulphates diminished; chlorids, 28 per cent. There were traces of peptone, but no albumin nor sugar. The microscopy showed renal epithelium and a few leucocytes. He improved rapidly and soon regained his former fair health. About two months afterward, while out walking, he fell suddenly, with a cry, and became unconscious. His face was cyanotic, pupils contracted to a pin-point size, the arms and legs twitched and jerked, both sides apparently equally affected. The respiration was slow and deep, pulse 90

*Read before the Toledo Medical Club.

and feeble. The surface of the body was covered with cold perspiration. After about twenty minutes he began to regain consciousness, vomited some undigested food and was soon able to walk to the house. During the next twenty-four hours he passed 300 c. c. of urine, sp. gr. 1016, acid, yellow, translucent, uric acid .09 per cent., urea 1.2 per cent., phosphoric acid .14 per cent., indican 2 per cent., sulphates 1 per cent., chlorids .6 per cent., no albumin nor sugar. The microscopy showed leucocytes and renal epithelium. At the present time this patient is in fair health, has a good appetite and sleeps well. He is rather stupid and indifferent, but answers ordinary questions fairly well, takes a moderate amount of exercise, but does not otherwise occupy himself. The following is the result of the last uranalysis: amount in twenty-four hours, 700 c. c.; sp. gr., 1030; acid; yellow; clear; uric acid, .03 per cent.; urea, 2 per cent.; phosphates and indican, normal; sulphates, 2 per cent.; chlorids, 12 per cent.; no albumin, peptone nor sugar. The microscopy shows cylindroids.

S. S. was admitted Aug. 6, 1895. He was born in Sweden, 78 years ago, was a widower, and a day laborer. Very little could be learned of his family history. The father died at 62 years of age, of "dysentery;" the mother at the age of 82, of "old age." One sister died of "dropsy" at 9 years of age; another sister was peculiar. The mother had been hemiplegic for some years before her death. There is no record of the early life of the patient. He suffered from "rheumatism" during adult life and for the past few years has been nervous and irritable. A short time before he was committed to the hospital, during a fit of despondency, he shot himself, with suicidal intent. The following is a record of his physical condition at the time he came into the hospital: temperature normal; pulse 60, full but intermittently; respiration fairly deep, rate 18; arteries atheromatous; depression in both supraclavicular regions; respiratory murmur roughened over both lungs, resonance increased. He had an umbilical hernia. The tongue was clean, digestion fairly good. There was some senile tremor of the tongue and limbs and inco-ordination. Uranalysis showed: sp. gr., 1023; urea, 2 per cent.; no albumin, sugar nor casts. He improved physically, became more cheerful, was quiet and well behaved, but steadily grew more demented. He was in bed for a month in the fall of 1896, complaining of pain in the body and limbs, and weakness. During this time there was retention of urine, which was decreased in amount, of low specific gravity, contained some leucocyte casts but no albumin. The phosphates and sulphates were normal, but the chlorids were decreased. There was no material change in his condition during the next year. He complained more or less of pain, from time to time suffered from retention of urine, was in and out of bed, feeble, but took a fair amount of nourishment and slept well. In the beginning of October, 1898, he grew more feeble and stupid, unable to help himself. There was incontinence of both urine and feces. In the latter part of the month he developed some congestion of the lungs, coughed and expectorated. The sputa contained streptococci and staphylococci, but no tubercle bacilli. Uranalysis showed 1175 c. c. in twenty-four hours; sp. gr. 1018; acid; urea 1.7 per cent., phosphoric acid .0001 per cent., sulphates 2 per cent., chlorids 7 per cent., no albumin nor sugar. Microscopy showed numerous leucocytes and fibrin bands. There developed some hypostatic pneumonia with dilatation of the right heart. This condition improved after a time and he was up and about the ward, but went to bed again early in the fall of 1898. He was

very feeble, irritable, nervous, confused and suspicious all the time, but always much worse during the exacerbations of his physical disturbance. In December, 1898, he developed a left hemiplegia, the arm being first involved, then the leg and face. He complained of general pains, was very restless and constantly trying to get out of bed. At this time uranalysis showed the following: amount in twenty-four hours, 600 c. c.; sp. gr., 1015; urea, 2.8 per cent.; phosphoric acid, .2 per cent.; sulphates, 2 per cent.; chlorids, 34 per cent.; no sugar nor albumin. Microscopy revealed amorphous uric acid. He grew steadily weaker and died Jan. 12, 1899.

At the necropsy, there was some fluid in the subdural space, the membrane was smooth except at the vertex, where it was adherent to the skull and pia, and there was marked adhesion at the base. There was a chicken-fat clot in the anterior third of the left lateral sinus, and the others were filled with dark clots. There was 135 c. c. of cerebrospinal fluid; the thickness of the pia was increased and the surface of the convexity covered with opaque patches. The vessels contained fluid blood and some gas. The brain weighed 1485 grams; 3 cm. from the longitudinal fissure on the right side, the dura and pia were adherent to the precentral convolution, the point of adhesion having the appearance of an old scar 2 cm. in diameter. There were small points of adhesion over the postcentral convolution on the left side, 2 cm. from the longitudinal fissure. There was serous effusion over the whole convexity, most marked over the Rolandic area on the left side. There was a subcortical cyst involving all three occipital convolutions toward their external surface, on the right side, also marked atheroma of the arteries at the base, and the carotids were aneurysmally enlarged at their exit from the bone. There was atrophy of the cortex in the region of the operculum, so that the insula was partially uncovered on both sides. Aside from these external evidences of degeneration, there was no gross lesion of the brain substance, but well defined in the floor of the fourth ventricle the condition previously described as characteristic of death from uremia was evident: edema of the ependyma of the fourth ventricle, with intense injection of the vessels. The viscera in the chest and abdominal cavity showed marked evidence of degenerative change. The right kidney weighed 120 grams. There was a large cyst on the convexity, which contained 25 grams of urine. The capsule stripped fairly readily, the surface of the kidney was covered with small cyst scars. The left kidney weighed 132 grams; there was marked atrophy of kidney substance on the anterior surface exposing the pelvis. The capsule stripped fairly readily and the physical conditions were practically the same as in the other kidney. The degeneration in these kidneys was as nearly a pure atrophy, without increase of connective tissue, as I ever saw. The bladder was almost empty, its walls very much thickened, and it contained about a gram of sandy particles.

I record the following case not so much on account of the association between the condition of the urine and the symptoms manifested, but because it is typical of a class of cases very common with us. The mental symptoms are characteristic and quite similar to those manifested in cases of urinemia associated with chronic degenerative disease of the kidney among the sane, differing only in degree.

H. M. A., male, aged 45, Canadian, salesman, married but divorced, was admitted Sept. 26, 1898. The family history was negative. The parents married young, were healthy, and had eleven children, four of whom are d-

the cause unknown. The patient was healthy as a child and showed no peculiarities of temper or disposition. Little information could be gained as to the history of his adult life, except that he drank to excess. There were some darkly-pigmented spots over each tibia, and some suspicious ulcers in the lumbar and sacral region. The ulcers healed rapidly under specific treatment. The genitalia were atrophied, but no scars could be detected. There was some ulceration along the posterior pillars of the pharynx. About two years ago he was "paralyzed." There was no history of this attack except that it came on suddenly, and the patient, on waking in the morning, found that he could not move his body or limbs. The paralysis gradually disappeared, but he was no longer able to do any work. About three months before admission he began to be emotional, irritable, confused, could not remember what was said to him, and was childish in conduct and conversation. He was in a city hospital one week before coming to St. Peter, and was said to have been violently maniacal during a part of that time. His examination on admission to this hospital disclosed the following conditions: height, 5 feet 7 inches; weight, 123 pounds, frame slender, nutrition impaired, flesh soft, skin inelastic; temperature, 98.6; pulse, 58, regular and of fair volume; respiratory rate 14. The relative heart dullness was increased downward and to the left, and a musical murmur, systolic in time, was heard in the second intercostal space on the left side near the sternum. The arteries were sclerosed. There was no evidence of disease in the lungs, and the appetite and digestion were not impaired. The muscles of the face and tongue were not affected, the pupils and the ocular reflexes normal, superficial reflexes present, knee-jerk exaggerated, co-ordination in the arms and legs poor. There was some disturbance of sensation, shown by hyperesthesia to heat and delayed recognition of cold.

Urinalysis showed 1575 c.c. in twenty-four hours, sp. gr. 1010, yellow, opaque, alkaline, urea 1.5 per cent., phosphoric acid .2 per cent., sulphates and chlorids increased, albumin 2 per cent., some peptone. Microscopy revealed numerous leucocytes. The patient was listless, careless and indifferent, unsteady in gait, suffered from incontinence of urine, but was constipated. His memory and mental reflexes were fairly active. He conversed freely and was quiet and agreeable. During the next two months he gained twenty-five pounds in weight, and was able to do light work about the sick room and ward. At times he complained of feeling ill and said his limbs ached. He could sleep during the day and said his left leg became numb when he sat long in one place. One morning, soon after, he was found unable to move his right arm or leg, was unable to speak, and his head was drawn to the left. The temperature was 103.4, pulse 92, full and regular, and respiration 24. He vomited some blood-stained mucus. His bowels were confined and there was retention of urine; 775 c. c. of dark yellow, alkaline urine was obtained by the catheter. The sp. gr. was 1024, urea 2.8 per cent., phosphoric acid .2 per cent., sulphates 2 per cent., chlorids 25 per cent. There was a trace of albumin, but no peptone nor sugar. Microscopy showed nothing abnormal. (The conditions producing the high temperature accounted for the increase of chlorids at this time.) The temperature remained close to 104 F. He would suddenly turn his head to the right and throw his arm to the right and backward. These movements continued for a quarter of an hour, being violent at first, but gradually decreasing to the point of complete relaxation. These convulsive movements were repeated at intervals of an hour, and were

accompanied by incoherent muttering. He took a little milk, but swallowed with difficulty and had to be catheterized at intervals. On the third day of the attack, 1100 c.c. of urine was collected: sp. gr. 1022; acid; urea, 3 per cent.; phosphoric acid, .2 per cent.; sulphates, .2 per cent.; chlorids, 6 per cent.; a trace of albumin, but no sugar nor peptone. On the fourth day the temperature came down to 99.6 F., and he seemed much brighter and there was some slight return of motion, first in the leg and then in the fingers and forearm. He apparently heard when spoken to, but could not answer nor make any sound. He was restless, appeared uncomfortable, would pull at the bedclothing and attempt to grasp the bed-post. In these attempts his hand would fail to reach the object, on account of its being carried too far to the left and not far enough to reach the object. At the same time he would mutter incoherently to himself. He would reach out into space and would bring his hand to his lips and make movements as though eating and drinking. At times he would be apparently listening, and again would make gestures and sounds as though conversing with another. In another day he could repeat parts of a sentence, but there was paraphasia. Names of objects bothered him. When asked to name an object held before him, such as a pencil, key, watch, etc., he failed to find the word, but when asked what it was used for, he readily described its use and then named it. He had no difficulty in reading or writing. At night he was restless and wakeful. He was very much confused for a few days. In the morning he would give an account of how he had spent the night, saying he had walked a great distance, taken a ride on a boat and been shipwrecked. He imagined people were talking about him and at times did not know where he was. He thought he was in a different room or house and believed that he was frequently moved about. The paralysis gradually disappeared, he passed his urine voluntarily, conversed fairly intelligently, but was still restless at night. His appetite improved, he was soon able to be up and about, was cheerful and went to work again. Urinalysis showed 1600 c.c. in twenty-four hours, sp. gr. 1025, dark yellow, clear, acid, urea 2.2 per cent., phosphoric acid .15 per cent., sulphates 1 per cent., chlorids 20 per cent., no albumin, peptone nor sugar. Microscopy revealed leucocyte casts.

The following conclusions seem to me to be warranted by our study of the clinical aspects of renal inadequacy during the past five years, supplemented by the urinalysis and post-mortem verification of the deductions made.

Renal inadequacy as a temporary condition, not necessarily dependent on histologic changes in the kidney structure, is quite common, especially during adult life and after.

There is definite clinical evidence that in some people renal inadequacy is congenital and dependent on limited potentiality—usually nervous—in the individual affected.

The amount of the total solids in the urine, or the presence or absence of albumin or casts, furnishes no direct evidence of impending urinemia, but the relative proportion of the solid constituents to each other does furnish such evidence.

In my experience, when the quantity of urine is decreased below 1000 c.c., urea below 2 per cent., chlorids below 10 per cent., while the phosphoric acid is increased above .2 per cent., the sulphates above 1.5 per cent., urinemia is present or impending. The importance of the elimination of the chlorids is apparent when we re-

member the effect of sodium and potassium on the nervous system, and the reduction in the relative quantity eliminated is the most constant change in the constitution of the urine of uremic patients. The increase of phosphoric acid and sulphates is the result of the nervous disturbance caused by the uremia, rather than in any sense a factor in its causation, while the relative amount of urea is not so certain a test and often misleading in the chronic form of uremia. In the acute explosive form, with syncope attacks or convulsive outbreaks, the marked reduction in the relative proportion of urea is quite constant. In other words, as would be expected from the pathology of the condition, urea is most apt to be diminished in parenchymatous nephritis.

The apparent contradictions in the tables given are explained by the presence of other disease conditions in the individual at the time, which materially modify the ordinary processes of metabolism.

The fact that the usual symptoms of urinemia may not be present in cases where profound degenerative changes in the kidney are found, post-mortem, is partially explained by the establishment of tolerance of the nervous system to the presence of the toxic substances in the blood, and further exemplified by the finding of one or more pyramids in each kidney, with the surrounding cortex in good working order.

The symptoms of chronic urinemia are most marked in cases of interstitial nephritis, and it is in this class of cases that the hemiplegias and partial paralyses, with mental disturbance, most frequently occur, while in parenchymatous nephritis the sudden uremic explosions with convulsions and stupor are most common, and in this class of cases, for obvious reasons, sudden death following renal congestion is most apt to occur. At the same time, the fact must be kept in mind that, as we rarely have a purely structural or parenchymatous change in any organ, cases of nephritis are apt to be of mixed form—especially those of alcoholic origin—and consequently the clinical picture furnished by each will run into the other and be present in varying degrees in the same case.

The hemiplegias and other paralyses due to uremia are to be distinguished from those due to cerebral hemorrhage, by the fact that all of the muscles are not involved, that the loss of power is seldom complete and that the degree to which different groups of muscles are affected will vary from day to day, also that the complete loss of power is quite temporary, although there may be a permanent paresis.

That simple interference, with metabolism and the resulting loss of vitality with impairment of the nutrition of the general organism, will not produce the conditions necessary to the development of urinemia is apparent in the history of the numerous disease processes which do interfere with nutrition and impair vitality; while the sudden appearance of the uremic storm in an individual apparently free from disease, makes it evident that there are other factors in the production of urinemia than those with which we are yet familiar. To my way of thinking the principal one of these is the nervous system and the influence it has on the activity of the kidney independently of its function as a filter. The analogy between the symptoms of shock and certain manifestations of uremia is suggestive, and so is the close resemblance between the symptoms of apoplexy due to cerebral hemorrhage and the same condition resulting from uremia. Then again, failure in the functional activity of the kidney is quite commonly manifested in those vegetative organs with which it is most intimately

associated in its nervous supply, as represented in the familiar gastric crises and apparently causeless attacks of diarrhea associated with the progress of chronic interstitial nephritis. Again, pleural effusion, bronchopneumonia or pulmonary edema, with dilatation of the right heart, may be the only symptoms manifested during the illness of the patient, and the necropsy reveal extensive degenerative changes in the kidney. Now, the association of the kidney with those organs supplied by the pneumogastric and phrenic nerves is principally through the suprarenal gland, and, so far as my observation goes, this gland is always involved in the degenerative process affecting the kidney—the change being atrophic in chronic interstitial nephritis and cystic in the parenchymatous form. This gland is also quite commonly infected by the tubercle bacillus and the pus-forming bacteria, when there is a similar infection of the kidney. It is further worthy of note that when degenerative change in the kidney manifests itself through disease processes in the vegetative organs, the nervous system is practically never directly involved and such nervous symptoms as do develop are secondary to the visceral disease. The converse of this obtains where the urinemia affects the nervous system primarily and the pulmonary edema and cardiac failure only appear after the intoxication becomes so profound that dissolution is imminent.

While many of the conclusions offered in this paper are in a measure speculative, still they are all founded on clinical experience and pathologic study. They have suggested to me a reasonable explanation of some of the many obscure conditions met with in hospital and general practice, and furthermore, they are in line with current physiologic speculation concerning the probability that each vegetative organ has a secretion peculiar to itself, which not only affects its own functional activity but also the vitality of the organism as a whole.

SHOULDER-HUMERO-SCAPULA ARTICULATION.

SOME OF THE COMPLICATIONS AND SEQUELAE ATTENDING OR FOLLOWING REDUCIBLE OR IRREDUCIBLE DISLOCATIONS, WITH A BRIEF REVIEW OF THE VARIOUS MODERN OPERATIVE MEASURES NOW EMPLOYED FOR THEIR TREATMENT.

BY THOMAS H. MANLEY, M.D.

Visiting Surgeon to the Harlem Hospital; Professor of Surgery in the New York School of Clinical Medicine, NEW YORK CITY.

(Continued from page 860.)

ARTHROTOMY OR REDUCTION.

When it is decided to be expedient or imperative to operate on an arm which resists reduction by ordinary methods, the question arises as to whether we will expose the articular head by a free incision, and remove it through the anatomic neck, or rather preserve and restore it by an arthrotomy. On this point surgeons are not in complete accord.

Resection is much the simpler procedure. The capsule is preserved and the attachments of the deep pronators are maintained, but the articulation is destroyed; an important anatomic structure is gone.

Arthrotomy and forcible reduction of the head usually entails an extensive mutilation and free hemorrhage. Sometimes all the muscular attachments to the outer head must be divided, and if the circumflex nerve has suffered damage, or if there be an osseous lesion, after the head is replaced it can not be retained. "Bloody reduction," says Knapp, "without resection is

not without serious results." He collected 12 cases; 3 deaths, with but 4 materially improved; while in 20 resections there were 4 deaths, and 16 fairly good results.

Delbet, while rather a partisan of arthrotomy, confesses that on the whole the ultimate functional results are better after resection.

In 37 cases of resection recorded by Lund, the result was good in 16, in 5 mediocre, in 2 bad, unknown in 6; 5 patients died as a result of the operation.

Resection of the humeral head should be followed by no mortality whatever. With those cases ending mortally, it is probable that resection was only resorted to when arthrotomy had failed, when retention was impossible and, as a forlorn hope, the articular head was sacrificed; not, however, until exsanguination was great and shock profound, and there had been extensive laceration of the tissues.

Tuffier believes that the functional results are much better after arthrotomy. He would, therefore, prefer arthrotomy as a primary endeavor, and then, if the exploratory incision revealed an osseous lesion, he would resect the head.

Schede insists that the effects on function are always very much better after operative reduction than after excision of the humeral head.

Delorme, in all old cases, resects the head. He records an example, after subspinous displacement, when this was followed by excellent shoulder action.

From the foregoing, and from a rational view of the subject, based on our knowledge of the character of structural disorganization present, in recent irreducible dislocations, it is evident that if sanguineous measures are decided on, an *exploratory* arthrotomy should be first undertaken; then, should we detect a fracture through the apophyses of the humerus or of its necks or through the glenoid fossa, as a second and final step it may be found necessary, as a complementary measure, to resect the head.

In old dislocations attended with painful ankylosis or disability, after organic changes have set in, when the muscles have wasted and the humeral head has undergone degenerative changes, arthrotomy with forced reduction should not be undertaken; but a simple and comparatively bloodless resection should, in every instance, have the preference.

ARTHROTOMY OR RESECTION IN HABITUAL OR PERSISTENT LUXATION.

The head of the humerus, once completely luxated, is liable for some time after reduction, on any sudden or vigorous movement, to again suffer displacement. In some, after reduction, it can not be retained in the position completely; the head tends to droop forward or outward; there is essentially a state of subluxation, and in various accentuated cases of this type, it has been sometimes denied that the head was ever reduced at all. These cases are sometimes a most painful and troublesome cause of expensive civil action for the surgeon. The deltoid has sustained violent over-tension, and slowly, if ever again, recovers its full tone; or perchance, the circumflex nerve is involved. Again, there are cases, happily very rare, in which, though reduction is easy, the weight of the arm is enough to drag the articular head completely out of the glenoid cavity.

Arthrotomy with excision of the head has served a most useful purpose in many cases of habitual or recurring shoulder luxation, although other methods are in vogue which appear, in the hands of some surgeons, to have been effective in overcoming the tendency to re-

currence of luxation. A remarkable case of the above class is published by Platt, from Mr. Southam's service. The patient was an epileptic, 45 years old, whose shoulder had been dislocated about fifty times. Excision of the humeral head resulted in a very useful arm.

In those cases which have been treated by resection it is remarkable to note the extent of *restitutio ad integrum* by Nature's unaided efforts. Thus Chassier, Roux, Hutchinson notably, have published the results of their examinations of shoulders post-mortem, in which the humeral head has been resected from three months to twenty years. In all they have found stout bands of fibrous tissue firmly joining the end of the humerus to the scapula. Dr. Souchon makes an extended note on this important post-operative state of the parts.

TECHNIQUE: MODE OF OPERATIVE PROCEDURE: ILLUSTRATIVE CASES.

Lord Lister was the first who recommended and performed arthrotomy as an *en courrait* procedure for fracture of the patella with extensive displacement of the fragments; and in 1887 he performed for the first time, arthrotomy for double shoulder dislocation. The dislocations were subcoracoid of eight weeks' standing, in a man of good muscular development. He commenced by making a vertical incision along the inner aspect of the deltoid. This brought him down on the tendon of the subscapularis muscle, which he divided with the external rotators, when traction was applied with pulleys and failed. Then all the internal rotators were severed and the pulleys again applied, when the head went into position. The result being very unsatisfactory, after two weeks the other point was similarly treated with the same results, the bone going into place at first efforts with the pulleys. Another similar case shortly after came under Lister's care for double dislocation of seven months' standing, in an epileptic. On free section of the rotators, with the aid of traction, the bone went readily into place. Six months later the other point was opened, and a resection of the head made. Both these cases yielded excellent results, and were presented before the Hunterian Society of London.

Lord Lister advises that in all old cases, the first step should be to expose the head and raise it well, and free it from any adhesions before traction is commenced, in order that the dangers may be obviated which arise from possible adhesions of the larger blood trunks with the head of the humerus. After this step, all the rotators should be divided and traction applied. This failing, we should excise the head.

Sir William MacCormick, assisted by Lord Lister, reduced the humeral head with great difficulty after arthrotomy, but supuration followed, and later section through the anatomic head had to be done.

Cotterill replaced the heads of two dislocated humeri by section; one of the cases being of four and a half months' standing. All the muscular attachments to the outer head were divided and the capsule opened, when the glenoid cavity was found partly filled by fibrous material. The bone was, however, replaced by supuration followed, though later the wound healed and some joint action followed. In the second case, six weeks old, on section it was found that the glenoid base was segmented by a fracture. The bone was replaced. In both of these cases there was paralysis of the limb before operation, which entirely disappeared and a fair degree of function was recovered.

Cotterill believes that the comparative value of this operation can not be yet determined.

Mayo Robson exposed the articular head and opened

the capsule. He found the glenoid cavity quite obliterated; he then closed the wound, leaving the head *in statu quo*. Some movement in the arm followed.

Watson Cheyne and Pearce Gould have restored the displaced head by arthrotomy with good ultimate functional results.

Mr. Edward Owen has treated three old irreducible cases, two women, by excision of the head. He made a clean vertical incision, exposed the head freely after dividing all its muscular attachments, and then excised it with a saw. Owen calls attention to the great danger to life from very violent traction in old dislocations. He regards anything past "eight weeks" an old dislocation, and beyond the time when forcible reduction could be safely undertaken. In his three cases useful joints were secured.

Lucas-Championniere declares that the relative value of arthrotomy and excision of the humeral head should not admit of controversy; but that the head should never be cleared away unless its replacement is impossible or it gives rise to painful conditions in its new situation. He even goes further and advises against operative procedures under any circumstances, unless the functional power of the limb is seriously compromised. He then narrates the case of a physician who had a dislocated shoulder which gave him so little trouble that he was unaware of its existence until his attention was called to the deformity by a confrere. Velpeau, under whose care he came, advised non-interference.

MODE OF INCISION. THE TRANS-SCAPULA-OSSEO-MUSCULAR FLAPS, ETC.

All our modern operative methods of dealing with irreducible shoulder dislocations entail a large open wound, that the deep parts be denuded and freely exposed.

What constitutes the greatest objection to the operative reduction of shoulder luxations is the extensive division of the soft parts, of the integral structures of the joint. Hemorrhage is free, but not difficult to control.

When the head is deeply locked, through a lacerated capsule, between or under contracted muscles, a large dissection must be made, and even then, so much traction and torsion on the humeral shaft are sometimes necessary that the parts are freely lacerated or contused; hence, their vital resistance being reduced, the tendency to infection and suppuration after arthrotomy is great.

Ollier noticed the uncertain position of the circumflex nerve, and the danger of wounding or dividing it when a section is made through the surgical neck; and Souchon observes that, in these cases, the care of the deltoid muscle and the nerve which animates it is an important point.

The convex incision has been quite generally discarded, because of the inevitable damage to the deltoid.

Diffenbach made a deep section through the pectoralis major, the latissimus dorsi, the two teres muscles and capsule.

In 1883 Poillon published a case in which he adopted this incision with good effect.

Reclus somewhat modified the procedure. He sent the bistoury in at about a centimeter below the summit of the acromion, the point directed horizontally over the head of the humerus. It was then pressed firmly inward between the anterior surface of the head and the under surface of the deltoid, dividing, in its course inward, all the fibrous structures and the capsule. This is essentially a revival of the "subcutaneous section" of Wisenhold.

In a subglenoid dislocation, hoping to the more easily reach and free the head, Volkmann made a vertical incision which failed to aid in reduction, and so wounded the axillary vein that it had to be ligated. By a similar incision, Kuster so lacerated the circumflex artery that it had to be ligated. He had suspected button-holing of the capsule, but when he cut down he found it entire though much thickened.

The coraco-humeral is now the incision generally preferred, as it entails less mutilation, is the safest, permits of the freest exploration, and ready exarticulation, and excision when this is desirable. The latest device for freely opening up the shoulder-joint is published by the celebrated Chicago surgeon, Prof. Nicholas Senn. It constitutes a radical departure from all former methods, although, of all the prodigious innovations contributed to surgical art and science by its originator, it is the most vulnerable; for, it would seem to be not only open to adverse criticism, but to positive condemnation. It is based on sound mechanical premises, but its range of destruction is great. Dr. Senn describes his open method as follows: "First an incision is commenced over the coracoid process and carried downward and outward in a gentle curve as far as the middle of the deltoid muscle, when it is continued in a similar curve upward and backward as far as the posterior border of the axillary space on the same level where it commenced; i. e., a point opposite the coracoid process. The semi-lunar flap is next reflected up as far as the base of the acromion process. Now the acromion process is detached with a saw, and turned down with the deltoid muscle attached. The capsule of the joint is now opened and freely explored. If the operation is for an irreducible luxation, the head of the bone can be detached, the cause of resistance sought for and removed, when reduction can be accomplished by direct or indirect means." He concludes by affirming that "when this trans-scapula section is done for irreducible dislocation, it involves no important tendons, muscles, vessels or nerves, and for this reason, good functional results may be confidently expected."

It is evident, though not so stated, that this means of opening the joint is intended for recent cases only, as in the old or recurrent habitual luxations, for obvious reasons, it would be of no possible value. But under any circumstances this section of a trans-scapular osseo-muscular flap must be serious in its consequences to the ulterior use of the limb. It is well known that the deltoid alone is capable of holding the humerus up and maintaining strength and action in the shoulder, when practically all the other muscular attachments are cut away.

An example of this, Professor Dennis recently demonstrated before the N. Y. County Medical Association, in a young man, from whom he had removed the head, both tuberosities and more than an inch of the humeral shaft; and yet, after recovery, nearly the full strength and movement in the joint were maintained by the undivided deltoid.

In the cadaver, if we make a clean cut across the three segments of the deltoid, and allow the arm to hang over the table, the head falls downward and outward, and we have a subluxation. In the Senn operation, the wide breach in this muscle must close in, and the ends unite by scar tissue, a substance which we know is always sure to stretch when put on a strain; when the head of the bone must inevitably topple downward or forward, pressing on the tubular structures, and in time possibly undergoing complete displacement.

Shafts of bones divided by saw cuts, we know, do not always unite well. If the cleft here through the root of the acromion process should fail to fuse well by osseous bond, the effects on the shoulder must be disastrous. Possibly the theoretic objections to the trans-scapular incision may not be realized in practice; though they must remain until controverted by clinical demonstration, which is yet impossible, as recent surgical literature records no cases so treated.

PERSISTENT DISLOCATION, REDUCIBLE BUT NOT RETAINABLE.

Besides those irreducible cases which are comparatively numerous, we have others, though very unusual, in which, either from damage to the muscles or the nerve cords, although reduction is easy the arm sinks downward and hangs limp by the side of the body, with little power in it.

Some years ago Prof. F. S. Dennis presented such a case before the N. Y. Academy of Medicine, in which amputation was seriously contemplated. Several such abound in surgical literature, as serious complications following luxation. Ricard has recorded two which were treated, it appears, with some advantage, by arthrotomy and reefing the capsule, i. e., by replacing the humeral head and tucking up the folds of the elongated capsule. However, it seems inconceivable how such a procedure can have any permanent effects, because the elongation of the capsule is the consequence and not the cause.

One such case came under my own care in a boy 7 years old. The dislocation was ten months old, and was complete. There was marked atrophy of the shoulder muscles, but sensation was intact, and there was fairly free motion in the forearm and hand. It was my impression that the capsule had been ruptured or that the head had slipped through it. But on dissection it was found entire, though very much thinned. The long head of the biceps was in position, and nothing was found on arthrotomy to account for the condition. The slack of the capsule was cut away and then closed. With the arm reduced and firmly fixed, a gypsum dressing was applied. Union was primary. For a time it was thought that reposition was permanent, but at the end of three months the dislocation had again entirely returned.

In this class, wherein diverse etiologic factors come into play, different modes of therapeutic procedure must be utilized. Authors are not in accord on causation, therefore we note that Cramer, Kuster, Volkman, and Voght, regarding enlargement of the humeral head as a mechanical impediment to retention, excise it. Burrell, Ricard, and others noted enlargement, thickening, and elongation of the capsule. Roser believed that non-return was sometimes caused by an enlargement of the subacromian and subscapular bursa.

In my own experiments, full distension of the subacromian bursa by injected liquid offered a decided impediment to replacement.

Malgaigne supposed a rent in the capsule was an obstacle.

Broca and Hartman thought that an absence of consolidation in fracture through the glenoid fossa was responsible for non-retention in certain cases.

The recent achievements of Ollier would seem to warrant the hope that in many of these important cases in healthy subjects, we may accomplish much by boldly resecting through the surgical neck and endeavoring to secure fixation and synarthrosis by union of the divided humerus with the scapula. If not, then some descrip-

tion of an elastic brace should be applied over the shoulder and arm, to keep the articular head securely in the glenoid cavity, and there retain it, with the hope that in time sufficient retraction may take place in the overlying muscles to permanently prevent later displacement.

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Therapeutics.

Dyspepsia.

FOR ACID DYSPEPSIA—FERMENTATIVE.

- R. Sodii chloridi ʒss
- Sodii bicarbonatis ʒi
- Sodii sulphatis ʒiiss

M. Ft. chart. Sig. Small teaspoonful in one pint of hot water an hour before meals. Regulate amount of salts according to bowels—one or two movements daily being desired.

—H. B. Whitney.

CHRONIC DYSPEPSIA.

Comby advises that in chronic dyspepsia due to atony and dilatation of the stomach in children, 5 to 10 years old, the following treatment should be continued for ten days, then omitted for the same period and repeated. It is contraindicated in severe pain of the stomach with accompanying great nervous irritability:

- R. Pulv. nucis vomicæ gr. 1/6 | 01
- Sodii bicarbonatis ʒi
- Magnesia calcinata. āā gr. iii | 2
- Pepsini gr. iss | 1

M. Sig. For one powder to be taken before meals, morning and evening.

HYPERCHLORHYDRIA.

- R. Betanaphthol gr. v
- Ess. zingib. ʒi
- Olei cajuput. gtt. i

M. Sig. To be taken in a small quantity of water, followed by larger draught.

Full doses of alkalis to be given at height of digestion.

—D. D. Stewart.

A. H. Hoy writes as follows regarding the treatment of dyspepsia, quoted from the Practitioner's Manual:

There are two essential points in the treatment of dyspepsia: 1. In the treatment of all forms of indigestion, be it gastric or intestinal, a sterile diet must be insisted upon. This means absolutely sterile, or at least the attempt to make it so, and admits of no distinction between harmless and harmful micro-organisms. Bread made with yeast, as ordinarily eaten, must be considered a germ-bearer, and butter also, even the choicest brands. It is the assumption that certain germs are harmless in the intestinal tract, which is the cause of failure to relieve many dyspepsies.

The physician should look at this matter from the standpoint of the surgeon and make no distinction as to the kinds of germs. Micro-organisms are of no aid to digestion. On the contrary, they may derange and inhibit the process just as much as they do the healing of a wound.

2. Limit or forbid entirely the ingestion of the organic acids in food or drink. We must remember that digestion is essentially an alkaline process. Even the acidity of the gastric contents is only temporary and must not go beyond narrow limits. It is proven that gastric digestion is not a life-sustaining necessity. It is necessary to a healthy and normal condition of the body, however, that the contents of the small intestine be maintained in alkaline condition, so that peptone can be changed into serum albumin. Nature will neutralize a great amount of free organic acid in the intestine, but the alkali necessary is taken from the blood and hence that fluid loses its normal alkalinity, and a departure from a healthy and normal state at once ensues.

The elimination of micro-organisms and organic acids from the alimentary tract in dyspepsia oftentimes stands in the relation of cause and effect, for the micro-organisms themselves are the great producers of many of the organic acids.

Diet, then, being the great factor in the treatment of all kinds of dyspepsia, some of the distressing conditions may be relieved by the following medication:

FOR NERVO-MOTOR DYSPEPSIA.

- R. Sodii bromidi ʒii
- Cocaine sulphatis gr. v-x
- Carmine, C. P. gr. xxx
- Aque destil. ʒiv

M. Ft. sol. Sig. From half to a teaspoonful in hot or cold water, either before or after eating, as deemed best in each case.

The carmine is not added for color. The writer believes that the carminic acid therein has germicidal powers. The follow-

ing should be applied to the skin over the region of the stomach by brisk rubbing with a piece of new red flannel:

- R. Ungt. hydrargyri ʒi
- Olei sinapis gtt. xv

M. Sig. Use a piece as large as a bean as directed, night and morning.

For an intestinal germicide the following seems to meet indications most successfully:

- R. Salophen ʒi
- M. Ft. cap. No. xii. Sig. One capsule before eating. Take no acids while using.

From the same source are quoted the following prescriptions which have been used in the treatment of dyspepsia:

IN FLATULENT INDIGESTIONS.

- R. Zinci sulphocarbollatis gr. xii
- Pepsini pur. ʒss
- Pancreatis ext. āā ʒss
- Bismuthi subgallat ʒiii

M. Ft. chart. No. xii. Sig. One before each meal. In indigestion, with much coating of the tongue, in nasopharyngeal catarrh, and especially in morning vomiting:

- R. Pulv. ipecac gr. viii
- Pepsini pur. ʒss
- Pulv. rhei ʒi
- Sodii bicar. ʒiiss
- Tinct. nucis vomicæ ʒiv
- Aque menthæ pip. ad. ʒviii

M. Sig. Shake well, and take a teaspoonful before meals in half a glass of hot water.

—L. F. Donohoe.

In the reflex nervous disturbances of stomach derangement, especially palpitation of the heart, so-called nervous dyspepsia:

- R. Zinci phosphidi ʒi
- Sodii et auri chloridi, āā gr. iss
- Ext. nucis vomicæ gr. viiss

M. Ft. pil. No. xxx. Sig. A teaspoonful every two or three hours.

—Upshur.

ACUTE INDIGESTION NOT RELIEVED BY CATHARTICS:

- R. Resorcini gr. xl
- Sodii chloratis ʒi
- Mist. rhei et sodæ ʒii

M. Sig. A teaspoonful every two or three hours.

—Andrew H. Smith.

- R. Acidi hydrochlorici dil. ʒiv
- Tinct. nucis vomicæ ʒii
- Liq. potassii arsenitis gtt. lxxii
- Ess. pepsini ʒii
- Aque, ad. ʒvi

M. Sig. Two teaspoonfuls in water after meals.

Or

- R. Fellis bovis purificati gr. i
- Ext. pancreatini gr. i
- Ext. colocynthidis comp. gr. ¼
- Quinina hydrochloratis gr. ss
- Ext. nucis vomicæ gr. ¼
- Ext. taraxaci gr. i

M. Sig. For one tablet. One or two before meals.

—Wm. Porter.

FLATULENT DYSPEPSIA.

- R. Magnesia
- Phosphate of lime
- Powdered charcoal
- Sulphur, equal parts.

M. Sig. Teaspoonful as required, taken in a little water.

Or

- R. Olei eucosoti m. xii
- Spiritus tenuioris ʒss
- Ammonii benzoatis ʒiii
- Glycerini ʒvi
- Infusi carophylli, q. s. ad. ʒvi

M. Sig. Teaspoonful in a glass of water.

—B. W. Richardson.

ANTISPASMODIC MIXTURE.

For the violent spasmodic attacks, with great distention of the stomach and bowels, to which some sufferers from flatulence are liable, the following is nearly always efficacious:

- R. Spirit cajuputi (P. D.) ʒiii
- Spirit ammoniæ aromati. ʒiii
- Spirit chloroformi ʒii

M. Sig. One teaspoonful in a glass of water every half-hour or every quarter-hour until relief is obtained.

FLATULENCE INDICATING GASTRITIS.

When flatulence is associated with pain after food and coated tongue, indicating gastritis, the following prescription should be given:

R. Potassii bicarb. vel sodii bicarb. ʒi
Spir. ammonia aromatiæ ʒi ss
Liq. strychninæ (P. B.) ʒss
Spts. cajuputi (P. B.) ʒi ss-ʒi
Spts. chloroformi ʒi
Infusi calumbæ vel gentiane co. ʒvi

M. Ft. mist. Sig. A sixth part three times a day between meals.
—*Stephen Mackenzie.*

Treatment of Typhoid Fever by Tepid Bathing.

The good effect of hyriatic measures in the treatment of typhoid fever is due not alone to the reduction in temperature brought about, but also to an impression made on the nervous system through its cutaneous terminals. In accordance with the recommendation of Brand, the cold bath has been the measure most commonly employed for this purpose. Immersion of the patient in water at a low temperature is, however, at times attended with serious difficulties. Thus the condition of the patient may seem to forbid it; or the patient may himself resent it; or the friends may interpose sentimental objections. It would, therefore, be a gain if the same results could be obtained by other, and perhaps more agreeable or more acceptable, measures, and it would be an advantage to have a substitute for the cold bath should this be contraindicated. From his experience in the treatment of typhoid fever, at the Brisbane Hospital, Hirschfeld (*Australasian Medical Gazette*, Jan. 20, 1900, p. 22) believes that the tepid bath is such a measure. It is his rule to bathe the patient for twenty minutes in water at a temperature of 85 F., when the temperature taken in the rectum every three hours is 102.2 F. by day or 104 F. by night. Pulse and temperature are noted half an hour after a bath, and, in accordance with the individual reaction of the patient, the baths are continued at the same temperature or are raised to 90 or reduced to 80 degrees. Exceptionally a lower temperature than the latter is required. A purgative is generally given to patients seen in the first week—either 5 grains of calomel, with 40 grains of compound jalap-powder, or from ½ to 1 ounce of castor-oil, with 15 minims of spirits of turpentine. In addition a mixture of quinin and chlorin is administered, being replaced in the third week by bismuth salicylate. When antipyretics are indicated, 20 grains of quinin are given at night, or from 10 to 15 grains of lactophenin thrice daily. Alcohol is relied on to sustain the action of the heart if necessary. The diet is generally wholly liquid while the fever lasts, and includes three pints of milk and two pints of beef-tea. When the tongue clears and the appetite returns, thin corn-flour or gruel is allowed during defervescence.

Hirschfeld contends that the patient does not part with his heat so readily in the cold bath as in the tepid one, because the initial contraction of the blood-vessels of the skin in the cold bath allows less blood to pass through the skin, and consequently less heat is dissipated, but this objection is overcome by vigorous friction of the surface. Further, the shivering of the cold bath is believed to cause rapid elevation of the temperature of the body by lessening the circulation through the skin, and inducing involuntary muscular contractions. Finally, it is thought that while the dissipation of heat is greater in the cold bath, the production of heat is stimulated in the period of reaction.

The statistics that Hirschfeld has to present seem insufficient for a final conclusion. They cover a period of three years, in the first of which the system in vogue, namely, bathing at the natural temperature of the water, was continued; during the part of the next year tepid baths were systematically substituted for cold bathing; and in the third year the tepid baths were employed exclusively. During the first year 266 cases were treated, with a mortality of 7.9; during the second year 147 cases, with mortality of 8.2; and during the third year 120 cases, with a mortality of 4.2. The especially favorable results of the last year are not attributed exclusively to the tepid bath, as it is thought the patients may have been seen at an earlier

stage of the affection, while in the previous year a considerable number of moribund ones were treated, death resulting within thirty-six or forty-eight hours after reception into the hospital.

For Arrest of Suppuration.

Levurin is the name given to a dried extract of beer-yeast, whose administration has been recommended for the arrest of suppuration and the reduction of temperature. The dose is a teaspoonful, given twice daily, before food, in beer or aerated water or in cachets. At a recent meeting of the Edinburgh Obstetrical Society, Prof. A. R. Simpson (*British Med. Jour.*, March 10) cited cases of tonsillitis, appendicitis, tuberculous ulceration, puerperal septicaemia, and pelvic cellulitis in which he had employed the preparation with satisfactory results. The mode of action is not explained.

Treatment of Dyspepsia With Natural Gastric Juice.

The Paris correspondent of *The Lancet*, February 17, p. 502, describes a new plan of treating dyspepsia, proposed by a French clinician and consisting in the administration of from 100 to 150 grams of gastric juice obtained from dogs through gastric fistula, and given in divided doses of 25 grams mixed with 75 grams of cold milk, beer or bouillon. The gastric juice is gradually withdrawn until the patient is able to dispense with it entirely. The results obtained have been good and can not be attributed to suggestion. The gastric juice is not easily obtained in large quantities and its production is expensive.

Medicolegal.

Model of Eye Not Scientific Apparatus.—In the opinion of the United States Treasury Department, a model of a human eye imported for an institution established for philosophic, educational, or scientific purposes is not a philosophic or scientific instrument, preparation, or apparatus, within the meaning of, and entitled to free entry under, paragraph 638 of the tariff act of July 24, 1897. The reason given for this ruling is that the article is not used for the purpose of making observations and discoveries in Nature, or for experiments in developing and exhibiting natural forces and conditions under which they can be called into activity, but is intended rather as an object-lesson to classes in anatomy or optics.

Destroys Bar to Action in Injury Case.—While it assents to the doctrine that an action in tort, once barred, can not be revived by a new promise, the Supreme Court of Michigan nevertheless holds, in *Renackowsky vs. Board of Water Commissioners of the City of Detroit*, that a plaintiff in a personal injury case may meet the defense that his right of action has been barred by the statute of limitations by showing that, before the time fixed by the statute for the bar, the defendant by his course of conduct, led him to believe that a suit to enforce his rights would be unnecessary, and thereby lulled him into a feeling of security, and induced him to refrain from bringing his action within the period fixed by statute.

Insurance Claimant Can Not Waive Privileges.—On the day before his death, a holder of a certificate of insurance payable to his son had the same changed so as to make his own brother the beneficiary. The son took the matter into court. He alleged, among other things, that when the change was made his father was very ill, and under the influence of drugs, and incapable of comprehending what he was doing. He was also permitted to introduce as a witness the physician who attended his father, and to examine him as to communications made by his father in relation to his physical and mental condition. This, the Supreme Court of Iowa holds, *Shuman vs. Supreme Lodge Knights of Honor*, was error. It holds that section 4608 of the Iowa Code makes such communications privileged, and the death of the communicant is not in itself sufficient in all instances to remove the bar. The patient, the court goes on to say, may waive this privilege; and in cases of contests of wills, where the parties are claiming

rights to the estate through devise, inheritance, or in a representative capacity, those representing the estate may also waive the privilege. But this case, it holds, did not come within the rule applicable to cases of that character. While both of the claimants of the fund here were blood relations of the decedent, they were neither of them asserting rights in that capacity. Each rested his right on other grounds. Each claimed to be, in effect, an appointee of the decedent. And there is no warrant, the court declares, for making such a case as this an exception to the rule of the statute.

Disease Contracted Before Marriage.—After they had been married and lived together for about ten months, a wife ascertained for the first time that her husband was suffering from a loathsome venereal disease, contracted before his marriage. From the time of this discovery they occupied separate rooms, and the wife, for nearly two years and a half more, nursed and cared for her husband, whose disease became worse. Then, his condition having become so loathsome that she could no longer care for him or nurse him, without danger to her health, she had a talk with him, and told him that something would have to be done, and he said that he would go to his brother's, after which he took his satchel and left, simply saying, "I am going." She sued for divorce, on the ground of constructive desertion. But the Court of Chancery of New Jersey holds that her petition should be dismissed, though without prejudice to her filing a bill for annulment of marriage. It says, Crane vs. Crane, that had the disease been contracted after the marriage, it would seem that the separation under the above circumstances might have been constituted a case of constructive desertion by the husband, as based on a cruelty which was a cause for divorce. But this cruelty relied on as the basis of constructive desertion resulted, not from any act of the husband since his marriage, but was the result of previous misconduct. Wherefore, the court is of the opinion that the only relief of the wife, if she has any, against the man whom she took for better or worse, must be an annulment of the contract of marriage on account of the cruel and outrageous fraud which seems to have been perpetrated. Her conduct in refusing to live longer with her husband, the court goes on to say, seems to have been entirely justifiable, but to call his departure from her house, under the circumstances, a separation of the wife, would, it thinks, create a new cause of divorce, by adopting a construction of the statute relating to desertions which goes beyond the authority of the words of the statute or of any decision.

Can Not Testify to Own Claim For Services.—The constitution of the State of Arkansas provides that "in actions by or against executors, administrators or guardians, in which judgment may be rendered for or against them, neither party shall be allowed to testify against the other as to any transactions with or statements of the testator, intestate or ward, unless called to testify thereto by the opposite party." This was invoked in the case of Cash vs. Kirkham. Here a physician had presented two accounts against the estate of a deceased person. They were principally for services rendered the deceased and his family. The administrator disallowed them. Then there was a suit over them. In that, the plaintiff was allowed to testify, over the defendant administrator's objection, that he was the attending physician during the last illness of the deceased; that he made forty visits, at \$2 a visit; that the cost of an operation on the wife of the deceased was \$25; and that the total amount due on this account was \$120. The defendant objected to this testimony of the plaintiff, for incompetency—the same being as to transactions with the defendant's intestate. The overruling of this objection and allowing the evidence to go in, the Supreme Court of Arkansas now holds was reversible error. It says that the testimony of the plaintiff tended to prove an implied contract with the deceased, the legal effect of which, as a whole, if true, was an implied promise of the deceased to pay the plaintiff the sum of \$105 for services rendered. This was a transaction with the deceased—as much as it would have been had the deceased expressly promised to pay \$105. The only difference between the two transactions was that in one case the promise was implied, and in the

other it was expressed. Hence, the court holds, the testimony should have been excluded on the ground that the plaintiff was incompetent to testify as to such transaction.

Licensing Barbers.—Mention has already been made, in the department of "Medical News" (Feb. 10, p. 374) of the fact that the Supreme Court of Minnesota has sustained the law requiring all barbers in that state to have licenses. The title of the case in which it has done this, after, as it declares, the statute was assailed from all directions, is *State vs. Zeno*. Here the court says that laws enacted for the purpose of regulating or throwing restrictions around a trade, calling or occupation, in the interests of the public health and morals, are everywhere upheld and sustained, as being within the police power of the state. Then, it says that it is a fact, of which it must take judicial notice, that the people of to-day come into contact with, and engage the services of, those following the occupation of barber, as much as, if not more than, any other occupation or profession. Besides, it says that it must take notice of the fact, too, that the interests of the public health require and demand that persons following that occupation be reasonably familiar with, and favorably inclined toward, ordinary rules of cleanliness; that diseases of the face and skin are spread from barber shops, caused, no doubt, by uncleanness or the incompetency of barbers. So it holds that the occupation of a barber is a calling or trade involving the public health and public good, and that the health of the citizen and protection from diseases spread from barber shops conducted by unclean and incompetent barbers, fully justify the law.

Malpractice on Arm.—In *Jameson vs. Weld*, wherein the plaintiff obtained a judgment for \$500 and the Supreme Judicial Court of Maine has overruled a motion for a new trial, malpractice in the treatment of an injury to the elbow of the right arm was charged. That there was a dislocation of both the ulna and the radius was not questioned. The defendant diagnosed the case as one of fracture and dislocation. The plaintiff insisted that there was no fracture, and that the diagnosis and treatment were accordingly wrong. But, if she was in error in this respect, the court says that it still remained necessary to inquire whether, there being fractures, the dislocation was treated with that reasonable degree of skill and care which the law imposes on surgeons. Further on it states that the parties differed most in their testimony with respect to the statements made by the doctor, from time to time, concerning the condition of the elbow and his knowledge of it. And the court says that if her statement was true that, being inquired of by her in the ninth week of the treatment, he assured her that the dislocation had been reduced successfully the first time he treated her, while this would not, of itself, prove want of skill or care, yet the jury would be entitled to give it considerable weight, as showing a purpose to conceal the true condition, for some reason or other. Then, it holds that it is not enough to set aside a verdict that it may be wrong, or that the court might have come to a different conclusion, it not appearing, upon all the evidence, clearly wrong. It also calls attention, with apparent approval, to the fact that it was left to the jury to determine whether, the issue being raised, reasonable skill had been used in letting the arm get stiff, nearly straight, when it might possibly have been somewhat more useful if flexed. Continuing, it holds that in a case of malpractice to an arm, where it is claimed that the present condition of the arm is due to the want of care or skill on the part of the defendant, it is within the discretion of the presiding justice to permit the arm to be exhibited to the jury, although the defendant may claim that the present condition of the arm is due to some other cause. It likewise holds that it is within the discretion of a presiding justice to admit in evidence an X ray photograph. Whether it is sufficiently verified, whether it appears to be fairly representative of the object portrayed, and whether it may be useful to the jury, it declares, are preliminary questions addressed to him, and his determination thereon is not open to exceptions. The use of the word "pungent," by the presiding justice, in alluding, during his charge to the jury, to iodine or ointment used on the plaintiff's arm, though it may be inaccurate, is not deemed to be prejudicial.

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

Medical Record (N. Y.), March 31.

- 1.—*Muscular Rheumatism. I. Adler.
- 2.—*Observations on Treatment of Cancer. A. R. Robinson and S. Edin.
- 3.—*Cardinal Pathognomonic Signs of Fractures of Lower End of Radius (Colles). Martin W. Ware.
- 4.—Locomotor Ataxia. B. C. Lovelaud.

Medical News (N. Y.), March 31.

- 5.—*Myocarditis in Infancy and Childhood. Henry Koplik.
- 6.—*Uterine Fibroids Complicated by Pregnancy. Willis E. Ford.
- 7.—*Toxins from a Chemical and Pathogenic Standpoint. A. E. Austin and I. H. Coriat.
- 8.—*Alcohol as a General Stimulant and Heart Tonic; Its Use to the Animal Economy in Health and Disease. T. J. Hillis.
- 9.—*Treatment of Whooping-Cough. Henry Coggeshall.

New York Medical Journal, March 31.

- 10.—*Gunshot Wounds: Report of Gunshot Cases in Spanish-American War, and Detonations Therefrom. W. C. Borden.
- 11.—*Report of Case of Tumor of Cervicellum with Drainage of Fluid Through the Nose. G. W. McCaskey.
- 12.—*Arthritis Deformans and the Benefits of Electric Treatment. Margaret A. Cleaves.
- 13.—*Spontaneous Discharge of Cerebrospinal Fluid from Nose. W. Freudenthal.
- 14.—*Diabetes Mellitus, with Special Reference to its Treatment with Double Bromid of Gold and Arsenic. George D. Barney.
- 15.—*Is There a Rheumatic Pericostitis? Arthur Stern.
- 16.—*Leucocytosis. J. H. Burch.

Boston Medical and Surgical Journal, March 20.

- 17.—*Typhoid Spine. R. W. Lovett and Chas. F. Withington.
- 18.—*Idiopathic Pneumothorax with Recovery After Aspiration. Elisha S. Boland.
- 19.—*Bradycardia, with Intermittent Albuminuria. Andrew H. Whitridge.

Philadelphia Medical Journal, March 31.

- 20.—*Inaccuracies of Home Modification of Cow's Milk. Charles E. Woodroff.
- 21.—*Case of Polyecephalomyelitis in Adult. Dewitt H. Sherman and William G. Spiller.
- 22.—*Prevalence and Diagnosis of Leukemia. George Dock.
- 23.—*Research into Cause of Collapse or Death from Blows on Lower Chest and Epigastrium. George W. Crile.
- 24.—*Case of Membranous Nondiphtheritic Croup with Recurring Laryngeal Stenosis. Herman B. Sheffield.
- 25.—*Unexplainable Congestion and Enlargement of Left Arm Cured by Exploratory Operation; Splenectomy. Orville Horwitz.

Medical Review (St. Louis, Mo.), March 31.

- 26.—*Peculiar Form of Fistula of Pharynx. W. Freudenthal.
- 27.—*Some Difficulties in Early Diagnosis of Pneumonia; Clinical Report of Two Cases. L. H. Behrens.

Cincinnati Lancet-Clinic, March 31.

- 28.—*Some Practical Points in Diagnosis and Treatment of Commoner Forms of Fractures. Louis A. Stimson.
- 29.—*Interesting Case of Pin Transfixing the Eye. Christian R. Holmes.

Railway Surgeon (Chicago), March 20.

- 30.—*Case of Compound, Complicated Fracture of the Femur. J. E. Luce.
- 31.—*Fractures, Sprains and Contusions. James G. Hunt.
- 32.—*Fracture of Femur. W. C. Gates.

Medical Fortnightly (St. Louis, Mo.), March 26.

- 33.—*Faith Cure and Law. E. F. Baker.
- 34.—*Physiology. A. L. Benedict.

American Practitioner and News (Louisville, Ky.), January 15.

- 35.—*Defective Vision and its Disqualifying Consequences. William B. Henry.
- 36.—*Eye-Strain as a Cause of Disease. A. G. Bincoe.
- 37.—*Three Cases of Puerperal Eclampsia out of Four Women Delivered within Ten Days: One Death. Perry W. Fox.
- 38.—*Report of Two Cases of Diptheria. Joseph Hopson.

Virginia Medical Semi-Monthly (Richmond), March 9.

- 39.—*Case of Paresthesia Sexualis with Anthropophagous Practices, showing Lesion Pointing to the Angular Gyrus as the Probable Cortical Center of the Sexual Instinct. Richard T. Still.
- 40.—*Home and Asym Treatment of Ischuria. T. D. Crothers.
- 41.—*Indications for and Method of Operating on Middle Turbinate Bone. John P. Davidson.
- 42.—*Chronic Non-suppurative Otitis Media. Johnson Eliot.
- 43.—*Fermentative Disorders of the Alimentary Canal of Infants. L. G. Frazier.
- 44.—*Removal of Dislocated Columnar Cartilage. F. Y. Chamberlin.
- 45.—*Report of Case of Tubercular Arthritis of Knee. J. W. Henson.
- 46.—*Latent Gonorrhoea in Male as a Factor in Diseases of Female Organs of Generation. Lewis Whont.

Medical Review of Reviews (N. Y.), March 25.

- 47.—*Education and Profession of Medicine. Andrew V. V. Raymond.
- 48.—*Extrauterine Pregnancy, Early Tubal Rupture; Development of Fetus to Term Free in the Peritoneal Cavity; Celiotomy; Delivery of Living Child; Recovery of Mother. Harry M. Lufkin.
- 49.—*Rational Treatment Neurosuspension of Uterus; a New Method. D. Todtillman.

- 50.—*Preliminary Note on an Operation for Suspension of Uterus. Robert T. Morris.
- 51.—*Pernicious Nausea and Vomiting of Pregnancy; with Report of Case. Edward P. Davis.

- 52.—*Report of Case of Nephrectomy for Pyonephrosis Due to Impaction of Stone in Ureter; with Remarks on Importance of Early Diagnosis and Treatment of Renal Calculi. Charles P. Noble.
- 53.—*Some Notes on Care of Intestine During and After Abdominal Section. L. Grant Baldwin.
- 54.—*Clinical Significance of Developmental Duplications of the Uterus and Vagina. Brooks H. Wells.

Therapeutic Gazette (Detroit, Mich.), March 15.

- 55.—*Treatment of Epididymitis. H. M. Christian.
- 56.—*Use of Citric Acid for Relief of Ozena in Atrophic Rhinitis. Lewis S. Somers.
- 57.—*Etiology and Treatment of Epistaxis. P. S. Donnellan.
- 58.—*Use of Croton Oil in Practice. A. K. Bond.
- 59.—*Treatment of Phthisis Pulmonalis with Nascent Chlorid of Ammonia. James C. Ballard.

Post-Graduate (N. Y.), March.

- 60.—*Results of Pans Operation for Strabismus. D. B. St. John Boosa.
- 61.—*Some Neurologic Notes. Philip Melrowitz.
- 62.—*Gastroptosis. Achilles Rose.
- 63.—*Electric Treatment of Some Forces of Paralysis. Wm. B. Snow.
- 64.—*Non-Operative Treatment of Strabismus; Its Possibilities. A. Edward Davis.
- 65.—*Differentiation and Treatment of Ocular Affections Commonly Met with in Family Practice. Frank Van Fleet.

Peoria Medical Journal (Peoria, Ill.), March.

- 66.—*Four Cases of Appendicitis, with Some of the Lessons That They Teach. J. F. Percy.

Canadian Practitioner and Review (Toronto), March.

- 67.—*Placental Inspection; Its Uncertainties and Its Dangers. J. F. W. Ross.
- 68.—*Puerperal Septicemia. Adam H. Wright.
- 69.—*Case of Tubercular Peritonitis, Complicated by Insanity. Thomas Ovens.

Journal of Cutaneous and Genito-Urinary Diseases (N. Y.), March.

- 70.—*Imperfect or Deficient Urinary Excretion as Observed in Connection with Certain Diseases of the Skin. L. Duncan Bulky.
- 71.—*Catheterization of Healthy Ureter Through an Infected Region. Howard Lilienthal.
- 72.—*Report of Case of Cutaneous Angiosarcoma. James MacFarlane Winfield.
- 73.—*Therapy of Impotence in Male. J. Zabladowski.

Canada Lancet (Toronto), March.

- 74.—*Peptones in Typhoid Fever. Frederick Peaton.
- 75.—*Subcutaneous Abscesses in Connection with a Bacillus in Circulating Blood. Thomas Bradley.
- 76.—*Operations for Soft Cataract. David Webster.
- 77.—*That Running Ear. Perry G. Goldsmith.

Chicago Clinic, March.

- 78.—*Revision of the United States Pharmacopoeia from a Medical Point of View. J. A. Patton.
- 79.—*Surgery of the Hand. W. A. Kuflewski.
- 80.—*Disease of the Conus Medullaris. A. Heym.
- 81.—*Some Practical Abdominal Anatomy for Practitioners. W. T. Eckley.
- 82.—*Inflating Rectal Specula with Detachable Tubes. J. Rawson Pennington.

Medical Times and Register (Philadelphia), March.

- 83.—*Address on a Surgeon's View of Value of Drawing to His Profession. Albert H. Tuttle.

Cleveland Medical Gazette, March.

- 84.—*Clinical and Pathologic Report of Two Cases of Genital Tuberculosis. Hunter Robb.
- 85.—*Résumé of Different Methods of Treating Hydrocele. Nicola Cerri.
- 86.—*Report of Case of Septicemia, with Metastatic Abscesses and Circutrical Contraction Retarding Labor. Charles L. Webster.

Illinois Medical Journal (Springfield), March.

- 87.—*Mechanical Method of Treating Sciatica. C. C. Hunt.
- 88.—*Why and When Operate for Appendicitis? W. F. Grinstead.
- 89.—*Medicological Aspect of Bright's Disease. Columbus Barlow.
- 90.—*Diagnosis and Clinical Course of Puerperal Eclampsia. Frank B. Eble.
- 91.—*Unusual Case of Perforating Gastric Ulcer. C. W. Hall.
- 92.—*Two Affections of Knee-Joint: Gonorrhoeal Synovitis; Loose Body in Joint. Geo. N. Kreider.

Obstetrics (N. Y.), March.

- 93.—*Advisibility of Inducing Premature Labor in Syphilitic, with Pro-lapse of Uterus and Bladder. Thomas S. Bullock.
- 94.—*Puerperal Septicemia, and Some of the Methods of its Prevention. Wesley A. Rape.

Western Medical Review (Lincoln, Neb.), March 15.

- 95.—*President's Address before Nebraska State Medical League. J. W. Bullard.
- 96.—*Congenital Hip-Joint Displacements. John Prentiss Lord.
- 97.—*Diagnosis of Abdominal Tumors. M. L. Harris.
- 98.—*Omphorectomy for Gravo Functional Nervous Diseases Occurring during Menstruation. D. C. Brockman.
- 99.—*Abortion. (continued.) A. D. Wilkinson.
- 100.—*Pollution of Drinking Water by Sewage. J. E. State.
- 101.—*Some Newer Therapeutic Agents. C. W. Lillie.

- 102.—Treatment of Rickets. Robert C. Kenner.
Ophthalmic Record (Chicago), March.
- 103.—*Clinical and Histological Study of Melanotic Sarcoma of Choroid, with Recurrence of Growth in the Orbit Five Months After Enucleation of Eyeball and one Extra-Scleral Mass. G. E. de Schweinitz.
- 104.—Profuse Recto-Choroidal Hemorrhage after Iridectomy for Chronic Glaucoma. F. C. Hotz.
- 105.—*Snow-Blindness. S. Mitchell.
- 106.—Fatigue from Effort to Maintain Binocular Single Vision. George J. Ball.
- 107.—Brief Clinical Study of Conjunctival Ulceration. H. McL. Morton.
- 108.—Case of Fracture of Orbit, with Unusual Symptoms. Geo. E. Bellows.
- 109.—Nystagmus Oculatorius Verticalis. W. P. Malone.
- 110.—*Chloretone (Tri-Chlorotertiary-Butyl Alcohol) in Ophthalmic Practice. H. McL. Morton.
- 111.—Muscular Atrophy. E. H. Hazen.
Southern California Practitioner (Los Angeles), March.
- 112.—Description of Cystoscopes for Catheterizing of Ureters. Granville MacGowan.
- 113.—Vis Medicatrix Nature. R. J. Gregg.
- 114.—Encysted Hydrocele of Testis, Bilateral. Ralph Williams.
- 115.—Suggestions on Systematic Discounts in Collection of Surgeon's Fees. Ernst Hall.
- 116.—How to Give an Ice-Cold Sponge Bath. Mary L. Mulholland.
Carolina Medical Journal (Charlotte), March.
- 117.—The Southern Negro; His Recent Erotic Tendencies; Causes; Suggestions as to Prevention. S. C. Baker.
- 118.—Cases of Mastoid Inflammation. Charles W. Kollock.
- 119.—Gunshot Wounds of Knee-Joint. Manning Simons.
- 120.—Syphilitic Gonorrea (?); Case Involving Scrotum and Perineum. William R. Lowman.
- 121.—Causes and Best Method of Treating Deafness in Children. Edward F. Parker.
- 122.—Few Operations by Country Doctor. W. P. Timmerman.
Interstate Medical Journal (St. Louis, Mo.), March.
- 123.—*Lethargy and France. Thomas M. Madden.
- 124.—*Etiology of Acute Tonsillitis. William J. Class.
- 125.—Preliminary Report on Etiology of Scarlatina. R. B. H. Gradwohl.
- 126.—Use of Forceps. Denslow Lewis.
- 127.—Sea-Sickness. J. B. Busdraghi.
- 128.—Four Cases of Diabetes Mellitus of Apparent Bacterial Origin, and Their Successful Treatment. J. P. Sheridan.
Medical and Surgical Monitor (Indianapolis, Ind.), March 15.
- 129.—Address Delivered at Commencement Exercises of St. Vincent's Training School for Nurses. L. H. Dunning.
- 130.—Persistent Erections; Report of Case. Edward M. Amos.
- 131.—Suppurative Hepatitis; Report of Case and Autopsy. A. T. Stewart.
- 132.—Auto-Intoxication. D. L. Field.
Hot Springs Medical Journal, March.
- 133.—Intestinal Auto-Intoxication; Its Prevention and Treatment. W. F. Barclay.
Kansas City Medical Record, March.
- 134.—*Formic Aldehyde as a Preservative of Milk. J. Moechel.
- 135.—Glycosuria. O. H. Parker.
Texas Medical News (Austin), March.
- 136.—*Grant's Cheiloplastic Operation for Restoration of Lip; Report of a Case. Joe. S. Wooten.
- 137.—Interpretation of the Skiagraph. Albert Woldert.
- 138.—Obstetric Notes. I. L. VanZant.
- 139.—Right to Hasten Death. Albert Woldert.

AMERICAN.

1. **Muscular Rheumatism.**—Adler combats the definition of Lorenz that muscular rheumatism is a functional trouble dependent on no particular lesion and due to cold, and maintains that it is, according to all probability and analogy, an infection with a probable streptococcus, perhaps staphylococcus origin, of attenuated virulence. He recognizes that a certain degree of individual predisposition contributes, augmented by indolent and sedentary habits, by improper nutrition, especially immoderate and over-rich diet and alcoholics. He also thinks that climate, probably in some way as yet unexplained, has an influence. Anatomically the disorder must be designated as an interstitial myositis, usually with inflammatory processes in adjacent tissues, the fascia, subcutaneous and fatty tissues and especially the nerves; in the latter the process is likewise that of interstitial neuritis. As sequelæ of the inflammation there are cellular infiltration, connective-tissue indurations, and sometimes even the complete fibrosis of the muscles. These generally exist after the abatement of the inflammation, and give rise to more or less frequent relapses and manifold functional disturbances. Medicinal treatment is indicated in the acute more or less febrile stage. As soon as this is over mechanical treatment is needed, especially adequate and proper massage, to bring about absorption of the infiltrations and indurations and to restore the muscle to its normal conditions.

Since this paper was written he adds a postscript. Wassermann has succeeded in isolating a streptococcus from the blood and viscera in a case of endocarditis, nephritis and chorea following rheumatism. Cultures of this in the rabbit invariably cause polyarticular rheumatism. This he thinks is suggestive of other micro-organisms being found for muscular rheumatism.

2. **Treatment of Cancer.**—The conclusions of Robinson's paper and summary of his arguments are as follows: 1. We know of no drug, animal extract, serum, nor toxin, which, given internally by any avenue of the body, can be relied on for the cure of cancer of any part of the system. 2. The statement that the knife is the only reliable agent in the treatment of cancer is not correct. 3. Certain caustics judiciously chosen and properly applied may attack deposits of the growth inaccessible to the knife, and in these cases should be employed even if the knife is necessary to prepare the way for their use. 4. In some cases both the knife and caustics should be used, and in some other cases curettage, followed by a caustic, is the proper procedure. 5. The majority of cases of cutaneous cancer can be removed with the greatest certainty and with least deformity by caustics, provided the patients are seen before the lymphatic glands are invaded. 6. The knife should be used when the lymphatic glands are invaded, and, also in some other cases of external cancer.

3. **Cardinal Pathognomonic Sign of Colles' Fracture.**—Warne calls attention to the unreliability of the occurrence of silver-fork deformity in Colles' fracture, notwithstanding the prominence that has been given it, and believes he has now found a pathologic sign in the fact that the styloid of the radius is at a lower level than the styloid of the ulna. With the hand in a prone position and on the same plane with the bones of the forearm, this sign is most readily ascertained by impinging the thumb and index finger against the styloids; and projecting the line between these two points, it will take an oblique course, slanting to the radial side. The only mention of this sign that is known to him is in Stimson's treatise on "Fractures and Dislocations." In estimating, the normal wrist must be taken in comparison. The facility of its clinical application renders it of greater value; he calls it a "cardinal pathognomonic sign of Colles' fracture."

5. **Myocarditis in Infancy and Childhood.**—After first noticing the lack of mention of the subject in text-books, and the fact that in daily practice myocarditis is one of the most trying and one of the most important conditions, Koplik reviews the facts known in regard to its pathology and in acute infectious disease. It is more frequent than is supposed, and it is not always as fatal as text-books would lead us to suppose. The muscle of the infant's heart must be capable of restoration to a larger extent than would be supposed when we consider the vast number of infections to which it is subject. He notices the striking effects of diphtheria antitoxin, showing that the toxic action of the disease has been arrested not only in other organs but in the muscle fiber of the heart itself. He then reviews the various conditions in which this complication may occur, with illustrative cases, such as syncope attacks and infectious pneumonias, pertussis, etc. The prognosis of rheumatic cardiac affections is much more favorable in children than in adults, but the most trying cases are those of adherent pericarditis. The possibility of diagnosis during life and the puzzling character of the problem are noticed, and the author points out the symptoms which should put us on our guard. If, in the course of an infectious disease, we have attacks of faintness, pallor, vomiting, disturbed and very irregular heart action, a persistent distortion of the respiration and pulse ratio as in adherent pericardium, it is certainly significant, especially if these attacks have a tendency to recur. If examination of the heart shows extreme weakness of the apex-beat, weakness of the first sound, or disappearance of its muscular quality, greater intensity of the second sound at the apex, with intensification of the second sound at the pulmonary orifice, we certainly in these have danger signals of greatest moment. If, in addition, as in pertussis, we have other signs of cardiac insufficiency, such as slight systolic blow at the apex, edema of the face and extremities, pallor and

cyanosis, disinclination to exertion, constant drowsiness, it would be certainly narrow, in view of our pathologic and experimental knowledge, not to entertain the possible existence of serious degenerative changes in the heart muscle. We should never forget that in the heart we have healthy tissue on which our drugs and methods are supposed to act. We must not exhaust these healthy foci by powerful drugs or harsh measures; the strength must rather be fostered. The hope of these cases then lies in well-sustained nutrition.

6. **Uterine Fibroids in Pregnancy.**—Remarking first that fibroid of the uterus does not necessarily imperil life, but its situation renders it important, and that pregnancy probably occurs more frequently in fibroid uterus than was formerly supposed to be the case, Ford discusses its dangers. They are chiefly rupture of the imperfectly developed fibroids, the prevention of the normal first stage by the presence of inelastic tissue of the neck or displacement of the uterus so as to distort the natural birth passages, and finally sepsis following infection after delivery. He reports a number of cases, with illustrations, which seem to him to indicate that the rule may be established that where the lower third of the uterus and the entire cervix are free from neoplasms, the physician may safely await the result, even if the fibroid is of considerable size. If any considerable fibroid is found opposite the internal os, especially if it blocks the canal, questions as to early operative interference may arise and the answers are governed by its position. The dangerous position of the fibroid is in the anterior wall of the uterus, low down, as it would interfere with Cesarean operation. Impacted fibroid requires early hysterectomy unless it can be released or is so high as not to involve the lower third of the organ. Rupture is sometimes caused by a small fibroid in the lower uterus or cervix after delivery at term or miscarriage. If fibroid exists and becomes infected, hysterectomy should be done at once, and in every case of fibroid uterus where pregnancy occurs, the patient should be carefully watched, especially if it exists in the lower half of the uterus.

7. **Toxins.**—Austin and Coriat's paper is a general discussion of the subject of toxin production and the nature of toxins, with a report of experiments. The greatest difficulty they had was in the small amount of substances which could be obtained, and while they say that no special new points were developed, they hope to continue the researches with greater results.

8.—See last week's *JOURNAL*, §21, p. 865.

9. **Treatment of Whooping-cough.**—Coggeshall, after first noticing the methods reported, suggests cocaineization of as much of the mucous nasal membrane as can be done with a spray, followed by cotton tipped probes wet with the solution, and application of a 2 or 4 per cent. nitrate of silver solution to the nose and nasopharynx, to be followed by a mild alkaline and antiseptic wash by spray or post-nasal douching. This treatment is hardly adapted to young infants, but can be used for children of 3 years or over. He believes that the good effect of belladonna is partly due to its action on the nasal mucous membrane in this disease, and he suggests the use of suprarenal extract.

10. **Gunshot Wounds.**—From experience of gunshot cases in the Spanish-American War, Borden concludes that if antiseptic methods were in use during the Civil War, the results would have been so different that it would have been seen that it is surgical methods and not a particular bullet that most influences the results. We are giving too much credit to the humane character of the modern military projectiles. In his experience he had not only wounds from Mauser bullets, but shell, shrapnel and revolver wounds, and he believes that in some cases the new bullet produces wounds as destructive as those made by the old slow-going projectile. Shell wounds are generally infected, and therefore differ from the majority of gunshot wounds that are properly treated in the field. The treatment must be rather antiseptic than aseptic. Shrapnel wounds, which from the character of the missile would be supposed to produce the same effects as old lead bullets, he finds, if proper first treatment is used, are very much like those of the small-caliber jacketed missile. If these had been probed

according to old methods, the results would have been similar to former experiences. The principal point made in his paper is, as he said in the beginning, that it is modern surgical methods rather than the character of the weapon which have most to do with success of modern military surgery, though something must be allowed for the small-caliber and rapidity of modern rifle projectiles. The article is to be continued.

11. **Tumor of Cerebellum and Drainage of Fluid Through Nose.**—McCaskey reports a case of cerebellar tumor in a young woman, which presents some peculiar features. The patient lost her hearing for a period of three months, but about two months before death she began to have a free discharge of serous fluid from the right nostril, which ran a steady stream or dropping amounting to several ounces a day, and with this her hearing returned. The tumor was a mixed angioma originating on the anterior margin of the left lobe of the cerebellum. Another point of interest in the case was the great intensity of optic neuritis of the side corresponding to the tumor. The patient died in a convulsion about three years after the first examination.

13. **Nasal Discharge of Cerebrospinal Fluid.**—The literature of this subject is noted by Freudenthal. He finds that there has been but one case similar to the one he reports, published in this country, though two other cases are somewhat doubtful. The most important publication on the subject is that of St. Clair Thomson, which has been previously noticed in *THE JOURNAL*. In Freudenthal's patient the discharge is regular though it had been subject to intermissions and these were associated with symptoms of brain pressure. Before the flow commenced also the serious brain symptoms were present and disappeared at its onset. He is inclined to think there may be a tumor in the brain situated near the optic chiasma. He discusses the diagnosis of cerebrospinal fluid from other forms of nasal hydrorrhea, and thinks that the absence of mucin and presence of reducing substance—sugar—suffice to confirm the opinion that the serum is of cerebrospinal origin. He calls attention to the fact that in the majority of cases reported thus far, the left nostril was the route of discharge; why this should be is not determined. Treatment is hopeless; no attempt should be made to stop the flow. In his case the recurrence of serious symptoms during intermissions is so evident that the patient herself appreciates this.

15. **Rheumatic Periostitis.**—From the case here reported, in which there was a periosteal inflammation on the sternum and the clavicle, together with rheumatic swellings of the ankles and knees, Stern believes that there is such a thing as rheumatic periostitis and that this is evidence of the infectious nature of rheumatism. As yet we have not been able to determine the organisms producing the disease, but knowing the general nature is a step toward a better understanding and treatment.

16. **Leucocytosis.**—Burch estimates the normal number of leucocytes as two polymorphonuclear leucocytes to each microscopic field, one small lymphocyte to every five fields, one large lymphocyte to each ten, and one eosinophile to twenty fields. This necessitates counting the number found in at least twenty-five, or better, 100 fields, and averaging the total found in this way. He thinks reliance can be placed on the aforesaid ratio. He has examined various diseases, pneumonia, typhoid, and tuberculosis, as regards their leucocytes and he reports several cases illustrating the value of blood examination in different disorders. In one he found diagnosed appendicitis transformed into a case of impacted colon. In another acute tuberculosis was revealed, and in a third syphilis was suggested from the microscopic blood examination.

17. **Typhoid Spine.**—The condition to which this name was given by Gibney, and which was considered by him to be due to a perispondylitis, and by Osler a neurosis, is illustrated here by a case reported by Lovett and Withington. In this instance there was a well-marked knuckle or projection of the spine in the lower dorsal region, which was evidently due to a destructive inflammation of the vertebral bodies. A periostitis could not explain it; one must assume an osteomyelitis to have been present. As far as the writers have learned this is the only case of well-authenticated typhoid spine accompanied

by deformity. Had the deformity not appeared it would have been considered a post-typhoid neurosis.

18. Idiopathic Pneumothorax.—A case reported by Boland is of interest as being an instance of apparent idiopathic pneumothorax of primary origin. It suggests, as the author says, that: 1, we can have (practically) a primary pneumothorax; 2, without diagnostic aspiration we can not be sure of the nature of any pleural effusion; 3, aspiration may precipitate an influx of air into the pleural cavity even if the lung is not touched by the needle; 4, the pleural cavity can, unaided, take care of aseptic blood as well as of air.

20. Home Modification of Cow's Milk.—The difficulties of home modification of cow's milk for infant diet are pointed out by Woodruff. He says that in the first place we should know the exact composition of the ingredients, which is impossible outside of the laboratory. There is a wide difference between milk from different cows, or from the same cow, and it is practically impossible to tell the extent except by analysis of its composition. In the second place even in the human milk there are marked variations, all of which may be tolerated by the healthy babies since they live in spite of bad feeding. Absolute accuracy can not be so important as we are told. In the third place accuracy is ruined by the inaccuracies of woman's methods. She does everything by rule of thumb: we have to guess to keep up with her guessing. In the fourth place infants vary so greatly that it is difficult to say what one will stand, and in the fifth place specialists are not agreed as to the exact proportions of proteids, fats and sugars to use. He sums up the average recommendations of specialists and in conclusion speaks of the importance of pasteurization or thorough sterilization. He says that if most breast-fed infants really get 1.5 per cent. of proteids, 4 per cent. of fat and 6 to 7 per cent. of sugar then we will not be much in error for all babies over eight weeks old, if we dilute 3 parts of a 10 or 11 per cent. cream with 5 parts of water and add 5 or 6 level teaspoonfuls of milk-sugar, the total amount being the stomach-capacity multiplied by the number of feedings, and this rule of thumb may be as near as we can come to accuracy in the average household.

21. Policephalomyelitis in Adult.—The case reported by Sherman and Spiller, in detail, with autopsy findings and pathologic report, presented a clinical picture of Landry's paralysis. Dr. Spiller, in his summary of the pathologic findings, discusses the literature of similar cases and concludes that: 1. Landry's paralysis may be due to poliomyelitis, and a number of cases reported under the name of Landry's paralysis are cases of poliomyelitis. 2. Poliomyelitis is an infectious disease, probably resulting from invasion by different forms of bacteria, and the inflammation is greatest in the anterior horns, but occurs in the posterior horns, in the white matter and meninges. 3. The symptoms are motor in type because the disease is especially one of the anterior horns. 4. Meningitis is not uncommon in poliomyelitis. 5. Poliomyelitis in the adult is essentially the same disease as poliomyelitis in the child. 6. Poliomyelitis is closely related pathologically to the nonpurulent form of encephalitis and to the policephalitis superior of Fernicke.

22. Leukemia.—The frequency of chronic leukemia, in the University Hospital at Ann Arbor is noticed by Dock, who compares it with the observations of others and calls attention to the peculiarities and difficulty of its diagnosis. He holds that routine exact examination of the blood is necessary if we are ever to recognize the disorder in its first stage, and he also points out the methods for distinguishing splenic tumor from that of other organs. In general leukemia is not diagnosed until both leucocytes and red corpuscles are markedly altered from the normal.

23. Effect of Blows on Lower Chest and Epigastrium.—After giving the methods of research and details of his experience, with blood-pressure tracings, Crile concludes that no amount of injury inflicted on the solar plexus, directly or indirectly, is capable of causing any inhibitory action on the heart, and such injury in no case contributed to immediate death or collapse. Its effect was to produce a vasodilation of

the "splanchnic area," causing a gradual decline in blood-pressure. While the abdomen is open and the diaphragm protected from violence, blows on the stomach produce little effect on blood-pressure or respiration, but where the diaphragm is not protected the blows on the pit of the stomach sometimes produce a momentary staggering fall in the blood-pressure. Pressure suddenly applied or blows directly on the diaphragm, within the cardiac zone, usually produce a marked drop. Even careful pressing of the hand upward against the diaphragm so as to produce an interference with the free movement of the apex causes very great cardiac irregularity and irregularity of blood-pressure. Blows on the lower chest, especially over the cardiac area, produce various results, in one case immediate death followed. Respiratory action is also suddenly arrested. The commonest result was a great drop in blood-pressure—a collapse with gradual restoration. The results vary somewhat in different animals, but as a general rule the nearer the blows are given over the center of the cardiac dulness the greater the effect. Blows on the naked heart produce similar though more pronounced effects. The evidence seems to show that the solar plexus may be disregarded as a factor, and the result is due to mechanical effects and violence either on the heart itself or its nerve mechanism. Though both vagi have been previously severed, similar results are produced and he holds that collapse and death may be caused wholly independent of the vagi, though the vagi probably usually contribute somewhat to the results. The causes of collapse and death from violence on the lower chest and abdomen are due mainly to loss of rhythmic contractions from the mechanical irritation of the heart-muscle itself.

25. See abstract in *THE JOURNAL* of March 3, p. 560.

26. Fistula of Pharynx.—Frendenthal reports a case of fistula of the pharynx, connected with disease of the ethmoidal and frontal sinus, which was completely relieved by attention to those parts. He thinks the infection first took place through the pus burrowing down from the ethmoid through the sinus maxillaris and from there through the fistulous tract to the pharynx.

28. Diagnosis and Treatment of Fractures.—Stimson points out the difficulties and the simple means often available in diagnosing the various fractures, for instance on the upper end of the humerus in a fleshy person, which is readily diagnosed by longitudinal pressure of the bone, or ulna, which can be told by holding the hand in your own and asking the patient to press against it. Colles' fracture is diagnosed by pressing the hand up toward the elbow straight or a little to the upper side, causing pain. In the leg, the test of pressure along the line of pain is also of value in a similar way. He also calls attention to the dangers of too much manipulation in fractures, especially of the neck of the femur, by taking away the periosteal bridge by which the bone is nourished. In any case the old rule of Hodgson is still applicable in any case of injury to an old man or woman where there is a disability of the limb; treat it as a fracture of the neck of the femur. If we could have only one sign of fracture, he would ask for pain, pain in pressing the ends of the long bones together, pain in pressing along the line of fracture, pain in the exercise of the function of the limb, for a diagnosis. This applies only to fractures in the continuity of the long bones. In fractures that are not along the line of pressure this does not apply. In regard to treatment, in any injury of the hip in an old person, it should be treated as fracture of the neck of the femur. In the treatment of some cases, details do not count, in others they are of very great importance, especially in articular fractures, in oblique fractures where the displacement is great, or where the sharp ends penetrate the tissues. In these cases we should spare no pains to get the details of the fracture and the displacement. In some cases of extensive injuries we wonder whether the tissues are dead, and whether the limb can be saved: he gives as a simple test the use of the Esmarch bandage. If this is applied for five minutes and the limb and parts noted where the blushing does not appear and where it remains white, that skin is dead. He also cautions, in cases where great violence has been done, against being too satisfied with finding one fracture—always look for further

trouble. As regards plaster-of-Paris encasements, he prefers to wait until the swelling has gone down, and it should always be inspected the day after its application. The author mentions ischemic contracture of the fingers due to insufficient blood-supply. He remarks also on the splints for limbs and on dislocations, and calls attention to the use of gravity in reducing dislocations of the shoulder and hip.

39. **Paresthesia Sexualis.**—Styll's article is a discussion of the case of a murderer of the Jack the Ripper type, in whom a cyst was found in the anterior part of the angular convolution of the right hemisphere, which the author correlates with the sexual perversion.

40. **Home and Asylum Treatment of Inebriety.**—The points which Crothers wishes to make prominent in this article are summed up in the following: 1. The treatment of inebriety extends back twenty centuries and more, and the recognition as a disease is still more ancient. 2. Its prominence and the increasing urgency for relief from medical men demands a new study of the whole subject along a scientific line. 3. The inebriate is literally poisoned, and starved, and degenerate, and there is no mystery about his condition or the results of treatment. 4. The possibility of restoration and cure is established beyond question. 5. Gold and other specific cures are only the application of common remedies, which every physician could use with great skill and success. 6. Every case can be restored and many of them permanently cured, by the intelligent co-operation of the family and asylum physicians. Both home and asylum treatment are invaluable. 7. The public treatment of pauper inebriates and the incurable classes will be carried on in workhouse hospitals specially organized for this class. The treatment for those able to pay will be in special private hospitals, where the best means of science can be combined to meet the wants of each case. 8. The successful cure and prevention of inebriety is largely an unoccupied medical field, the solution of which opens up a new realm of practice, promising the greatest possibilities, which, in the near future, will be occupied.

48. **Extruterine Pregnancy.**—In the case reported by Lufkin, the fetus went to term apparently free in the abdominal cavity. There were none of the signs of any limiting sac, and he discusses the opinions in regard to the possibility of such a condition. He himself is of the opinion that it was a free intraperitoneal pregnancy from not later than the third month.

49. **Ventrosuspension.**—Gilliam reports his modifications of Ferguson's method of suspending the uterus by the round ligament. The basis of the principle of the operation is the invagination of the proximal portion of the round ligaments in the abdominal wall as evolved by Ferguson. The successive steps of the operation modified by Gilliam are: 1. A median abdominal section three to four inches long in the usual position. 2. Break up adhesions and bring fundus forward. 3. Seize the Fallopian tube and bring it to the opening, for which purpose he has devised two special forceps. 4. Carry a heavy silk thread under the ligament close to the forceps in such a manner as to include a little of the tissue of the broad ligament. 5. The forceps holding the tubes and round ligaments are now removed. 6. The other round ligament is secured in the same way and the ends of the thread brought out of the abdomen and held in the bite of another clamp forceps. 7. Retract the skin and superficial fat on one side until an inch or more of the rectus muscle is exposed. 8. Thrust the perforating forceps through into the peritoneal cavity and seize the thread which holds the round ligament. 9. Remove the clamp forceps from the thread. 10. Withdraw the perforating forceps. 11. While the ligament is held taut, fasten it into the wound by catgut sutures passed through its base and including the tissue of the other side including the entire thickness of the wall. 12. The exposed free loop of the ligament is now spread out on either side of its point of emergence and tacked down with catgut so as to form a button or bar. This is intended to prevent retraction. 13. Treat the opposite side in the same manner. 14. Close the median abdominal incision.

50. **Suspension of Uterus.**—Morris also describes a similar

operation as follows: The abdomen is opened in the middle line. A hook is inserted through the round ligament at a point midway between the uterus and the inner inguinal ring. The round ligament is angulated by strong traction on the hook. The peritoneum is stripped away from the ectad face of the angulated ligament, but remains attached at the base of the angle. Two parts of the bared round ligament are approximated at the base of the angle with a suture of chromicized catgut. This throws two or more inches of the round ligament out of the function. The bare face of the loop of the ligament that is thrown out of function is re-covered with a flap of peritoneum that previously belonged to it. The other round ligament is treated in the same way. He has done this in some twenty cases, with success so far as the operation is concerned; the results during and after pregnancy are yet to be seen and this note is published at this time in order to fix the responsibility for the operation.

51. **Vomiting of Pregnancy.**—After reporting a case Davis summarizes the salient features of the condition as follows: In a considerable number of cases of pernicious nausea of pregnancy the womb is sharply anteflexed and the cervix extraordinarily thickened. The pelvic organs are forced strongly downward and forward, and a contracted condition of the pelvic fascia and muscular tissue is present, which may be termed "pelvic tenesmus." In other cases the uterus is retroflexed or retroverted. These patients are much relieved by raising the uterus as far as possible in the pelvis and by stretching the cervix. The latter is done at the risk of bringing on abortion, but is sometimes effective in stopping nausea and in enabling the patient to go to term. The salient feature in the symptoms of these cases is nausea and not vomiting. Many of the worst cases vomit but once or twice in twenty-four hours, but are nauseated while awake. Coupled with this, and resulting from it, is the profound mental and physical depression from which these patients suffer. Especially significant in the symptomatology of these is the obstinate, boring, burning pain beneath the sternum, and the discharge in the vomit or bowel movements of coffee-ground material, which is recognized as decomposed hemoglobin. He has found no adequate explanation for the substernal pain, although it has been noted in other patients, not pregnant, who suffer from pernicious anemia. Coffee-ground vomit has been observed repeatedly in nephritic patients and in those suffering from extensive degenerative disease. He finds that in successful treatment the patient should be fed, put to absolute rest and her strength so recruited that her nausea gradually ceases, then she can go on to recovery. The replacement of the uterus to a better position and stretching of the pelvic and cervical tissues is an important aid. Unless these measures succeed the pregnancy must be ended.

53. **Care of Intestine in Abdominal Section.**—The points made by Baldwin are the administration of morphin and atropin as an aid to the ether anesthesia; the anticipation of uterine paralysis by the administration of a laxative prior to anesthesia, which he has followed as a routine practice with good results. He also insists on the importance of a small incision and as little use of packing as possible. Cleansing of the abdominal cavity is best done, he thinks, by means of a large funnel with rubber tube, the latter passing completely to the bottom of the pelvis before allowing the water to run—thus floating off all debris from the bottom. When this is satisfactorily done he siphons out the water. The abdomen may be filled with a fresh salt solution; the amount left will vary in different cases. Every case of abdominal section before being removed from the tables receives an enema consisting of one quart of normal salt solution, one ounce of whisky, and twelve minims of Squibb's compound of opium. The normal salt solution injection, without the whisky and opium, in half the amount is repeated every two or three hours until the patient is able to take food by the mouth, which is encouraged as early as possible. To keep the intestines out of the pelvis Clark's method is used. He secures the free action of the bowel at the end of twenty-four hours by the measures already described and the administration of from 10 to 15 grains of

calomel in capsule, twelve hours after operation, followed about six hours later by administration of Epsom salts dissolved in hot water. At the first evidence of distension of the large intestine high enemas are commenced and not discontinued until gaseous or fecal movements have been secured. He notices Byford's suggestion of producing early movements of the bowels, and recommends Watkins' formula for enemas of two ounces of Epsom salt, one of glycerin and three of water, given through a large tube.

54. **Uterine and Vaginal Duplications.**—Wells' paper is an analysis of 112 cases of duplication of the female genitalis.

60. **Panas Operation for Strabismus.**—This operation consists essentially in stretching the muscles before the division and dividing interni or externi muscles as the case may require. Roosa reports 36 cases, 31 personal ones, with results. The perfect results—so-called parallelism of the eyes—resulted in 32 of the 36. The other 4 are still under observation and ultimate cure is hoped for. The dread of over-effect of stretching the muscles and their simultaneous division is, he thinks, unwarranted.

67.—See abstract in THE JOURNAL of February 24, p. 497.

70. **Deficient Urinary Excretion in Skin Diseases.**—Bulkley gives a study of 2000 urinary analyses in patients suffering with skin disease, with results not very conclusive as regards any specific positive facts. They do not indicate that any special urinary changes can be demonstrated as having direct connection with any particular skin lesions, but they do show evidence of deranged assimilation and dissimilation. Very few represented the state of normal health.

71. **Catheterization of Ureters.**—Lilienthal's paper is largely a protest against the practice of catheterizing sound ureters. He thinks that while the value of catheterization of the diseased side is great, that of the other is perilous and hardly justified by the needs of the case. In some cases the kidney may be unmistakably palpated, in others the mouth of the ureter may be inspected with the cystoscope and when these means fail, at the time of the contemplated nephrectomy, a small incision can be made which will permit of the ocular demonstration of the condition of the other kidney without serious additional risk. If catheterization of the other ureter is practiced it is by no means certain, as Wossidlo says, that the kidney which functionates normally before nephrectomy will continue to do so afterward.

73. **Impotence in the Male.**—Zabludowski recommends general massage: 1. Directed to the genital apparatus and its vicinity. 2. To the spine by means of reflexes. 3. To the body generally, the vessels and lymphatics. 4. To the brain centers, giving rise there to certain images. The necessity of avoiding sexual excitement during treatment, and of healthful bodily exercise within the fatigue limit should be emphasized. The following are given as special directions: 1. In case of pollution, the sleeping arrangements must be changed from bed to sofa, with a bolster under the feet. In one severe case of over twenty years' standing a remarkable result was effected by directing him to use at night, in place of the bathing-trunk to which he was accustomed, a condom. The emissions ceased. Beverages at night are forbidden, and the supper hour changed. 2. In cases of spermatorrhea from interrupted coitus, and in cases of prostaticorrhea, particular attention is given to the massage of the prostate and abdomen and the habit replaced by the use (in the women) of occlusive pessaries. 3. In cases of general disturbance after the shock or exhausting illness, general massage is most beneficial, especially on the heart. This massage works in diabetes and obesity as a compensation for a strict dietary regimen. 4. A good prognosis should always be given to men about to marry, who are fearful of their sexual capacity, and to married men whose intercourse is obstructed by vaginismus. These do well. 5. In relative impotence, absence of erection in familiar conditions, a change brings about good results. 6. When there is disturbance in the secretion of urine, particular attention is paid to the perineum and bladder, and sleeping arrangements are changed. Benefit is sometimes secured by sleeping on some unusual material, such as rubber, leather, or linoleum.

74.—See abstract in THE JOURNAL of October 28, 1899, p. 1104.

82.—Ibid., February 17, p. 425.

87. **Mechanical Treatment of Sciatica.**—The method indorsed by Hunt is the use of the Hodgkin splint, giving rest to the parts by suspension. He finds it a most valuable agent in the treatment of this disorder, and reports several cases.

88.—See abstract in THE JOURNAL of June 3, 1899, p. 1257.

89. **Medicolegal Aspect of Bright's Disease.**—Barlow believes that many cases of Bright's disease are accompanied by testamentary incapacity, and reports one or two instances. He thinks that any person suffering from nephritis with any cerebral symptoms should have his mental capacity tested before making his will.

92.—See abstract in THE JOURNAL of June 3, 1899, p. 1257.

96.—Ibid., January 27, p. 233.

97. **Abdominal Tumors.**—This article largely covers the ground of the paper published in THE JOURNAL, Feb. 11, 1899. The author calls attention to the importance of distention of the colon in locating the region of the tumor, of segregation of the urine in differentiation between the different tumors, and of analyzing the range of motion in movable tumors as of value in diagnosis.

98. **Oophorectomy for Functional Nervous Diseases.**—Brockman reports four cases of oophorectomy in which he believes hysteria and insanity were relieved. He thinks the conservatism of alienists and neurologists in regard to this operation for such cases is not altogether justifiable.

103.—See abstract in THE JOURNAL of January 20, p. 166.

105. **Snow-Blindness.**—Mitchell describes a case of snow-blindness, and mentions the apparatus used in Alaska by the miners. He does not allow much value to colored glasses. The real remedy is a wooden goggle made somewhat after the plan of pinhole spectacles.

110. **Chloretone.**—This new drug is stated by Morton to have a decided value in ophthalmic practice, due to its antiseptic properties combined with its mild anesthetic action without affecting the pupil or accommodation. It is also free from undesirable properties of disturbing corneal epithelium like cocaine, and another very decided advantage of it is as a preservative to other drugs, supracornal extract for example, which has always had to be specially prepared, but which can be kept for some time with a small addition of chloretone.

123. **Lethargy and Trance.**—Madden discusses the subject of trance, and reproduces the literature of a number of interesting cases that have been reported. While many reported ones are apocryphal, there are some well-substantiated instances that show the danger of premature interment.

124. **Etiology of Acute Tonsillitis.**—According to Class, acute anginas may be thus classified according to their importance: 1. Those caused by the pneumococcus. 2. Those caused by the diphtheria bacillus. 3. Those caused by the streptococcus. 4. Those caused by the diplococcus scarlatinae. 5. Those caused by the influenza bacillus. 6. Those caused by the staphylococcus pyogenes. 7. Mixed infections, two or more of the above germs being present in each case. These do not include absolutely all, as there may still be unidentified germs, and the anginas met with in measles and smallpox, which are probably due to specific contagion. Something like the pneumococcus zymogenes is sometimes found in throat cultures, which suggests a solution regarding the connection between anginas and the occasional subsequent endocarditis. Each of these forms is discussed separately, and the author urges giving more thought to the bacteriology of throat infections.

134. **Formic Aldehyde in Milk.**—Moechel is strongly in favor of the use of small quantities of formaldehyde as a milk preservative. His experiments were made on not only animals, but human beings, and therapeutic experiments on children. As a result he believes the proper percentage of formaldehyde should be allowed to be a benefit rather than deleterious in milk, and that it is much better than the process of pasteurization, which destroys the amylolytic property possessed by raw milk, modifies the butter fat and changes milk sugar into caramel. The reasons he gives for his opinion in favor of

formaldehyde are: "1. It does not interfere with the human gastric, intestinal or ptyalin digestion. 2. Infants that did not prosper with various kinds of infants' food and milks, also cows' milk prepared according to the best authorities., at once changed for the better when supplied with milk treated with formaldehyde—and they continued to augment in weight and health. 3. An insignificant amount, 1 to 150,000, and not more than 1 in 50,000 preserved the milk from souring for a few days. Whether the same percentage destroys the bacteria or inhibits their growth will be shown by further investigations, now under way. Formaldehyde is the best milk preservative and does not introduce any mineral matter. These conclusions are preliminary, as our conclusions are not yet finished, but they are based upon strong facts, which we obtained from experiments made by us up to the present time. In order to prevent decomposition of milk, we regard it as entirely admissible to add formaldehyde (pure) in proper quantity after milking and not later, and therefore by the only permissible one, the dairyman." The proper percentage of formaldehyde seems to be about 1/80,000, according to the results of experiments in infant feeding reported to Moechel by Dr. F. W. Fröhling, who conducted this part of the investigation.

136. Grant's Operation for Restoration of Lip.—Wooten reports a case of Grant's cheiloplastic operation for restoration of the lip after excision for epithelioma. This consists of a square incision connected at the corners with oblique ones on the chin instead of the V-shaped incision. The advantages of the operation are, he claims: 1. The incisions are confined to the mobile, elastic portions of the lip and cheek, allowing dissections where necessary from the alveoli; the large, well nourished triangular flaps can be slid over the chin and make traction on the whole cheek and none on the chin. 2. There is less tension of the lip; it is more prominent and natural in consequence, therefore it is more flexible in use. 3. There is less necessity for resorting to accessory operations to restore size and shape of mouth, which is less apt to be disfigured by this operation than any other. 4. The removal of all submaxillary gland tissue can be easily accomplished by the continuations of the same oblique incisions over the rami of the jaw.

FOREIGN.

British Medical Journal, March 25.

The Lettsomian Lectures, Being Practical Observations on Cancer of the Breast. WM. BANKS.—In this second lecture Banks first notices the errors about heredity, which he previously discussed, and the very serious error in regard to pain. The presence of pain is usually associated with cancer, so that its absence generally means to the patient that there is no cancer. There are, unfortunately, few neoplasms in their beginnings less accompanied with pain. The old statement in regard to skin adhesions and nipple retraction, which is only necessarily present when it is situated under the nipple is an error. One of the most striking symptoms is what he calls a "pig-skin" appearance, which appears on a portion of the skin when pinched between the finger and thumb, and consists in fine points due to a number of hair follicles caught and tucked down by the cancer. This he considers as certainly indicative of subjacent carcinoma. The conditions that simulate cancer are next noticed, chronic mastitis, fibroadenoma and small simple cysts. His method of examination is described. He never removes a breast without first cutting into the tumor, and he frequently uses a small exploring trocar and canula for diagnosis. He always examines a breast tumor in three positions, standing behind the patient and having her press against him, examining from the front and when the patient is in a dorsal position. He considers the first method of very great importance in examining for anything on the anterior surface of the trunk and neck. After noticing the occasional occurrence of insanity after operation on the breast, which has long been observed, Banks describes chronic interstitial mastitis at length, and its possible malignant transformation. He thinks that early diagnosis of cancer is the most important thing, and if in any case the evidence seems to make for nothing worse than chronic mastitis, he treats for that condition, but keeps the patient under close observation

until all the induration has subsided. On the other hand, if there is any probability of cancer, he thinks extirpation of the breast justifiable and the diagnosis can be made certain at the operation by the passage of the knife through the tumor. As regards the proportion of cases in which there is transformation of mastitis into cancer cases, the statistics fail us. He does not believe that milk abscesses leave behind them induration which degenerates into carcinoma.

Vomiting: Some of its Surgical Aspects; Especially with Reference to a Feeculent Vomit, Which is Sometimes Curative. WILLIAM H. BENNETT.—In this address, two classes of vomiting are considered: Those due to the anesthetic or to certain conditions of disease which necessarily lead to vomiting under any circumstances, whether operation be performed or not, and certain other cases hitherto unrecorded in which vomiting of a particular grave form as commonly understood, proves in the end to be curative. That connected with operation may be divided into that which is the result of an anesthetic and that which is caused by disease from which the patient suffers. When caused by anesthesia also it may be directly after the operation or may be deferred till some days or hours later. When it is due to disease it may be dangerous through septic infection of the lungs, portions of foul vomit being inspired into the air-passages, producing pneumonia. In this it is really not the anesthetic in the ordinary acceptance of the term that is the cause. He advises that we previously wash out the stomach, cleaning it of offensive material or half-digested food so as to prevent a possibility of a lung implication. This is also valuable in ordinary post-anesthetic vomiting. Usually this is not dangerous, but in some cases when it is deferred for hours or days it may be very serious. In these patients, if the stomach has not been emptied of vomit it is a good practice, if the condition of the patient will permit, to use the lavage. The second class of cases to which he refers are those in which feeculent vomiting occurs in cases of apparent obstruction, and he reports several cases where this form of vomiting was followed by immediate relief. From careful consideration of the subject he concludes that: "1. Feeculent or stercoraceous vomiting occurs more commonly than supposed in cases in which no mortal disease exists. The occurrence of feeculent vomiting must of necessity be a grave symptom, but it is not always followed by death, even though nothing be done for the patient from a surgical point of view. 2. In certain cases the vomiting is curative, inasmuch as it empties the bowel and stomach of accumulated contents which for the time being are unable to find their way downward in the normal way. This view is supported by the fact that in such cases as I have narrated, a very copious and as it were final vomit immediately preceded the change of the patient from an apparently hopeless state to the commencement of recovery." If the abdominal distension continues, however, after the vomiting the case is still serious.

New Method of Performing Perineal Prostatectomy. P. J. FREYER.—The author describes a case in which he operated by first opening the urethra in front of the prostate, on the staff, and then making a crescentic incision about four inches long from the opening backward around the anus to the coccyx on the right side, carrying the dissection deep into the ischio-rectal fossae, the rectum being pulled inward by a broad retractor. The tumor was then passed out of the wound by the left forefinger being hooked around it in the bladder. The capsule of the prostate was incised and peeled off and the tumor, which involved the right lobe of the prostate, removed piecemeal by cutting forceps and curved scissors, only a thin layer being left to support the mucous membrane of the bladder and prostatic urethra. A soft rubber perineal tube was passed through the urethral opening into the bladder, and retained there by a suture. The large gaping wound was packed with iodoform gauze and the usual dressings applied. The recovery of the 59-year-old patient was good, and he was sitting up in about six weeks, and shortly after quite well. The tumor was of a fibroadenomatous type. The author sums up the advantages of this method, which consist chiefly of the ability to thoroughly examine the tumor and the avoidance of dangerous dissection as in Dittel's operation, and the guide

furnished by the finger in the bladder. It is only adapted to certain patients, not, for example, for those with enlarged middle lobe projecting into the vesical cavity, and in very fat patients the finger may not be long enough to reach into the bladder and hook the tumor.

The Lancet, March 24.

The Typhoid Bacillus and Typhoid Fever. P. HORTON-SMITH.—After first describing the typhoid bacillus and its characters, the author gives the values of the different tests, of which he considers the agglutination one, carried out in high dilutions, and Pfeiffer's test the most accurate, but the others are not to be neglected. They are long and tedious, but we know so little as yet of saprophytes that they are necessary. The author considers that there is no proof that the typhoid bacillus can multiply outside of the body, though with our increasing knowledge of the disease we can explain many outbreaks without such an assumption. He notices the toxins and their possibility of diffusion and distribution of the bacillus in the human organs. The following data seem to him assured; the typhoid bacillus must always be found in the stools at the early period of disease. It can always be demonstrated in Peyer's patches and the mesenteric glands. It does not, however, remain limited to this space, but very soon and in all cases passes into the blood, by means of which it is distributed to the most diverse organs; thus it can always be found in the spleen and liver. It gives rise to the typical eruptions of the skin and is almost always present in the marrow of the bones and in the bile. It is frequently present in the urine and is commonly found in the kidney; occasionally it may be detected in the lungs and sometimes in other organs. The old conception of typhoid as merely a disease of the alimentary tract can no longer be maintained; as it is we must look on it as a modified form of septicaemia in which, however, there is a definite and local primary disease whence dissemination of the organism takes place.

Influence of Temperature of Liquid Air on Bacteria.

ALLAN MACFADYEN.—This paper, which was read before the Royal Society, gives the results of experiments on the effects of liquid air on various bacteria, those of typhoid, diphtheria, cholera, etc. The experiments show that bacteria may be cooled down to -190°C . for a period of twenty hours without losing any of their vital powers. Further experiments are being carried on with these and other micro-organisms with liquid air for longer periods, and also with liquid hydrogen.

The Therapist (London), March 15.

Use of Local Hot Baths in Poisoned Wounds. DAVID FRASER.—The writer calls attention to a treatment of septic wounds with which he has had remarkable success. It consists in keeping the limb or wound in hot water, as hot as can be borne, for at least a couple of hours, three times a day, and poulticing in the meantime with linseed meal. He thinks this method thoroughly carried out and patiently persevered in will cut short the attack unless the inflammation has already passed the axillary or inguinal glands. He has never seen one of the virulent cases of blood poisoning with serious constitutional effects since first trying this treatment.

Australasian Medical Gazette (Sydney, N. S. W.), February 20.

A Palmar Reflex. GEORGE E. RENNIE.—Rennie describes a reflex due to a traction of the palmaris brevis when pressure is made on the pisiform bone and on the ulnar nerve above the wrist. He thinks that this must be a true reflex, and since the nerve-supply of the palmaris is derived from the eighth cervical and first dorsal nerve roots it may possibly be of service in localizing lesions in the cord.

Presse Medicale (Paris), March 14.

Reduction of Size of Shoulders in Difficult Delivery. E. BONNAIRE.—Cleidotomy or supra-acromiotomy has never been practiced on a live child, but if the head has been delivered and the shoulders are inextricably caught, instead of fetical tractions a resort to cleidotomy will enable the child to be born alive, with no injury except the incision of the skin, aponeurosis and bone. No vessels are affected and even the subclavicular muscle is intact. Bonnaire uses ordinary long scissors. After the perineum is pulled back as much as possi-

ble, the finger is inserted and the clavicle sought. It feels like a match lost in the soft parts if it is transverse or unless repeated manœuvres have pulled it out lengthwise. In the latter case cleidotomy is impossible and supra-acromiotomy is necessary. If the clavicle can be reached the scissors are inserted between two guiding fingers to the clavicle. The first stroke of the scissors slips usually on the rounded surface of the bone and merely cuts the soft parts. The second severs the periosteum and the handles of the scissors are then grasped in the palm and the bone cut. The other shoulder is then cut in the same way. By supra-acromiotomy Bonnaire means a partial embryotomy, which consists in severing wide the skin and muscles surmounting the shoulder, in such a way as to liberate the scapulo-clavicular attachment of the arm. This allows the bis-acromial diameter to pivot and pass the uterine or pelvic diaphragm which is holding the shoulders.

Semaine Medicale (Paris), March 14.

Traumatic Hernia. F. DE QUERVAIN.—The writer uses the expression *hernie de force*, and studies the subject from the accident insurance point of view. It is evidently unjust to make manufacturers or insurance companies responsible for a pathologic tendency on the part of a workman, a predisposition to hernia. Persons with this tendency should select an occupation less arduous than others. And in deciding the indemnity such a predisposition, if proved, should reduce the claim. The supreme authority in accident insurance in Germany, the *Reichsversicherungsamt*, recognizes the right of a subject with a traumatic hernia to an indemnity and does not consider it reduced by a predisposition. In Austria the same rule prevails, and also in Switzerland, but in the latter a predisposition reduces the amount of the indemnity. Some private companies refuse to allow an indemnity for traumatic hernia, while others grant it. It is very important, in examining a subject, to bear in mind that there must have been a more or less considerable effort or traumatism to have produced the hernia, also that true traumatic hernia is almost invariably accompanied by sudden, severe pain, and frequently by strangulation. The physician should also seek for indications of preceding predisposition and also of an old hernia. If the inguinal canal is large and especially if it has lost its oblique direction, a traumatic origin of the hernia is less probable. The size is also significant. Except in the rarest cases, a traumatic hernia is never larger than a lemon. The fact of irreducibility also speaks against a fresh traumatic origin, as it indicates old adhesions. Evidences that a pad has been worn should also be sought. A double traumatic hernia is almost unknown. The coexistence of ectopic testes also suggests a non-traumatic origin, as this is frequently accompanied not only by a predisposition but by a pronounced hernia. Other circumstances in favor of a gradual development of the hernia are advanced age of the subject, and the knowledge that he has been incapable of hard work in spite of a robust appearance. A predisposition to hernia is generally accompanied by flabby abdominal walls, with trilobed abdomen; sometimes there is a hernia point on the other side. A thin hernial sac without adhesions with the elements of the cord, nor thickening of the latter, is a point in favor of fresh traumatic hernia. The indemnity accorded in Germany is from 10 to 50 per cent. of the working capacity. In Switzerland a single sum is paid, ranging from 500 to 2000 francs. The article concludes with the expression of the writer's personal opinion that companies, etc., should accord the expenses of radical treatment as the minimum of indemnity in any case of traumatic hernia.

Centralblatt f. Chirurgie (Leipzig), March 24.

Operative Treatment of Neuralgia of the Trigemini.

A. B. TICHONOWITZ.—The conclusions of this prize thesis are that resection of the Gasserian ganglion, according to Quenu and Seibican, is much the best operation. The advantages are the lesser extent of resection of bone required, the harmless route to the foramen ovale between the bone and periosteum, the absence of large vessels in the field, the easy recognition of the tissues, the favorable conditions for the application of a ligature to the middle meningeal artery, which

can thus be well protected, the comparatively small size of the opening in the bone necessary for the exposure of the ganglion, and lastly, the protection of the defect in the bone by the numerous organs located behind the provisionally resected arcus zygomaticus, and the certainty of the consolidation of the arcus by the broad surface of the anterior incision of the resection. The Quenn and Sebileau method combines the advantages of the "temporal," and also of the "basal" method without their chief faults, and is therefore the method of election for resection of the Gasserian ganglion.

Deutsche Medicinische Wochenschrift (Leipsic), March 22.

Revision of Pharmacopeia Germanica. E. HARNACK.—The new drugs that have been added to the German pharmacopeia are already announced, twenty-five in all. The revising committee endeavored to avoid patented medicines and to re-baptize those already in the work. The list is: *adeps lanae anhydricus*; *adeps lanae emm aqua (lanolin)*; *ether pro narcosi*; *alcohol absolutus*; *arecolinum hydrobromicum*; *baryum chloratum*; *bismutum subgallicum*; *brromoformium*; *caffeinonatrium salicylicum*; *gelatina alba*; *hydrargyrum salicylicum*; *hydrastininum hydrochloricum*; *mel*; *methylsulfonyalum (trional)*; *oleum camphoratum forte*; *oleum chloroformii*; *oleum santali*; *pilule fer. carb. Blaudii*; *pyrazolonum phenyldimethylcum salicylicum (salipyrin)*; *semen eruce*; *serum antidipteriticum*; *tela depurata*; *tuberculinum Kochii*; *unguentum adipis lane*; *vinum china*. None of the new preparations of silver, of tannin, organic iodine, organic iron, of creosote, methylene blue, etc., are included in the list. *Salol* is re-baptized: *phenylum salicylicum*, and *antipyrin*, *pyrazolonum phenyldimethylcum*. Among the substances dropped from the pharmacopeia we note *auro-natrium chloratum*, the only preparation of gold; *keratinum* as a coating for pills (*salol* is recommended in its place), and *thallium sulfuriolum*.

Muenchener Medicinische Wochenschrift, March 13 and 20.

Distortion of Lower Joint of Foot. H. KRAPP.—The writer of this communication has had occasion to observe a number of cases in which the subjects had wrenched or sprained a foot some time before. As they recovered they found they could walk perfectly well on level ground, but there was a sensation of uncertainty on an uneven surface, and if they stepped on a pebble or anything of the kind, the pain was so intense that sometimes they fell. On examination, the talocalcaneal joint was found enlarged, or a small prominence in the talus region, or a displacement of the anterior talus angle; pronation and supination of the foot were almost if not entirely impossible, while dorsal and volar flexion and gait were normal. The cause is either a fracture or distortion of the lower joint of the foot and usually leads to ankylosis of the joint. Rest, massage and a special shoe will cure recent cases and improve all. Krapp urges investigation of the lateral movements in all cases of injury to the foot, and observes that the effects of distortion of the lower joint, while not impairing the working capacity in most occupations, proves a serious detriment in others.

Large Splinter in Eye Not Discovered for Year and a Half. PETERS.—A child of 8 fell and complained of pain in the eye, and for several days there were marked cerebral symptoms, but the physician found no foreign body in the eye. It suppurred and became blind. A year and a half later, as suppuration still continued, the child was taken to Peters, who extracted a splinter of wood over 3 cm. in length and 3 mm. wide. He believes that the sight might possibly have been saved if the splinter had been removed at once, and asks what would have been the results if the parents had sued the first physician for his neglect to find a splinter of such size in their child's eye.

Trial of Local Alcohol Therapeutics in Gynecology. L. SEITZ.—A series of cautious and thorough tests were made of local alcohol treatment in various gynecologic troubles, in the hope that the arterial hyperemia induced might assist Nature in the defensive reaction of the organism. Applied to the vagina, the effect was only beneficial in one case—chronic metritis and endometritis fungosa—while the erosions and shedding of the epithelium induced offer a favorable soil for infection of all kinds. A case of tuberculosis of the peritoneum

and adnexa was also favorably affected by alcohol compresses applied to the abdomen after laparotomy to evacuate ascites, and this success warrants further attempts in this line. In other respects local alcohol treatment proved a failure in gynecologic affections.

Treatment of Lupus and Other Skin Diseases with the Roentgen Ray. ALBERS-SCHOENBERG AND HAHN.—The long experience of the writers at their Roentgen institute at Hamburg enables them to affirm that all skin diseases without exception are favorably influenced by the Roentgen ray, while, with proper precautions, there are no inconveniences from its use. It invariably cures the eczema accompanying lupus, and the indurations, and is peculiarly adapted for the treatment of flat surfaces and extensive areas. Recurrences are not prevented by this treatment any more than with other methods, and it does not exclude other treatment; in fact, is best applied in combination with other methods.

Simple Method of Determining the Bound Hydrochloric Acid in Gastric Juice. O. COHNHEIM.—The simplicity of this method adapts it to general clinical use. The contents of the stomach is filtered and the total acidity and proportion of free hydrochloric acid computed as usual, for each 10 cm. A similar amount—10 cm.—is then precipitated with calcium phospho-tungstate prepared by neutralizing a 4 per cent. aqueous solution of commercial phospho-tungstate with calcium carbonate at boiling point; 30 c.c. are sufficient. After waiting two to five minutes, filter and determine the acidity with resol acid or phenolphthalein. The difference between the amount thus obtained and the total acidity is the amount of bound acid. In the absence of free hydrochloric acid the deficit is determined and a certain amount is added, 30 to 40 c.c. more than the actual deficit, and this amount is subtracted from the amount of bound acid established. In the tabulated tests the total acidity varied from 27 to 95, with minus 78 free acid in the first case and plus 70 in the second. The amount of bound acid was 25 in each case. The total hydrochloric acid in the first was minus 53 and the second plus 95.

Gazzetta degli Ospedali (Milan), February 25.

Subconjunctival Injections of Sublimate in Ulcers of Cornea. F. AMATA.—An experience with forty-two cases of severe ulcers of the cornea has convinced Amata that this method of treatment far surpasses all others in simplicity and efficacy. A single injection was sufficient in all but one case. He uses Grosso's formula—corrosive sublimate, 5 cg.; sodium chloride, 10 cg.; aq. dest., 100 gm.—after cocaine.

Mercurial Neuritis. P. C. MODINOS.—A young man had rheumatic pains appearing three years after he had contracted syphilis and been effectively treated at the time. He returned to his mercury to dispel the pains, but found that they increased until walking was impossible. Modinos ascribed them to a mercurial neuritis and appropriate antimercurial treatment soon cured them. He also reports a similar case occurring eighteen years after the first syphilitic infection. He suggests that possibly this mercurial neuritis may occur comparatively frequently and be ascribed to other causes.

New Indications for Injections of Gelatin, and New Formula. V. PENSUTI.—The writer has been using injections of gelatin extensively in all hemorrhagic infections, and recommends them as harmless and marvellously effective in chronic cases that have resisted all other treatments. He describes one observation in detail, a young woman very much debilitated from several weeks of bloody dysentery, forty-five passages a day, all blood-stained. The blood ceased to appear in twenty-four hours after the first injection of .90 gelatin, and the discharges were reduced to normal number in three days. No other treatment was instituted except the daily injection of gelatin. Pensuti adds a few centigrams of phenic acid to each c.c. of the 30 per cent. gelatin; filters in steam and injects 3 c.c. once to three times a day in very severe cases. By this means he avoids the large amounts necessary when a more diluted fluid is used.

Alum in Lead Poisoning. G. CAMPANELLA.—In the failure of all other remedies Campanella administered alum, which at once conquered the rebellious constipation and cured the

patient. He explains the mechanism as due to the formation of a soluble alkaline sulphid by the combination of the alum with the albuminoids and free alkaline substances in the intestines, with the formation of sulphuric acid. These stimulated peristalsis and irritated the mucosa, producing hyperemia, which counteracted the anemia caused by the lead.

Experiments in Prophylaxis of Malaria on the Rome-Tivoli R. R. A. BALDI.—The houses of the railroad agents were rendered mosquito-proof, and netting masks, veils and gloves were provided the agents who had to be in the open air at night. Insecticide powders were burned in the rooms. The stretch of the road on which these precautions were taken was in a notoriously malarial region, and a corresponding stretch was left unprotected to serve as control. In the latter every person connected with the road and every member of their families was infected with malaria, terminating in cachexia in some. In the protected stretch all escaped except the station agents who had to be exposed to the night air. These results are considered very encouraging, as the scientists had to contend with ignorance and negligence on the part of the railroad employees, although the officers of the road afforded them every facility and appropriated a thousand lire to pay expenses.

Success of Nitrate of Silver in Acute Lobar Pneumonia. E. CACCIANIGA.—THE JOURNAL called attention to Caccianiga's treatment of pneumonia with nitrate of silver, when he first announced it in 1898. He has now an experience of 60 cases with 56 prompt recoveries, 1 slow one and 3 deaths. The drug seems to have a specific action on the pneumococcus, and restores the temperature to normal in twenty-four to forty-eight hours; the resolution of the pneumonic foci commences two to a few days after defervescence, and a sense of relief and general improvement accompanies or precedes the latter. He gives adults 25 to 30 eg. of nitrate of silver in pills of 2 to 5 eg. each, or in a mucilaginous vehicle, one pill or one tablespoon of the solution every hour. He repeats this prescription every day, increasing it if necessary until complete apyrexia and then continuing half the dose for two or three more days. In very severe cases he makes subcutaneous injections, and considers protargol the best preparation of silver for this purpose, injecting 15 eg. at a time in a 50 per cent. solution. He appeals to the profession at large to test this treatment of pneumonia and report results, confident of its efficacy.

Experimental Research in Regard to Toxicity of Serums, Exudates, Etc., in the Various Morbid Conditions and Under the Influence of Medicines. F. BADANO.—The heart of the tortoise, *Emys Europea*, was used for the tests, with Williams' apparatus to maintain artificial circulation. The chief results of the extensive research show that pleuritic effusions are very slightly toxic, a little more if from a febrile patient and still more if purulent, but peritoneal effusions showed no toxic action. Blood from patients with pneumonia arrested but did not kill the heart, whose functions could be restored by sending salt solution through it, but blood from subjects with pneumonia, who had been taking digitalis, was much less toxic. There did not seem to be any proportion between the amount of digitalis and its modifying action, and it did not prevent the arrest of the function at last. Blood from patients with erysipelas killed one heart; another was revived by salt solution after it had been arrested. Streptococcal toxin had a slightly toxic effect. Blood from subjects with severe malarial infection killed the hearts sooner or later in every case, and this effect was only retarded by half an hour when the subjects had been taking quinin. Blood from typhoid subjects was also fatal to the heart, and seemed most toxic during the second week of the disease. Phenacetin and antipyrin had no effect in diminishing the toxicity of the blood. Blood from subjects with pyemia soon exhausted the heart. Tuberculous blood had no special toxic action on the heart, but the blood in severe icterus and with cirrhosis of the liver showed marked toxicity, even when subjects felt comparatively well.

St. Petersburgers Medicinische Wochenschrift, March 10 and 17.

Erythema Exsudativum Multiforme. H. LAU—G. Lewin, who has treated over eighty thousand syphilitic patients, always urges his students to wait for the eruption before instituting specific treatment, as it frequently occurs that cir-

cumstances arise which render it impossible later to determine whether a subject has had syphilis or not. Lau relates a convincing instance: a man, 33 years of age, noticed five small sores on the prepuce, diagnosed by a physician as soft chancres and treated with specific medication. They soon healed, leaving indurations, and a year later a papulous eruption appeared, for which he took a regular course of treatment. This eruption recurred nine times in the course of six years, during which time the various courses of specific treatment had introduced about a pound of mercury into his system. At the end of this time Lau was consulted and demonstrated that the eruption was merely a cyclic erythema exsudativum multiforme, and if the subject had ever had syphilis at all, it had been cured long years before.

Septic Maculo-Papulous-Erythema Consecutive to Follicular Tonsillitis. K. DEHIO.—The acute follicular tonsillitis had evidently been the starting-point of a severe septic intoxication, with high fever, involvement of the central nervous system, digestive disturbances and a maculo-papulous eruption over nearly the entire body. A second observation is related in which the eruption recurred three times after an interval of two years. Dehio considers it probable that the specific, probably septic toxins causing the eruption encountered in these cases a certain predisposition or idiosyncrasy.

Societies.

COMING MEETINGS.

- AMERICAN MEDICAL ASSOCIATION, Atlantic City, N. J., June 5-8.
- Medical Association of Alabama, Montgomery, April 17.
- South Carolina Medical Association, Charleston, April 18.
- Louisiana State Medical Association, New Orleans, April 19-21.
- Medical Association of Georgia, Atlanta, April 18.
- Medical and Chirurgical Faculty of Maryland, Baltimore, April 24.
- Texas Medical Association, Waco, April 24.
- American Proctologic Society, Washington, D. C., May 2 and 3.
- Illinois State Medical Society, Springfield, May 15-17.
- Association of Military Surgeons of the United States, New York City, May 31 to June 2.
- American Medico-Psychological Association, Richmond, Va., May 1.
- American Association of Anatomists, Washington, D. C., May 1-3.
- American Association of Genito-Urinary Surgeons, Washington, D. C., May 1-3.
- American Laryngological Association, Washington, D. C., May 1-3.
- American Surgical Association, Washington, D. C., May 1-3.
- American Association of Physicians, Washington, D. C., May 1-3.
- American Climatological Association, Washington, D. C., May 1-3.
- American Dermatological Association, Washington, D. C., May 1-3.
- American Orthopedic Association, Washington, D. C., May 1-3.
- Arizona Medical Association, Prescott, May 2-3.
- American Gynecological Association, Washington, D. C., May 4-6.
- Medical Society of State of North Carolina, Torboro, May 5.
- American Pediatric Association, Washington, D. C., May 7-9.
- Ohio State Pediatric Society, Columbus, May 8.
- Nebraska State Medical Society, Omaha, May 8-10.
- Washington State Medical Society, Spokane, May 8-9.
- Oklahoma Territory Medical Society, Oklahoma City, May 9.
- Ohio State Medical Society, Columbus, May 9-11.
- Kentucky State Medical Society, Georgetown, May 9-11.
- Medical Association of State of Missouri, Mexico, May 15-17.
- Medical Association of Montana, Butte, May 16.
- Iowa State Medical Society, Des Moines, May 16-18.
- Arkansas Medical Society, Jonesboro, May 14-16.
- Connecticut State Medical Society, New Haven, May 23-24.
- North Dakota State Medical Society, Grand Forks, May 23-24.

Indiana State Medical Society, Anderson, May 24-25.
New Hampshire Medical Society, Concord, May 31 and June 1.

New York Academy of Medicine.

Section on Medicine, March 20, 1900.

TREATMENT OF RHEUMATISM.

This was the general subject for the evening's discussion.

TREATMENT OF RHEUMATISM AT THE NEW YORK CITY HOSPITAL.

DR. HUGHES DAYTON, in his paper on this subject, said that the chief reliance is placed on sodium salicylate, given in doses of 10 or 15 grains every three hours until the pain is relieved. Where it seems advisable to push this drug in spite of the presence of such toxic symptoms as tinnitus, sodium bromid is added. In a few instances the salicylate has been administered per rectum, in doses of 30 grains dissolved in two ounces, but ordinarily, when the stomach proves intolerant of this drug, salol, 5 grains every three hours, is given instead. For local use methyl salicylate is useful. It is absorbed into the system through the unbroken skin, as is readily demonstrated by testing the urine half an hour after applying it to the affected part. The same local application is used in the cases of chronic rheumatism in this hospital, but internally alkalies and iodid are given. If there is much infiltration about the affected joints, the hot-air bath is employed, and if used for a considerable time, it reduces the swelling and increases the mobility of the joints. For muscular rheumatism salol and phenacetin, each 5 grains, are given every three hours, and methyl salicylate or belladonna plaster is used locally. Perhaps the most reliable local application is the thermo-curety.

TREATMENT OF RHEUMATISM AT THE MOUNT SINAI HOSPITAL.

DR. L. A. S. BODINE read a paper on this topic. The method in vogue is to first thoroughly clear out the intestinal tract by a dose of calomel, followed by a saline cathartic, and then to administer the salicylate of soda in doses of 10 or 15 grains at intervals of three hours. If the salicylate causes gastric disturbance, tinnitus aurium or eruptions, the oil of wintergreen, or the citrate or acetate of potassium is substituted. Morphine is rarely given to relieve the pain, the main reliance in this disease being on such sedatives as phenacetin, acetanilid and antipyrin. Trional, either alone or combined with bromid of sodium, is the favorite hypnotic. Rest in bed and a fluid diet are insisted on during the acute stage, but after the temperature has remained at the normal for three or four days the patient is allowed to get up, and his dietary enlarged to embrace eggs, bread, potato, and fresh vegetables, but meat is still excluded. During convalescence, iron, strychnin, and quinin are administered. Locally, methyl salicylate is used, also tincture of iodine, and ice-bags, and attention is paid to the position of the limb. If these measures do not suffice to check the effusion, the joint is aspirated to determine the character of its contents. Hot-air baths for the affected parts, at a temperature of 200 to 400 F., have been used to some extent.

DIFFERENTIAL DIAGNOSIS OF CHRONIC RHEUMATISM.

DR. J. J. WALSH, in commenting on the differential diagnosis, divided the cases of rheumatism into four classes: 1. Subacute rheumatism, the attacks occurring rather frequently yet yielding readily to treatment. 2. Cases presenting the symptoms of articular rheumatism, and occurring especially in children, under the name of "growing pains," or alternating with chorea, tonsillitis, and certain skin affections. 3. True chronic rheumatism, where the joint is sometimes permanently injured and deformed. 4. A very large and motley array of cases often diagnosed as rheumatism, chiefly because of the presence of pain somewhat resembling that of true rheumatism. It is true that this pain is relieved by the remedies often employed in rheumatism, but as these drugs are usually the coal-products, which relieve pain in the peripheral nerves no matter what its nature or origin, this is no argument in favor of rheumatism. Incidentally the speaker said that anybody who ever experienced the soothing effect of the salicylates as a surgical dressing, or the great relief afforded in toothache arising from an abscess at the root could readily understand the relief of pain from the administration of such remedies.

Another common mistake in diagnosis is to confound the pain of flat or weak foot with rheumatism. The error is made apparent by the relief afforded by simply placing a small pad of felt under the inner border of the foot to properly support the arch. A similar condition of pain in the foot was noted in some dentists; it had its origin in supporting the weight of the body for long periods of time on one foot while the other was engaged in running the dental engine. These occupation neuroses should be borne in mind, and the possibility of their presence in the given case carefully weighed before making the diagnosis of chronic rheumatism.

HOT-AIR TREATMENT OF CHRONIC RHEUMATISM.

DR. THOMAS E. SATTERTHWAITE said, on this subject, that in the modern apparatus used for this purpose the essential idea is to keep the body dry while the air about it is superheated. To this end, the limb is wrapped in two or three layers of blanketing or Turkish toweling, to prevent the scalding which will result if this provision is not made for the immediate absorption of the perspiration. The inner surface of the cylinder is lined with asbestos to prevent contact of the skin with the heated metal. If the toweling is not applied snugly about the limb some perspiration may lodge between it and the skin and so cause blistering. He could not endorse the extravagant claims made for this apparatus by some observers, but it could certainly be said to be an adjuvant to other methods. Dr. George L. Kessler, of Brooklyn, who had had an extensive experience with this method, felt warranted in drawing the following conclusions: 1. The treatment causes contraction and then dilatation of the superficial blood-vessels. 2. The pulse becomes stronger but beats more rapidly. 3. The bodily temperature is raised from one to six degrees. 4. This is associated with profuse and acid perspiration. 5. The respirations are increased in frequency. 6. If the treatment is too prolonged, nerve exhaustion will be experienced.

DR. H. W. GIBNEY detailed a number of cases in which he had used this portable hot-air apparatus with more or less success.

USE OF ELECTRICITY IN CHRONIC RHEUMATISM.

DR. WILLIAM JAMES MORTON, in his paper on this subject, considered the effect of the high potential high frequency current in general, and that of his so-called "electric wave current" in particular. When using this wave current, he said, the patient practically becomes one coating of a Leyden jar, and is therefore subjected to a very powerful but not unpleasant condenser current. By means of dry, uncovered electrodes of some pliable material, such as block tin, this current can be readily applied to the joints or various other regions of the body—indeed, by making use of the metallic military cloth, used in decorating soldiers' uniforms, one can readily and quickly cut out rude garments, and apply the current generally as well as locally. The application should be kept up for from fifteen to thirty minutes, but if the patient feels exhausted afterward it is an indication that the treatment has been too prolonged. In subacute and chronic rheumatism he first advises a general treatment as just described, followed by a local one with sparks. This electric method powerfully influences all the nutritional processes, and is greatly superior to the hot-air treatment or to any other method he has tried. It is particularly useful in cases of gout, and where there is only a watery edema, the relief at once afforded by the application is apt to be permanent. Skiagraphs were exhibited to show the good results obtained from this treatment in cases of rheumatoid arthritis, and the assertion was made that the progress of rheumatoid arthritis can be arrested in any stage, the result being secured more slowly in proportion as the disease is more advanced before coming under treatment.

DR. WILLIAM M. LESZYNSKY said that while he had had even brilliant results from the use of the static electric machine in the treatment of muscular rheumatism, he had not achieved such signal success when he had employed this method in cases of chronic articular rheumatism. One reason the electric treatment is commented on adversely by so many physicians is that they have not made sufficiently long applications of the current. One method of the treatment which he

has found very useful is the wet pack. By the use of this at night, and massage and oil of wintergreen by day, joints stiffened by rheumatism can be improved in a comparatively short time.

DR. MORRIS MANGES spoke against the prevailing tendency in some quarters, to believe that we are in possession of any specific treatment for rheumatism, and added that to treat this disease solely by the use of the salicylates is a serious error. Patients so treated will have many complications, and recover slowly. The urine should be carefully watched to determine the quantity of alkali needed. The urine should be made alkaline, and kept so. The best results will be secured by combining a pronounced alkaline treatment with a moderate salicylate one, and by giving due attention to the heart and to immobilization of the affected joints. He knew of one or two instances in which the chilling of the parts after their removal from the hot-air apparatus led to a subacute case again becoming acute. The hot-air treatment is also not wholly free from other dangers, such as fire and burns.

DR. MARY PUNNAM JACOBI said that she had had an opportunity of witnessing the treatment of rheumatoid arthritis by means of the electric wave current, and had been favorably impressed with the method.

DR. G. L. KESSLER said that he had treated 350 cases of rheumatism in the Sprague hot-air apparatus, and had found it capable of increasing the mobility and reducing the deformity in most cases. In those in whom the joints have become suddenly stiff he has used lactic acid with gratifying success, though it must be confessed empirically. This medication, together with the hot-air treatment, should be kept up for several months. The temperature of this apparatus can not be safely allowed to run up above 350 F., as indicated by the thermometer in the top of the apparatus. He is opposed to the splinting of rheumatic joints, believing that this simply encourages the stiffening of these parts.

Section on Laryngology and Rhinology, March 28, 1900.

CHRONIC ATROPHIC RHINITIS.

DR. FRANCKE H. BOSWORTH opened the special subject for discussion by a consideration of the etiology. He says that atrophic rhinitis is only a development from the purulent rhinitis of childhood, and that there is not a single case on record which justifies the assertion that atrophic rhinitis ever follows hypertrophy. Children are well known to be susceptible to catarrhal inflammation, and the result of such a process is, at first, increased secretion. The process gradually extends into the glandular structures, and the secretion becomes inspissated, and finally dried into crusts which by pressure, interfere with the vascular supply of the mucous membrane; and as they are not easily expelled, they decompose, and cause the stench so characteristic of this class of cases.

DR. JONATHAN WRIGHT reviewed the more recent contributions to the etiology and pathology, particularly certain anthropometric studies, which point especially to two factors as prominent in the etiology of atrophic rhinitis, viz.: 1, epithelial metamorphosis of the nasal mucous membrane; and 2, the presence of wide nasal fossae. Some authorities are of the opinion that the short septum has a direct bearing on the occurrence of ozena. Gerber maintains that the flat nose type is more common in women, and asserts that 71 per cent. of the cases of atrophic rhinitis occur in females.

DR. CLARENCE C. RICE discussed "the importance of distinguishing functional collapse of the nasal tissues from atrophic rhinitis," and said that in the simple dry rhinitis of the anemic the nasal mucous membrane is smooth and presents all shades of pallor, while in atrophic rhinitis the color of the membrane varies from a red to a dirty gray. Perhaps the most important distinguishing feature is the amount of secretion. In cases of functional collapse, there is comparatively little; in atrophic rhinitis there is usually an abundant accumulation of pus and crusts. Again, in atrophic rhinitis the degree of dryness varies greatly from time to time, while in functional collapse, although the dryness is never so great as in atrophic rhinitis, the mucous membrane is never moist. Hyperplasia of the middle turbinate is more marked in atrophic rhinitis than in functional collapse.

DR. THOMAS R. FRENCH, in speaking of the treatment, said that while oily sprays give temporary relief, their use is inadvisable as they tend to aggravate the disease by still further interfering with the glandular action. For local treatment, he prefers the spray, both before and after an application of hydrogen peroxid. Most of these patients require daily cool baths, life in the open air and other general tonic measures.

DR. D. BRYSON DELAVAN, in discussing "the mechanical and electrical treatment," deprecated any extensive removal of the mucous membrane in most cases. Gottstein's treatment by means of tampons is chiefly indicated in patients in whom there are localized areas of tissue partly hypertrophic and partly atrophic. Either the galvanic or the faradic current, frequently interrupted, could be used in the treatment of atrophic rhinitis, but this method was both tedious and expensive.

DR. CHARLES H. KNIGHT discussed "the treatment by drugs." For local cleansing he knows of nothing superior to a normal saline solution made by dissolving one teaspoonful of common table salt in a pint of water. For use in spray apparatus it is superfluous to previously warm the solutions, as it has been conclusively demonstrated that the temperature of the solution falls materially almost immediately on leaving the nozzle of the apparatus. There can be no doubt concerning the beneficial action of menthol when used locally. It improves the character of the secretions, and reduces their quantity. To begin with the strength should not exceed five grains of menthol to the ounce of fluid absolute, but after the patient has become accustomed to this, the strength can be increased with advantage. Formaldehyde would seem theoretically to be an ideal medicament in atrophic rhinitis when used in an atomizer in the strength of 1 in 5000. However, some persons will not allow it to be used for any length of time because of the pain attendant on the application. A 5 per cent. solution of ichthyol in petroleum is exceedingly useful, but its unpleasant odor is a drawback.

DR. COYLE, of Hornellsville, remarked that he had had greater success in the treatment of this affection from the use of gauze tampons in the nose than from any other method.

DR. WOLF FREDENTHAL expressed the opinion, based on considerable observation and experimentation, that much of the atrophic rhinitis now so prevalent is to be explained by the dryness of the air in most living rooms. For comfort and health there should be 60 per cent. of relative humidity, and certainly not less than 40 per cent., yet he has often known it to be as low as 30 per cent., and sometimes even as low as 15 per cent. This compels the mucous membrane of the upper air-passages to do an excessive amount of work, and quickly leads to diseased conditions.

DR. BEAMAN DOUGLAS said that a most useful local application in atrophic rhinitis is a 50 per cent. solution of ichthyol, as this substance, when applied to the mucous membrane, causes a serous exudation and an absorption of leucocytic infiltration. Another method which gives promise of usefulness is the carbonic acid gas treatment advocated by Dr. Achilles Rose.

DR. WENDELL C. PHILLIPS expressed the opinion that a 25 or 50 per cent. solution of ichthyol makes the best application, but insisted that to attain the best results the patient should be carefully instructed in the best method of cleansing the vault of the pharynx as well as the nasal passages. This part is very unpleasant, and it is difficult to get some persons to do it at all, yet it is a measure which should not be neglected.

Chicago Academy of Medicine.

March 9, 1900.

CASE OF FUNCTIONAL TREMOR OF THE ARM.

DR. HAROLD N. MOYER reported this condition in a man 47 years of age. This is the second attack of the tremor noted in his right arm. The first began about ten years ago. His health previous to that time was always good and there was apparently no cause for the attack. As he was going home from work, his arm suddenly began to shake, but less than it does now. He confined himself to the house for a month and

then returned to his work somewhat improved. At the end of the year the tremor had practically ceased, excepting for certain "reminders of it," he says. He was able to go on with his work, using his hand in all the ordinary occupations as well as before, but now and then there was a suggestion of the tremor, disappearing as suddenly as it came. Six weeks ago, while he was eating his dinner, the arm suddenly began to shake and has been shaking ever since. He has perfect co-ordination: the reflexes are intact; the eye-grounds and pupils are normal; there are no sensory disturbances. The muscles in this arm are well-developed and in fact, larger than those in the other arm, presumably due to the very great exercise which these muscles have. When stripped, he presents no tremor of any other member or muscle excepting those of the right arm and forearm, but Dr. Moyer was not quite certain that there is no tremor in the shoulder muscle. There is some jerking in the pectoral muscle, none in the head muscles nor in those of the other side. The jerking of the arm jerks his whole body. The tremor disappears during sleep.

The case is a very interesting one from the standpoint of diagnosis. Dr. Moyer does not believe it is paralysis agitans nor a case of sclerosis, and would hardly class it with chorea, yet there is perhaps more suggestion of the latter than any other kind of tremor. He can use his arm to some extent. The vibrations are about 280 per minute.

DR. HUGH T. PATRICK—I would like to ask whether the patient has been intoxicated recently?

DR. MOYER—He has not.

DR. PATRICK—I venture to predict that if he got drunk the tremor would stop. It would probably also disappear in a fit of anger. I had a similar case in which the shaking stopped and the eyes were closed.

DR. J. G. KIERNAN—I have had, some time ago, a case somewhat similar to this with the exception that tremor involved not merely the arm, but the speech center and the leg center as well. It was a case in a 15-year-old negro, and began with a peculiar stammer. The more attention was directed to the symptoms the more violent they became. While the age in this case differs—the age also would lead to the inference that there was an organic rather than a biochemical lesion—still the results obtained by Dr. Patrick and also the use of conium and camphor monobromate, which seems to exercise a beneficial effect, would make these cases somewhat alike. The boy has certainly gotten rid of the tremor, and speech disturbance, except under some very decided excitement.

In dealing with these cases, not merely the ordinary biochemical explanation, but the hysteric or neurasthenic as well, should be taken into account. In the case of the young negro the neurasthenic element alone could be excluded. In his case stammering was the last symptom to disappear.

Conium is undoubtedly a motor sedative. I have seen a similar tremor occurring in a 70-year-old woman, who was sent to me from Texas ten years ago. She had been given opium in enormous doses, and became an opium eater at the age of 65. That tremor turned out to be precisely the same as in the case of the boy. It disappeared completely under the rest treatment of opium disease, and the use of conium. I might add that two years afterward it recurred under "Christian Science." As far as I can learn from what Dr. Moyer has said anent his case, the condition is rather a biochemical one; to me it seems that it would be advisable to try the treatment indicated by Dr. Patrick, and also try conium in large doses.

DR. W. X. SIDDUTH—Several have suggested that I undertake to control this tremor, the patient being present. There is no doubt that it can be controlled by suggestion, as it is an involuntary action. The man, however, is not in a frame of mind to be made a clinic of at the present time, and that makes handling of the case rather difficult. Sedative drugs would have a beneficial effect in this case as it is the man's good right arm, the one with which he makes his living. The tremor has developed a suggestion in his mind so firmly that it requires a good countersuggestion to relieve it. The treatment of rest cure, suggested by Dr. Kiernan, is a good one, but it must be accompanied by diversion in order to take the patient's mind from his affliction. Any line of treatment which will divert his attention from the tremor will cure the case.

DR. HUGH T. PATRICK—I would like to ask Dr. Moyer whether he inquired closely into the emotional condition of the patient prior to his first attack.

DR. MOYER—So far as I can learn it was normal. He distinctly remembers the onset of the trouble ten years ago; the shaking began suddenly while he was on his way home from work. The second attack came on equally as suddenly while he was at the dinner table.

DR. PATRICK—There is nearly always some emotional disturbance in relation with the first shock. It may not be immediately preceding the attack but relatively near it. I remember two cases very much like this one, one in a boy in whom the shaking stopped immediately when the eyes were closed, the other a case of amputation just above the ankle. The latter had in the stump, exactly the same tremor or jerking which the patient has, but it did not persist constantly, and was relieved by placing the limb in a certain position.

This patient has probably discovered, consciously or unconsciously, some way in which he can partially control this tremor. I have watched him closely and it seems to me that sometimes the tremor subsided almost entirely. When he removed his overcoat and in so doing put his arm behind his back the tremor subsided entirely, and when the arm was drawn from the sleeve it began again. I think there can be no question as to this being other than a purely functional affair. I would not like to call it a biochemical lesion, as Dr. Kiernan suggests, because I do not know what that means. Brissaud called another set of muscular spasms "mental torticollis," indicating not only its functional but furthermore its psychic nature. The name was well chosen. I believe this case to be similar in origin, and I can see no reason why it should not be perfectly curable.

DR. WILLIAM J. BUTLER—We will all agree on the diagnosis which Dr. Moyer will make, namely, that the condition is functional, i. e., a tremor neurosis. I wish to call attention to a number of cases of tremor neurosis reported by Kraft-Ebing, in 1898, in the *Wiener Klin. Woch.*, and to which this case seems analogous. As a result of his observations he noted occurrence most frequently in young girls, though in one case, at the age of 41 years. The patients, were, as a rule, of a low order of intelligence and very emotional. The tremor was usually ushered in by a psychic or mechanical trauma. It frequently started in an arm or arm and leg, and extended later to involve the other extremities and head, producing a clinical picture simulating paralysis agitans. The tremor was always increased by intentional movements or excitement, and in one case could be increased or diminished by suggestion. All the patients lacked bodily stigmata of hysteria, except in one in whom painful pressure points were observed on the back.

The various methods of treatment resorted to—hypnotism, magnetism, electricity, sedation, etc.—proved valueless during the time under observation, in all cases, except that of a young girl whose tremor came on only during the recumbent or sitting position and disappeared on standing erect. She presented painful pressure points on the back, and pressure on them resulted in diminution of the intensity of the tremor; vigorous faradization of these areas resulted in disappearance of tremor.

DR. H. N. MOYER (closing the discussion)—I have refrained from making a diagnosis and I think my confrères have been equally wise. I had expected to hear the word hysteria used, but it was not. To say it is a functional affair is wise. The term "hysteria" has been abused for a long time, and I am not inclined to group under that head things which are not clear to me nor things which we do not consider as organic. That is bad neurology. As this man presents no evidences of hysteria I will not make that diagnosis. I agree that the case is functional. I have noticed, as Dr. Patrick did, that on voluntary movement, especially if of an automatic character, there is partial cessation of the tremor, even if momentary.

The case is an interesting one and it certainly is rare. I have seen but three in twenty years. The first one was in a young girl who had the same tremor confined to the pronator of the forearm. I carefully studied it. The case was reported in THE JOURNAL nearly fifteen years ago. The rate

was 450 per minute, the fastest I have ever seen. Another one was in a woman and was undoubtedly hysteric. She presented the identical appearance that this man does. The ultimate result of treatment in the first case was absolutely *nil*. Suggestions and other means were unavailing. The young woman recovered after more than a year, without treatment. I do not know the result in the second case.

I have tried hyoscyamus in large doses in this man, without any effect on the tremor, and I believe that the relief lies, as Dr. Sudduth says, along the line of suggestion. If Dr. Sudduth, who is more skilled in applying suggestions, which in my hands is a very discouraging procedure, is willing to try it on this man I will be very glad indeed to put him in his charge and see what he can do for him.

San Francisco Society of Eye, Ear, Nose and Throat Surgeons.

March Meeting.

WHITE OPTIC ATROPHY IN TABES.

DR. GEO. W. MERRITT presented two tabetic patients with white optic atrophy, as illustrating that the atrophy of spinal disease is not always of the gray variety.

INJURIES TO THE EYE.

DR. GEO. H. POWERS presented a boy who, some time ago, was struck on the left eye by a ball, causing traumatic cataract. Several needlings were done and some vision recovered, but a rather dense membrane remains. The plane of the iris is far back, making the anterior chamber excessively deep, and a peculiar, spongy, black substance occupies the whole periphery of the anterior chamber.

Dr. Powers also presented a man who, five days before, was injured by a bit of steel from a chisel, which had penetrated the cornea, iris and lens near their superior periphery. The iris was torn away at its upper periphery. The lens when first seen was swollen and opaque. Two days later Dr. Powers took the patient to Dr. Pischel, who used his giant magnet. A "pulling" was felt when the circuit was closed, and a piece of steel weighing six grains jumped suddenly to the pole. There was no reaction and is now perception of light with ability to tell the direction of hand shadows.

Dr. Powers' third patient, a young railroad employee in good health, was attacked with a sudden feeling of apprehension of impending calamity so that he could not work. Two physicians who attended him thought there was cerebral lesion. In the meantime the patient discovered, on unintentionally covering his left eye, that the right one was blind, and this frightened him to the verge of collapse. Tension of the blind eye was normal, with posterior synechia, opacity of the lens, and evidences of suppurative. Dr. Powers asked an expression of opinions as to whether there is any connection between the mental condition and that of the eye, and as to the advisability of removing the blind one.

DR. W. F. SOUTHWARD presented a man showing the extensive ravages of tertiary syphilis. The right eye was deviated far upward and outward, part of the palate lost, and the vertebrae exposed. There was a fair vision in the right eye.

DR. R. W. PAYNE presented a rare case of corneal disease, in a man of about 50, who had worked for many years in a smelter, being exposed to very irritating fumes. There was no specific nor rheumatic history. On the cornea were elevations in islands, between which were clear, transparent spaces. The elevations appeared to be epithelial. Peritomy and curetting had improved the condition.

DR. W. F. SOUTHWARD said he had seen a similar case in a child, with Dr. Schloss. The cornea was nearly covered with elevated opacities similar to those in Dr. Payne's case. He had shaved off a bit of the growth, and the microscope showed it to be epithelium. Nothing similar is described in the textbooks.

DEMONSTRATION OF TESTS FOR MUSCULAR ANOMALIES.

DR. F. B. EATON limited his demonstration mainly to the tests for what is variously termed suppressed squint (Maddox), heterophoria (Stevens), and superable squint (Duane). All deviations are properly strabismic, the difference between

strabismus and heterophoria being one of degree, not nature. Strabismus can be conveniently defined as the habitual absence of binocular vision, and it is important to determine when this is the case. Most of the tests are familiar, and only those were dwelt on which are misunderstood or neglected. To insure economy of time, and accuracy, some form of optometer must replace the trial frame, and one was shown which he has devised, after the one of Dr. S. D. Risley, Philadelphia, and which insures proper centering and levelling of lenses and double rotary prisms; it is fixed to the chair, and renders the examination more rapid, exact, and less fatiguing to examiner and patient. The ultimate muscular condition should be found after careful correction of the refraction, but at the first consultation a certain routine of muscular tests is necessary to avoid error in prognosis, and misunderstandings. Dr. Eaton makes the tests in the following order:

Inspection.—In addition to the ordinary observation of the movements when the eye follows a pen point, etc., attention was drawn to the value of the ophthalmoscopic corneal reflection as an objective test of deviation, first introduced by Priestley Smith. The patient fixes the hole in the mirror at nine inches, and the reflections are referred to the cornea, not to the pupil. This method is of particular value with infants, the light being thrown *rapidly* from one eye to the other.

Colored Glasses.—This test is familiar. Dr. Eaton has found that diplopia can be produced in all persons, provided the color is deep enough. When the diplopia is thus difficult of production, he has found esophoria for distance almost invariably present. Stevens has stated that 1 degree of hyperphoria by a red glass indicated habitual diplopia as also 1 or 2 degrees of esophoria or exophoria, but Dr. Eaton has found notable exceptions to the contrary.

Screen.—The screen or cover test is well known. It should be used in different parts of the field, both for the near as well as for distance.

Parallax.—This test is generally made too rapidly.

Maddox Rod.—The light should be small, with a background of black velvet. The tangent scale for both distance and near is the best method of using. For distance, esophoria of over 10 degrees and exophoria over 8 or 10 degrees by the rod generally indicates habitual loss of binocular vision. For the near, Dr. Eaton has found the Edw. Jackson rod with Maddox' small tangent scale the best. A clear black line is formed by the cylinder that acts as a rod, out of the black head of the arrow of the scale.

Prisms.—In spite of its convenience, the Stevens phorometer is far less sensitive and accurate than the Maddox rod. This has also been the experience of Dr. Hubbell of Buffalo, N. Y., who has shown that its findings, at least for distance, are unreliable. Both the rod and phorometer findings are modified by the range of accommodation, by spasm of accommodation from atropin and intense light. Stevens states that with his phorometer, hyperphoria of over 4 degrees and lateral heterophoria of over 8, indicate habitual absence of binocular fixation.

Prism Abduction.—Double rotary prisms, one before each eye, turned on simultaneously, give the abduction with absolute accuracy. Noyes and Valk prefer square prisms. For the near, abduction of 16 to 20 degrees may be taken as normal. With good health, an abduction of only 4 degrees at 20 feet can exist without asthenopia.

Prism Abduction.—At 20 feet, 20 degrees on to any amount may be considered normal; for near, 30 to 40. The dictum of Risley, that for distance the ratio of adduction to abduction is normally 3 to 1, has been found by Dr. Eaton to be a good working rule.

Convergence Near-Point.—This should be measured in meter-angles, the normal being, according to Landolt, 9½ meter-angles on an average, or 4¼ inches from the eyes. According to Duane, it is 2 inches, and he considers 1 inch abnormal. For an average interocular distance, 7 degrees of prism (refracting angle) equals one meter-angle. Error will occur unless with presbyopia, the patient is given lens correction for four inches. The length of time the subject can *hold* convergence for near is to be observed.

Monocular Field of Fixation.—This is taking its place as an important test in asthenopia. There is disagreement as to the normal bounds, and Stevens is at variance with all other observers. The method is of value in determining the muscle or muscles at fault in old cases of paresis with contraction of other muscles and consequent concomitancy. Also, before operating, to indicate whether tenotomy or advancement is indicated, etc.

DR. V. H. HULEN, on beginning his demonstration, stated that he would give the tests as he himself used them and not as others had. He first inspects the face and skull as to possible asymmetry. He has not found muscular troubles at all connected with asymmetry. One muscular test will show abnormality, another none, hence we should employ a number of them. He has found the Maddox rod test more accurate and searching than the Stevens phorometer, nevertheless the latter instrument has given him great satisfaction, owing to its great convenience.

Stevens' Stenopæic Lens.—This piece of apparatus Dr. Hulen has found very useful. It is the only test he is acquainted with that gives, at once, all the deviations, vertical and horizontal. He rarely prescribes prisms, since they weaken the muscles, and we have to increase their strength. He has watched Dr. Noyes, and found his method of using square prisms the best.

He demonstrated Dr. Noyes' holder, consisting of a central stem 20 inches long, graduated in inches, centimeters and meter-angles, on which is a slider carrying test-cards, and carrying three cells before each eye, in which corrective glasses and square prisms can be used. This apparatus is also useful in determining the presence of spasm of the accommodation. He also demonstrated a small trial box he had made to hold lenses and square prisms, and which he used on the arm of the Stevens phorometer. The Stevens tropometer was then demonstrated. Dr. Hulen believes this to be the best instrument for measuring ocular rotations.

New York County Medical Association.

New York City, March 19, 1900.

REPORT OF A SUCCESSFUL CASE OF EXCISION OF THE CECUM WITH END-TO-END ANASTOMOSIS.

DR. FREDERICK HOLME WIGGIN reported this case, the report appearing elsewhere in this week's JOURNAL.

SYMPOSIUM ON SERUM THERAPY.

DR. E. K. DUNHAM opened the general discussion, and was followed by Dr. E. A. de Schweinitz, chief of the Biochemic Division, Bureau of Animal Industry, U. S. Department of Agriculture, Washington, D. C., on "Tuberculin and Their Use." Dr. Alexander Lambert read a paper on "Antipneumococcus Serum," followed by Dr. W. H. Park, on "Diphtheria Antitoxic Serum." Dr. Charles B. Fitzpatrick then presented a paper on "Yellow Fever Antitoxic Serum," giving the results of some work done at the quarantine station. This was followed by one on "Antitoxic Serum," by Dr. R. J. Wilson, and one on "Antistreptococcus Serum," by Dr. H. Lilienthal. Dr. Wm. B. Coley presented a paper on "Serum Containing Mixtures of the Toxins of Erysipelas and Bacillus Prodigiosus." The above papers are printed elsewhere in this week's JOURNAL.

DR. WILLIAM H. WELCH, of the Johns Hopkins University, being unable to be present, sent a communication on "Typhoid Serum," in which he outlined his views. He does not think there is at present any satisfactory clinical evidence of the beneficial effect of serumtherapy in typhoid fever, though there is a sufficient experimental basis to justify, under proper conditions, the use of the vaccin as a prophylactic agent.

DR. W. TRAVIS GIBB, in speaking of the value of diphtheria antitoxin, mentioned a series of 19 fully developed cases of diphtheria that he had treated in this way, in some of which there had been instructive contrasts in the same households between the results of this treatment and of the older methods. He found that the temperature was usually decidedly reduced soon after using the antitoxin, and that it was kept in check.

He never noted any unpleasant constitutional symptoms follow the injections.

DR. S. A. KNOPP, speaking of the treatment of pulmonary tuberculosis with tuberculin, commented on the complexity of the problem, and the well-nigh impossible task of differentiating between the legitimate effects of such special treatment and those effects dependent on other means simultaneously employed, for, he took it for granted that the conscientious physician would not feel justified in treating any case solely with tuberculin, neglecting other and well-known measures for the management of consumption. He has tried the antistreptococcus serum in a few cases, but the results have not been encouraging, and he has discarded it.

The Kings County Medical Association.

Brooklyn, New York, March 13, 1900.

(Continued from page 877.)

The advantages of this method are to be found in the rapid action, the absence of unpleasant odor, the absence of excitement and struggling, and the comparative freedom from unpleasant after-effects, and the great safety of the method. The speaker's own experience leads him to believe that unless very skilfully administered, the administration of gas alone, or of gas and oxygen is more dangerous than either ether or chloroform. The disadvantages are the rapid changes in the stages of narcosis, the great difficulty in administering it properly, the cumbersomeness of the apparatus, and its expensiveness. As a rule, the anesthesia is not deep enough for operations on the abdomen or rectum, and a small proportion of persons can not be satisfactorily anesthetized in this way. The method is especially adapted to patients to whom it is especially dangerous to give ether and chloroform, e. g. aged persons, or those greatly debilitated, or having serious organic disease of the heart, lungs, or kidneys. He has seen no fatalities from this anesthetic, but on two or three occasions witnessed an alarming degree of asphyxia.

DR. E. R. SQUIBB said that in 1871 he read a paper on anesthesia before the Medical Society of the State of New York, and presented a simple apparatus which at that time was a novelty. It represented one of the earliest efforts to use a bag in connection with the ether inhaler. The apparatus consisted of a long muslin bag, having a narrowed central portion containing a sponge moistened with ether. The upper flaring portion constituted the face mask, and the lower part the bag into which the patient breathed. The bag was moistened when in use, in order to make it less pervious. The administration was commenced by placing about 10 cm. in a tumbler and holding it under the patient's nose until the mucous membrane had become anesthetized with this mild ether vapor. In this way anesthesia could be induced with very little trouble, and with a comparatively small quantity of the anesthetic. The objection made to the apparatus was that carbonic acid was breathed over and over again, as was also the ether vapor. For this reason the apparatus gradually went out of use, its place having been taken by Lente's inhaler.

DR. SQUIBB then spoke of the preparation of anesthetic ether. He said that under the best management there would be collected 96 per cent. of absolute ether and 4 per cent. of alcohol. This inseparable alcohol is a very definite proportion. Anesthetic ether is distinct from the commercial ethers, of which there are two varieties. One of these contains 87 per cent. of ether, and the other, or lower grade, about 75 per cent. In order that the alcohol should act properly as an anesthetic agent it should be 96 per cent. ether. The strength of ether is defined in the U. S. Pharmacopœia by the specific gravity, but ether being a very volatile liquid it is exceedingly difficult to determine its specific gravity accurately. There is a variation within the pharmacopœial limit of 2.3 per cent. A difference of 1 degree C. would make a difference of 1 per cent. in the strength of the ether, and the specific gravity could only be accurately determined by the use of a specially devised specific gravity bottle. The errors arising from these sources would be sufficient to make a difference of 3 per cent. in the strength. All alcohol contains slight impurities which lead

to the existence of certain odorous hydrocarbons in ether. Their presence is detected by dropping the ether on clean bibulous paper, and noting the odor as the ether evaporates. The odor of these hydrocarbons is analogous to the smell of a drunkard's breath when he is recovering from a spree. In his opinion the small traces of these hydrocarbons found in ether are often responsible for much of the nausea and vomiting following etherization. He feels positive that the surgeon who uses the cleanest ether will have the least vomiting among his patients. Ether having a specific gravity of .726 is a clean ether, while one having a specific gravity of .728—the pharmacopeial limit—may be an unclean ether.

Dr. J. C. BIERWIRTH said he had had the good fortune to have Dr. Bennett give gas and ether to some of his patients, and felt enthusiastic regarding the excellent results obtained. For example, in a woman of 74 years, suffering from malignant disease of the abdomen, both the induction of the anesthesia and the coming out of it were agreeable almost beyond conception. The method is peculiarly serviceable in anesthetizing children, as struggling and excitement are completely avoided. In one case in which nitrous oxid and oxygen was used, the anesthesia was like natural sleep, while in the case of a very neurotic individual the method proved an absolute failure. He has observed very little nausea and vomiting after gas and ether anesthesia. The inhaler devised by Dr. Bennett is an exceedingly simple and cleanly apparatus, and reduces to the minimum the quantity of ether consumed by the patient, he said, and he had used Dr. Squibb's muslin bag arrangement for a number of years, and found it quite satisfactory. At a recent meeting of the New York County Medical Association, Dr. R. H. M. Dawbarn made the assertion that Dr. R. C. Kemp's and Dr. W. H. Thomson's searches of the hospital records showed that one in sixteen had died as a result of ether anesthesia. He wished to declare his utter disbelief in the accuracy of that statement, and could not understand how such a statement could go unchallenged. Dr. Thomson and Dr. Kemp made some interesting experiments on animals, but giving ether to animals and to human subjects is a different matter. Undoubtedly a person with damaged kidneys is exposed to considerable risk from the common haphazard method of giving ether, but he has yet to see any serious trouble from this source if the ether has been properly administered. In one case, in which the kidneys were known to be damaged, and careful preparation had been made for the anesthesia, the anesthetic so stimulated the circulation that there was actually an increased activity of the kidneys afterward.

Dr. JONATHAN WRIGHT spoke of the use of ether in diseases of the upper air-passages. A patient with adenoids, he said, should be anesthetized to such a point that just as soon as the fingers and instruments are removed from the mouth, the patient would cough and expel the blood from the throat. To do this is exceedingly difficult with ether alone. He has seen two laryngectomies, lasting $1\frac{1}{2}$ and 2 hours respectively, in which nitrous oxid was used with great satisfaction. One great trouble from ether in the upper air-passages is the bronchorrhea induced. A drawback to the use of nitrous oxid gas alone is the blackness of the field from the cyanosis.

Dr. WILLIAM P. POOL said that the methods described in the paper are hardly applicable to the needs of the general practitioner. Chloroform acts, as do other anesthetics, on the respiratory organs. It is a very violent respiratory and cardiac depressant as compared with ether, and hence he wished to emphasize the greater safety of ether. He had one unpleasant experience with chloroform in a child on whom the operation for phimosis was about to be done. The chloroform had been given on a mask, according to the usually prescribed methods, yet before the reflexes were entirely abolished the respirations suddenly ceased, never to return. This suddenness of the lethal action of chloroform is what is so much dreaded. Ether should be given by the drop method, and air quite freely admitted. He believes the only proper field for chloroform anesthesia is in obstetrics. Such mixtures as the A.C.E. and the Schleich mixtures only give a chloroform effect slightly modified by the supporting action of the other ingredients.

Dr. WILLIAM B. BRNSMADE said that four years ago he read a paper before the Brooklyn Surgical Society, on the use of nitrous oxid, but it was received in silence. To-day this is quite commonly used in the hospitals, and both time and ether have been saved. The only criticism he would make on the bag inhaler is the uncleanliness inseparably connected with to-and-fro respiration. In cases requiring minute dissection the nitrous oxid is not satisfactory, because of the dark color of the field. He asked Dr. Squibb why it is that on damp days the patients do not take ether so rapidly as at other times.

Dr. E. R. SQUIBB replied that he knew no reason for ether being slower on damp days. A very slight current of air in the vicinity of the inhaler would be sufficient to blow away the ether and make it act slowly.

Dr. T. L. BENNETT closed the discussion. He said that he had met with some very slow ethers in hospitals using a cheap grade, and the after-effects were distressing. It is unfortunate that there is more vomiting and after-disturbance from gas and oxygen than from gas alone, probably because the patient receives more gas by this method than where gas is given with air. The rapid asphyxia which supervenes when nitrous oxid gas is administered in the ordinary way prevents such a great intake of nitrous oxid as where the oxygen is administered in conjunction with it, thus largely preventing the asphyxia. Gas anesthesia is at best a rather light form of anesthesia as compared with that obtained from either ether or chloroform. As to the statement made by Dr. Dawbarn he is positive that the clinical reports from the hospital records were incorrect. The laboratory experiments of Dr. Kemp were well done, but his deductions from the clinical records are certainly open to question. Dr. Bennett said that his plan of anesthetizing persons for adenoid operations is to push the anesthesia to the full degree. As a rule, even though the anesthesia is light, considerable blood will get into the upper air-passages, but he discharged again very soon under proper management. The so-called bronchorrhea observed in connection with etherization is not a true one, but really a flow of saliva and mucus, and this being swallowed is regurgitated. In his opinion, ether kills more people through the lungs than in any other way. The immediate effects of chloroform are certainly worse than those of ether, but perhaps if both immediate and remote effects are considered, there will not be such a great difference in the safety of these two agents. He protested against accepting the opinion that the lethal effect of chloroform is instantaneous. He had studied this matter very carefully, and believes that there are always certain danger-signals present. In his experience it has always been foretold by the approach of pallor, by enfeeblement and slowing of the pulse, and by certain states of the respiration. Robust individuals are apt to breathe too vigorously, and take in an overdose of chloroform. The pains of parturition act as a most powerful vasomotor stimulant, and this, together with the hypertrophy of the heart occurring during pregnancy, explains the immunity of the parturient woman under chloroform anesthesia. He suggested that the reason ether is slow on damp days is because of the low atmospheric pressure at such times. It has been found by careful experimentation that variations in the pressure under which gas is administered produce widely different results. It is a recognized fact in the London dental institutions that nitrous oxid gas acts much more slowly when the barometric pressure is low.

Direct Questions, As on Deafness.—Medical witnesses, the Court of Appeals of Maryland holds, may properly be asked such question as to whether the deafness in one ear of a person thrown from a wagon in collision with a street-car was the natural and probable result of the accident. Nor does it deem it necessary that the evidence should be restated in the form of hypothetical questions for them. It holds it enough, in *Baltimore City Passenger Railway Company vs. Tanner*, that the witnesses simply based their opinions on the facts given in evidence, that were not disputed, they being familiar with these.

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SATURDAY, APRIL 14, 1900.

EPIDEMIOLOGY AND PROPHYLAXIS OF MALARIAL
FEVER.

Since the discovery by Laveran, in 1890, of the parasites of malarial fever, there has been unceasing activity in the study of this most important subject. For a time the great interest aroused by the revelations of bacteriologic investigation tended to divert attention from other problems in the domain of etiology, and it is only recently that the field has broadened, and the discoveries in the realm of animal parasitology promise to be not less important than those that have been made in that of vegetal parasitology. That malarial fever may be transmitted through the agency of mosquitoes has been suggested at different times in the past by a number of observers, but the demonstration of the fact has been made only within the last few years. Important work has been done in this connection especially by English investigators in India, by Italian investigators who have pursued this subject with unremitting industry and perseverance, and by German investigators in Africa, and there has been a remarkable concordance in the final results. Among those who have engaged in these studies for many years is Professor Celli,¹ Director of the School of Hygiene, in the University of Rome, who recently contributed an important article on "The Epidemiology and Prophylaxis of Malaria in the Light of Recent Researches." This paper is a summary of what Professor Celli says on these subjects in his book entitled, "La Malaria secondo le Nuove Ricerche," published in 1899, and in successive communications. Celli points out that man is the temporary and the mosquito the definitive host of the malarial parasite, which completes its asexual life and prepares its sexual form in the human blood; while it completes the sex cycle of life, that by which the species of the parasite external to man is assured, in the middle intestine of the mosquito. In the circulation of the malarial contagion the presence of malarial man is indispensable, as the hereditary transmission of malaria from mosquito to mosquito has not yet been demonstrated experimentally or morphologically; nor have resisting parasitic forms been found in the environment external to the body of the mosquito. Transmission is effected only by certain varieties of mosquitoes, and these belong to the genus *Anopheles*. So far as is at present definitely known, the specific germs external to man do not live in the soil nor in the water, but in the body of the mosquito, although the two former may be favorable or not to the life of the latter.

The mosquitoes lay their eggs in sequestered places in clear, slowly running or stagnant waters. The so-called ground waters that appear at the surface and run slowly—trenches, canals, etc.—or are slowly renewed—lakes, ponds—contain the best pabulum for the development of the larvae of the *Anopheles*. These waters are relatively cool in summer and relatively warm in winter. The larvae of the mosquitoes offer slight and the nymphs much resistance to desiccation. Freezing is injurious, as is also putrefaction after a time. The immature forms can not live in sea-water, in saline waters nor in strong sulphurous ones. Rapid movement of the water further is hostile to their development. The infective agents are most plentiful in the atmosphere during the hours of evening, sunset and night, as the insects lie hidden and sequestered by day. The infective agents rise from limited foci and spread for a limited distance horizontally, obliquely and vertically, as the insects do not fly far from the place where they are born and not to any considerable height. Winds tend to diminish the number of infective agents in the atmosphere by keeping the insects in their hiding places. Woods may be foci of malarial infection, as when they are shady and damp they are the homes of mosquitoes. Of all the vehicles of malarial infection hitherto suggested, the mosquito is the only one that has yet been directly and undoubtedly demonstrated. The only indisputable path by which the infective agent penetrates is the skin bitten by the proboscis through which the infecting mosquito inoculates its sporozoites. The same mosquito may in a single night bite and infect many persons. The biting apparatus is so powerful that it can penetrate a tough skin and bite through fairly thick clothing. The *Anopheles* do not make a humming sound and are not so annoying as other varieties of mosquitoes, so that one may not be aware of their presence or of having been bitten by them. There are numerous predisposing causes and a number of immunizing agencies against infection with the malarial parasites. Thus, chilling of the body is a predisposing factor; and children are more prone to infection than adults. No race is per se endowed with congenital or hereditary immunity, although some individuals are naturally immune and in some immunity appears to be hereditary. Malaria cachexia may be followed by immunity. Artificial immunity can be induced by drugs, such as echinin and methylene blue.

Of first importance in prophylaxis, after the diagnosis has been made by microscopic examination of the blood, is the removal of the patient from the locality in which the infective mosquitoes prevail—preferably to an elevated situation—in order to avoid repeated infection of the patient, as well as infection of others. Nor should the patient return until his blood is shown to be free from parasites. At present a practical means of treating the patient in order to prevent biting by mosquitoes is wanting. Quinin is a specific disinfectant for amebic organisms, and consequently for the malarial parasites

¹ British Med. Jour., February 10; Berliner Klin. Woch., February 5 and 12; THE JOURNAL, March 3, 1899.

in the amebic stage. It is, therefore, best given after a paroxysm. Large doses should be administered, 30 grains for example at the beginning of the infection, and be repeated in doses of 8 grains for several days and then at intervals of five, six or seven days. This treatment does not, however, prevent recurrences, and for this purpose steps should be taken to destroy the larvæ in the water and the mosquitoes in the air. The larvæ can be destroyed by means of certain vegetable powders—as the expanded flowers of Dalmatian chrysanthemums on a large scale in malarial places. The mosquito can be destroyed by the fumes given off by an ignited powder composed of the unexpanded flowers of the chrysanthemum, valerian root and aniline dyes. Various measures may be employed to protect the skin against bites, such as avoidance of exposure of the surface of the body after dark, the protective influence of special coverings for the skin, the use of screens, netting, etc., local application in the form of washes, ointments and soaps of essential oil of turpentin, iodoform, menthol, valerianic acid, extract of tobacco. The most promising agent for the establishment of artificial immunity is methylene blue. Arsenic used on a large scale is said to have yielded uncertain results. A most important general prophylactic measure consists in efficient drainage and the provision of a healthy soil. Above all things, opportunity for the accumulation of water should be removed. In addition general hygienic principles must be observed and all predisposing influences avoided.

DISEASES OF THE PINEAL BODY.

Some time ago reference was made in these columns to a form of giantism in a boy, 4 years old, associated with sarcoma of the pineal gland. The case was described by Oestreich and Slawyk.¹ In the Transactions of the London Pathological Society for 1899 (Vol. 1) there occur a number of interesting reports of cases of tumor and of other lesions² of the pineal body. Cyril Ogle describes a primary, slightly pigmented sarcoma of the pia over the surface of the cerebrum. The patient was a woman, 32 years old. The illness began suddenly, with a fit of unconsciousness and right hemiplegia; this was followed by headache, emaciation, choked disc, mental dulness ending in coma, intermittent aphasia and right hemiplegia. There is no mention in the report of any abnormal enlargement of any part of the body. The patient was under observation for ten weeks.

Ogle also describes a tumor of the pineal body in a boy aged 6 years. The growth was globular, about one inch in diameter, and the only tumor in the body. Its structure is best described as that of an alveolar sarcoma with hemorrhage and cysts. There were certain spaces, lined with columnar epithelium, which it is thought might possibly represent a rudimentary retina. The first symptoms noticed were a change in manner, inclination to sleep a great deal, and masturbation. It is noted

that the penis was uncommonly large, the pubic hair plentiful but the testicles were not excessively large. The gait was staggering. Sleepiness continued to be the most striking symptom. The external recti became paralyzed and the eyes blind. The enlargement of the penis, the general symptoms of an intracranial tumor, the blindness, etc., led to the probable diagnosis during life of a tumor of the pituitary body. Ogle mentions that Heubner³ has recorded a case of tumor of the pituitary in a boy 4½ years old, in whom the penis, serotum, and testes were abnormally large, and the pubic hair fully grown. The excessive growth took place in one year.

Lawrence also reports a tumor of the pineal gland in a male aged 16, associated with acute tuberculous leptomeningitis. The tumor was relatively small; it is described as a gliomatous growth, the central part having undergone degeneration. There is no statement of any changes in the development of the body in this case.

Garrod, Russell, and Campbell describe several examples of cystic formations in the pineal body, but without much if any clinical significance; at all events there is no record of any clinical symptoms referable to the resulting enlargement.

Finally Lord makes some general statements concerning the normal structure and morbid changes of the pineal body. He also describes an enlarged pineal body in a case of cerebral gummas; the septa of the gland were extremely cellular, new septa had formed, and the condition resembled a hypertrophic cirrhosis.

In addition to the tumors of the pineal body recorded by the London observers, by Oestreich and Slawyk, and by Heubner, it may be well to mention that Weigert and Gutzeit each describe a teratoma; Ziegler, Coats, and Falkson record growths of a sarcomatous structure containing cysts or glandular formations lined with cylindrical cells; in Turner's case the structure was also complicated, the sarcoma containing collections of large cells, referred to as carcinomatous, and other cells regarded as nerve-cells: Duffin "reports a case of apparently a solitary glioma." Oestreich and Slawyk mention that Henrot has described a case of acromegaly with sarcoma in both the pituitary body and the pineal body.

The pineal body develops as a hollow outgrowth of the posterior portion of the fore-brain: in some of the lower animals the hollow outgrowth becomes elaborated into a median eye, which is especially perfect in the lizards (Badwin Spencer). This eye is not functional in any living animal. The relation of the pineal body to a third eye has been fully discussed in an editorial in this journal.³

Special nervous functions are not attributed to this body. Ogle mentions that extracts of it are sold, to be given "in functional diseases of the brain due to failure of nutrition: in cerebral softening; chronic mania, and dementia." Representing developmentally a median eye,

¹ *Allg. Med. Central Zeitung*, An. 28, S. 89. (Quoted by Ogle.)

³ *THE JOURNAL*, Feb. 15, 1896, p. 343.

² *Virchow's Archiv*, 1889, 157, 475.

it would not be expected that diseases of the pineal body would cause anomalies of growth such as follow changes in the anterior lobe of the hypophysis, and of the thyroid gland. The pineal body does not possess a glandular and secretory structure as ordinarily understood. It is composed of spaces filled with small nucleated cells of a uniform appearance. Nerve-fibers are described in the pedicle; the question of their occurrence in the pineal body proper does not seem to be fully settled.

It would therefore be a matter of some surprise if it should appear that diseases of the pineal body are closely associated with anomalies of growth. There are now at least three cases of tumor—all described as sarcoma—of the pineal body associated with overgrowth, especially of the genital organs, namely Ogle's, Oestreich and Slawyk's and Heubner's. All three concern boys between 4 and 6 years of age. In two the overgrowth was limited apparently to the penis, and the exact time of its onset is not given. The overgrowth was most marked in Oestreich and Slawyk's case, resulting in a form of gigantism, distinct however from acromegaly. Future observations must decide whether the overgrowth, which appears to have especially involved the genitalia, was a mere fortuitous matter, in these three patients, whether it was caused by the changes in the pineal body itself, or by secondary effects of the tumors on adjacent structures.

Some of the symptoms of tumor of the pineal body are in many respects similar to those produced by Ferrier by destroying the surface of the superior tubercles of the corpora quadrigemina in monkeys: blindness, dilated and stiff pupils, no motor nor sensory paralysis, but loss of normal equilibrium. Another symptom that was marked in some of the cases is sleepiness.

THE DEADLY PNEUMOCOCCUS.

The dominant microbic pest of mankind is generally supposed at the present time to be the bacillus tuberculosis which causes one-seventh of the mortality of civilized races, or at least it is so claimed. That this estimate may be too high and that the morbidity of tuberculosis is not quite as necessarily equivalent to its mortality as was formerly supposed does not materially affect the question; it is one of the most serious health problems with which we have to deal. With the attention that is now being given it, however, there is a chance that we may overlook some other perhaps hardly less formidable disease, and possibly neglect matters that are of only slightly less importance than the "great white plague." According to the report of the Health Department of the City of Chicago, the deaths from consumption in that city during 1899, numbered 2516, and from tuberculosis of all varieties and locations, 2920—a percentage of 11.449 on the total mortality. During the same period the deaths from pneumonia also numbered 3438, or a percentage of 13.48 on the total deaths. In other words, the mortality of pneumonia exceeded that of all forms of tuberculosis by 518 or 17.7 per cent. If we take the year 1899 alone, pneumonia would appear to be

a much more important factor in the mortality than tuberculosis. It, however, is rather exceptional in this regard, and this is more noteworthy since the total annual death-rate for the year was small—only 14.57. Taking up the statistics of other years we find that in 1898 also the deaths from pneumonia numbered more than those from consumption, though not more than those from all forms of tuberculosis, and that in the previous years since 1890 the deaths from this cause have generally exceeded those from pulmonary tuberculosis, the years 1894, 1896, and 1897 being the only exceptions. Prior to 1890 the deaths from consumption invariably exceeded those from pneumonia. Another striking fact is that while the ratio of deaths from consumption to the total mortality has been nearly stationary for the past twenty years, and its ratio to population has decreased, that from pneumonia has increased rather than otherwise in both these respects.

These figures of the comparative mortalities of tuberculosis and pneumonia are obtained from Chicago, a lake city, where lung and catarrhal diseases prevail, and the question whether the same general tendencies exist elsewhere may be raised. To test this we have consulted the health reports of several states that publish accurate vital statistics. In Massachusetts we find that the pneumonia death-rate on the total mortality has risen from 7 to 8 per cent. in the late '70s to 9 or 10 in the last decade (1888-1897). In the same period that of consumption has decreased from about 17 to about 11½ per cent. In Rhode Island and Connecticut we find a similar increase of pneumonia and decrease of consumption mortality, and where the figures available we would probably find them corresponding more or less closely throughout our northern Atlantic and lake regions. It is unfortunate that there are not fuller data for the interior states, but what we have for many of them are not likely to be quite as full and reliable as those to which we refer. There is evidence enough to show that, while recognizing the influence of the grip during the last few years and making all due allowance for less perfect diagnosis in the past, pneumonia mortality is on the increase over a considerable portion, at least of the northern United States, while that of phthisis is diminishing.

At the present time acute lobar pneumonia is recognized as an infectious disease, due to a germ, the pneumococcus of Fraenkel in at least 95 per cent. of cases. What proportion of the fatal cases of pneumonia reported in the health statistics were of this type, and what were due to other germs, streptococci, Pfeiffer bacilli, etc., is not certain, but we can probably assume with reasonable certainty that 70 or 80 per cent. were pneumococcal. The estimate of Netter that 66 per cent. of pneumonias are primarily due to this germ is probably an under-rather than an over-estimate. While something may be allowed for diagnostic errors, we certainly have here a formidable showing of the malignant activity of this germ in this one disease. When we also take into consideration the fact that it is an active etiologic

factor in the diseases of many other organs of the body besides the lungs, in the disorders of the central nervous system, of the air-passages and throat, the pleura, the heart and its envelope, the ear, the liver and elsewhere, it will plainly appear that we have not adequately estimated its morbid powers. In fact it is probably not much less widely disseminated as an agent of evil than is the tubercle bacillus, and the apparent increase in the mortality it produces suggests at least the utility of a fuller study of its natural history and its prophylaxis. While we are giving our attention to tuberculosis, a disease that is apparently on the wane, if only to a slight extent, we might also divert our minds with one that is apparently increasing among us. It is not necessary to excite alarm, but a little more attention to a disorder that has, we have reason to believe, a widely varying range of virulence and which, in our northern climate, is our most fatal disease for at least half the year, would not be out of place. The fact that it is so closely related in its morbidity and mortality to climatic conditions would seem to indicate the chief line of prophylactic endeavor, but there are other factors also to be considered. At the present time it appears to be getting a little the better of us and it is for us to find the reason why.

ORGANIZED EFFORT SUCCEEDS.

The effect of even partial organization among physicians was easily noticeable in the recent city election in Cincinnati. One of the appointees of the city administration was an out-and-out quack and, as a body, says the *Cincinnati Lancet-Clinic*, "the medical profession was weary and tired of making reports to an ordinary plain quack." Hence the physicians made up their minds that there should be a change. And there was a change.

HEALTH AND HYGIENE.

A somewhat celebrated Boston philosopher says he has lived according to the following rules: he always sits in a draft when he can find one, wears the thinnest underclothes he can find, winter and summer, and prefers to work in a cold room, 55 to 60 F. He works the largest part of the twenty-four hours, day or night indifferently, eats when hungry, rarely tastes wine but drinks two or three quarts of beer daily and smokes a pipe all the time when he is at work. He evidently considers himself a pattern of health, and apparently publishes his rules of living in a sort of spirit of bravado, and to make himself a monument of the futility of ordinary hygienic rules of life. There is a streak of vanity in the announcement, but great men are often vain and may even be foolish in regard to their personal qualities. One with an originally strong constitution, favored with a special freedom from accidental disease, gifted with a happy, equable disposition and living under favorable conditions, can sometimes sin for a time against many of the minor and some of the major hygienic moralities with comparative impunity. Thus we occasionally hear of favored beings who have gone to bed drunk every night up to 90 or 100 years. These are, however, somewhat apocryphal; they are seldom people of much intel-

ligence and possibly also not always reliable as to their ages or history. In the case above we have a noted man in the prime of life, 58 years old, who has done much intellectual work of a high order in his past, and should have a considerable future still before him. He is said to be in his dimensions, 72 inches by 46, and to weigh 240 pounds or more, from which it would appear possible that the degenerative processes had already made a headway in his organism. One does not care to venture prophecy in any such individual case, but it is variously suggestive, and it will be of interest to watch its future. In the meantime we ordinary people will do best for ourselves by obeying and living according to the well-established rules of temperance and hygiene.

THE PRODUCTION OF CARCINOMA BY EXPERIMENTAL DISSEMINATION OF EPITHELIAL CELLS.

H. Lambert Lack¹ in a preliminary note, describes an experiment which he made in order to test his view that carcinoma is simply the result of the entrance of the normal epithelium of the body into the lymphatic spaces and its continued growth therein. Opening the abdominal cavity of two rabbits, the ovaries were cut open, the raw surfaces freely scraped, and the milky juice containing free epithelial cells thus obtained, was allowed to diffuse through the peritoneal cavity. In the animal which survived for about one year numerous peritoneal nodules were found extending into the liver, and similar growths on the pleura, the pericardium, in the lungs and in the mediastinum. The microscopic structure was that of a columnar-celled carcinoma. Unfortunately for the value of this experiment, which is tentatively claimed to have produced the disease, and has been so interpreted by others, the condition of the uterus has been left out of the consideration. "The uterus was greatly thickened; the mucous membrane papilliform, and at the place in the wall was a tumor as large as a cherry." There is no record of any microscopic examination of this growth to show that it is of different structure from the other tumors, and it is believed that one is fully justified in saying that the possibility of this growth in the uterus being the primary carcinoma, and developing under perfectly natural conditions, can not now be successfully denied. Shattock² has recently described carcinoma of the uterus of a rabbit, showing that uterine carcinoma may develop spontaneously in this animal.

QUACKERY IN AMERICA.

The other day, in London, an American was sentenced to five years' imprisonment for swindling. The fellow was a palmist and had plied his trade in Chicago, New York and elsewhere in this country unmolested, and he thought he could do the same abroad, but he could not. Commenting on the occurrence, the *Chicago Journal* says: "There seems to be something in the social atmosphere of this country peculiarly favorable to impostors of the palmist and clairvoyant order. They flourish here. Foreign observers have been amused not a little to see their signs hung out like a physician's shingle and their columns of cards in the newspapers. They flourish elsewhere, it is true, but not to the same extent. This, among civilized countries, whose people are sus-

¹ *Jour. of Path. and Bact.*, 1899, vi, 154

² *British Med. Jour.*, 1900.

pected of intelligence, is the real paradise of the palmist, the spirit rapper and the astrologist." And it might have added: the advertising quack, the medico-religious humbug and the secret nostrum vendor. Just why this country is such a profitable field for every kind of humbug and delusion is a question on which we are not prepared at this time to hazard an opinion. The truth of Barnum's assertion, however, is more evident to-day than ever. Dowie, failing on his native heath, went to Australia and tried to work the people there, but his success in that country was such that he was penniless when he arrived in this land of liberty. Here, though, in a few short years he has succeeded in gaining not only a large following, but, what is more to the purpose, a large fortune. A little while ago a man in Missouri, of the name of Still, promulgated a theory that all the physical ills of the human race were caused by misplaced ligaments and dislocated bones, and now thousands of dupes, even including senators and governors—who by the way are not necessarily overly gifted with either common sense or statesmanship—are believing in this new "scientific" discovery. Could such an idiotic theory obtain a foothold in any other country, and if not why not? Down in Missouri—poor Missouri!—another fellow is rapidly becoming rich as a magnetic "healer" who "has the power to give the absent as well as the present treatments." He also gets them coming and going, for he teaches others—at so much per head, of course—and is rapidly building up another system or school of treatment. A newspaper before us contains four columns of advertisements of clairvoyants, palmists, trance mediums, etc., more than a hundred individuals and all located in this city of schools. A third of the advertising space of the same paper, and it is one of the best in Chicago, is taken up with advertisements of quacks and quack medicines. These show to what depths of moral degradation the advertiser will stoop, and at the same time show how much credulity and how little common sense the average reader must have. Why does all this pertain to this and to no other country?

WOMEN NURSES IN MILITARY HOSPITALS.

At the present time there are before the military committees of Congress two bills, S. 3731 and H.R. 6879, providing for the employment of women nurses in army hospitals. From this it is not to be inferred that there are no women nurses in the army. On the contrary, early in the Spanish-American War female nurses were employed by the Surgeon-General of the Army for service in the general hospitals. In September, 1898, over a thousand trained nurses were on duty in the hospitals, general and field, and at the close of the last fiscal year two hundred were still on the rolls. Experience gained during this period enabled Surgeon-General Sternberg to provide an efficient organization for the women nurses. The regulations governing the female corps were published in full in his last annual report. If the above-mentioned bills limited their provisions to the accomplishment of that which is stated to be their object we would merely question the necessity for legislation to effect that which has already been effected and which has already received congressional sanction in the form of appropriations for the payment of the nurses

employed. These bills, however, give specifications as to the character of the organization which, if they became law, would necessitate a reorganization on new and untried lines. That the army does not look with favor on the proposed legislation may be seen from the introductory paragraph of an editorial discussion of the subject in the *Army and Navy Register*, April 7, 1900:

We see no reason for the enactment of House bill 6879 and Senate bill 3731, which have the identical ostensible purpose of providing for the employment of women nurses in military hospitals of the army. This measure has influential backing, most of the supporters being women of prominence who have devoted themselves and their resources to charitable and humane tasks. The high character of the friends of the bill should not preserve it, however, from the defeat which so unmeritorious a measure deserves. There are no arguments to justify passing the bill. It offers no improvement on the existing system of supplying women nurses to the military service. That system was evolved from the methods of the war and is conducted on practical lines within the control and administration of the Surgeon-General of the Army and the Secretary of War.

TABLET-TRITURATES AND READY-MADE PRESCRIPTIONS.

The popularity of ready-made medicines is always a matter of concern to the pharmacists and to a somewhat lesser extent to scientific physicians. The very general use of tablet triturates and of special medical preparations is one of the facts we have to meet, and the question is how are we to meet it? Is it to be considered, as many of our pharmaceutical friends hold, an absolute evil, or shall we accept it as something to be modified only for the better? It is possible that it implies a lack of facility of drug-combining, and probably of a certain sort of pharmaceutical knowledge in the physician, and this is to be regretted. On the other hand, there is a certain attractiveness and apparent safety in some features of the new methods, strongly in their favor with medical men. An honestly made tablet triturate ought in many cases to afford as safe a method of administering powerful drugs as a pill or solution, however carefully compounded by a druggist from a prescription. It is the convenience of these preparations, however, that accounts for the favor with which they have been so generally received. We should probably not be able to get rid of them even were it desirable to do so, and it is well therefore to make the best of the situation. The one ethical rule that it is safe for any physician to follow will be to prescribe or to give nothing unless its composition and reliability are known. It would be a still better rule to avoid the use of all ready-made compounds, except such as are official, and to cultivate such a knowledge of pharmacy and therapeutic invention as will make the physician perfectly self-reliant in this respect. The simple drugs or alkaloids in triturate form have probably come to stay, and the fact need not be altogether deplored, for reasons already given, but the prescriptions made up in this form tend to encourage a sort of therapeutic laziness that should be discouraged. The ideal physician is one who knows and understands thoroughly the tools he uses, and it is to be feared that the present tendencies, while admirable in some other respects, are not what one

could desire in this particular direction. In reading over the questions as published by various state examining boards, the thought suggests itself that they have it in their power to give more aid practically in the needed reform in this matter. The suggestion is therefore here offered of a more thorough practical test of pharmaceutical knowledge in their examinations than has sometimes, at least, been made. A suggestion of possibly still greater value would be that our colleges give more attention to this practical point. It may be that in our zeal for science we may have too totally overlooked the despised "cook book" therapeutic art of prescribing.

Medical News.

ACCORDING to the *Medical News*, Mrs. Mary Baker G. Eddy, leader and founder of the "Christian Science" Church, is very ill at her home in Concord, N. H., with a cancerous affection.

THE LIVERPOOL School of Tropical Diseases has decided to admit qualified medical women on equal terms with men students. The second expedition for West Africa will soon start. The party comprises Drs. Annett and Dutton, and Dr. Elliott of Toronto.

CHICAGO'S "Christian Scientists" are objecting to the teaching of physiology in the schools. They protested to the Chicago Board of Education, at its meeting, April 9, against it, against medical inspection of schools, and against the rules requiring vaccination. The reply of the Board was to the effect that the children of "Christian Scientists" would be governed by the same rules as were the children of the plain, common people.

WE LEARN from the *Medical News*, that a physician from Kentucky, on Broadway, New York City, met two or three men, and one of them led him to believe that he had known him in Kentucky. The Doctor went with them to a place near Park Row and the Bowery, and in a spirit of friendship cashed a check for \$400 for the one who claimed to have known him in Kentucky. The check turned out to be worthless. The physician was in New York preparatory to taking a trip to Europe, but after the loss of his money he returned to his home in Kentucky.

A WRITER in the *British Medical Journal*, March 31, points out that the death-rate from disease in the forces in South Africa has been considerably lower than the rate in the American Army in Cuba, but in both instances the most virulent enemy to soldiers has been typhoid fever. He persistently advocates boiling the water, and in South Africa it seems that this can be accomplished satisfactorily as there the water can be cooled to almost ice-cold by being suspended in canvas water-bags or felt-lined water-bottles in the open air, the dry atmosphere producing such rapid evaporation from the surface that the temperature is rapidly lowered.

STATUS OF THE PLAGUE.—The Indian correspondent of *The Lancet* gives the recorded cases of plague in Calcutta as 481 for the week ending March 3, with about 100 deaths a day from March 3 to March 6, the date of writing. He shows that the plague returns for Bombay are too low, as published. The plague statistics for the whole of India, for the week ending March 3, gave 3363 deaths as compared with 3184 the previous week. In Karachi the deaths increased from 12 to 47, and in the Bengal Presidency, from 1905 to 1936 that week, while

the *British Med. Jour.* (March 31) is authority for the statement that 4725 deaths occurred here the week ending March 21, and 741 in Calcutta. The disease has also appeared at Aden. In Mauritius, 8 new cases and 5 deaths occurred the week ending March 22.

THE PROFESSION IN FRANCE.—The overcrowding of the profession, which has been the theme of so many jeremiads, has been shown to be a myth as far as France is concerned, by some recent comparative statistical studies. They show that in 1847, when no one thought of complaining of any overcrowding, there was one physician to each 2020 inhabitants; in 1876 there was one to each 2568; in 1896, one to each 2565. The physicians crowd to the large cities and centers of wealth, and forsake the smaller towns. In certain departments, like Haute-Savoie, there is but one physician to 4030 inhabitants. The overcrowding of the profession is therefore merely local congestion, while other regions suffer from the lack of medical attendance. These unexpected facts have been brought out by a prize offered by the French *Concours Médical* for the best work on the "Encombrement Médical."

CONTROL OF VENEREAL DISEASES AMONG TROOPS.—On the recommendation of Major F. V. Ives, chief surgeon, Department of Matanzas and Santa Clara, Cuba, the department commander, Gen. J. H. Wilson, has issued a circular, dated March 13, 1900, requiring a weekly inspection of all the enlisted men of the command to be made by the medical officers in the presence of company commanders. A list of all men found to be infected with venereal disease is to be drawn up under the direction of each company commander, and this list is to be posted conspicuously on the bulletin board or in the barracks of each organization. The privilege of the canteen and all pass privileges are to be withheld from all those whose names are thus posted. This is not intended as punishment but as the removal of causes which could tend to retard the recovery of the individual. The circular provides also for instruction by medical officers to non-commissioned officers on the effects, results and prevention of gonorrhoea, chancroids and syphilis that the latter may be in a position to influence and instruct the men of their companies.

INSANITY AMONG U. S. TROOPS IN PHILIPPINES.—For some weeks past there have been published in the columns of the daily press statements which lead the public to believe that military service in the Philippine Islands is not only destructive of the *corpus sanum* but also of the *mens sana*, for which it should furnish a habitation. We can attribute these statements only to sensationalism or to falsifications for specific purposes. The first announcement of the alleged disastrous effect on the mentality of our troops by the tropical or other conditions of our far away islands appeared in a Washington paper of February 13, giving what purported to be a telegram from San Francisco, Cal., of the same date, to the effect that: "Eleven insane soldiers were to-day sent from this city to the Government Hospital at Washington, D. C., and it is probable that about thirty more will go east during this week. During the last three months nearly 250 demented soldiers have been sent across the continent, and it is said that over 300 more will soon arrive here from Manila. In nearly all cases the men are violently insane." This drew from the Adjutant-General of the Army a statement to the effect that from May 1, 1898, which may be regarded as the beginning of our recent war experiences, to the date of the cited telegram, there had been received into the Govern-

ment Hospital for the Insane, to which all cases of this kind occurring in the military service are committed: 134 soldiers of the regular army, 70 of the state volunteers and 10 of the United States Volunteers, making a total of 214 cases in 21½ months, out of a force which for many of these months aggregated more than a quarter of a million men; and that 37 of these cases came from the islands of the Pacific Ocean. This should have put an end to the sensational statements of insanity in our military forces in the Philippine Islands, but the same publicity does not appear to have been given to the adjutant-general's statement that was accorded to the sensational telegram, for since then many letters of inquiry on the subject have been received at the War Department and a Senate Resolution, No. 222, was adopted March 22, calling for information concerning sanitary conditions and health in the Pacific Islands, and particularly concerning the number of insane soldiers sent home for treatment. In reply Surgeon-General Sternberg has stated that during the twenty-one months, July 1, 1898, to March 31, 1900, the forces in the islands had a mean strength of 32,000 men. From this command, during the period stated 55 men were returned to the United States for transfer to the Government Asylum for the Insane, a number which is equivalent to 31.3 cases for twelve months. These cases are then compared with the numbers committed annually to the asylum from the regular army during the past ten years. Nine of these years were years of peace; the tenth includes the period of active campaigning during the Spanish-American War. The comparison is as follows:

Year.	Mean Strength.	Insanity, Cases.
1889	27,206	34
1890	26,681	33
1891	26,460	37
1892	26,861	48
1893	27,659	35
1894	27,674	24
1895	27,326	21
1896	27,183	22
1897	27,374	21
1898	46,635	56

Mean—10 years 29,106 33.1

As to the character of the cases received from the Philippines the only information we have is that of 37 cases admitted into the hospital from the Philippines from May 1, 1898, to Feb. 13, 1900, 11 had already been discharged as cured on the latter date. From this we must infer that the men who scissor the items for the daily press prefer sensation to fact.

PENNSYLVANIA.

THE LANCASTER Board of Health has formulated an ordinance imposing a penalty on persons expectorating in a public conveyance.

THE FOLLOWING officers were recently elected members of the Bridgeton Board of Health: president, Ellsmore Stites; secretary, Isaac T. Nichols; treasurer, William H. Ballenger; physician, John H. Moore.

AT A MEETING of the Tamaqua Borough Council it has been decided to reduce the salaries of the health officer and secretary of the Board of Health to \$50 annually. The Board of Health, however, has not agreed to this but fixed the salary of the health officer at \$120, and that of the secretary at \$100 annually. Whether Council can be made to pay the amounts named remains an open question.

THE PHYSICAL laboratory of Lehigh University, South Bethlehem, was destroyed by fire April 6. The building was a four-story stone structure, erected in 1893, and with its contents was valued at \$200,000. The insurance on the building is \$50,000. It is announced that the laboratory will be rebuilt at once.

BOARD OF MEDICAL EXAMINERS.

The State Board of Medical Examiners met in Harrisburg on April 3, to arrange for the examination to be held in Philadelphia and Pittsburg, June 26 to 29. The questions will be prepared and not given out until the day of examination, and will not be printed. Dr. Henry Beates of Philadelphia was re-elected president, and Dr. W. S. Foster of Pittsburg, secretary. The new members of the Board are Drs. McConnell and Lindsay.

Philadelphia.

DR. LAMBERT OTT has been re-elected president of the Twenty-ninth Sectional School Board, for the ensuing year.

AT THE meeting of the Geographical Society, held here April 4, Dr. Edmund W. Holmes delivered an address on "The Briton and the Boer."

A BEQUEST of \$1300, from Nicholas Ost, has been divided between St. Joseph's and St. Mary's hospitals and other charitable institutions.

DR. M. HOWARD FUSSELL delivered the principal address at the meeting of the James Tyson Medical Society, on the subject of "The Manner of Acquiring and Conducting a Medical Practice."

THE NEW Children's Hospital of Germantown will be opened for the receiving of patients at an early date, sufficient funds having been raised to establish one ward, and a dispensary.

THE BOARD of Health has passed a resolution to the effect that hereafter all cases of so-called membranous croup shall be reported and recorded as cases of diphtheria.

DR. MOSES BEHRENS, a former resident physician of the Jewish Hospital, has been appointed a resident physician at the Philadelphia Hospital, and Dr. Ridpath, also a resident of the Jewish will accept a similar position at the Medico-Chirurgical Hospital.

COLONEL J. LEWIS GOOD, chief of the Bureau of Health, is making an effort to have all cases of tuberculosis reported to his department, doubtless for the purposes of giving proper instruction in regard to preventing its spread among members of the families in which the disease exists.

AT A RECENT meeting of the Board of Health, a communication was received from William J. Buchanan, Director-General of the Pan-American Exposition, to be held at Buffalo, N. Y., next year. It requested that the city make an exhibit of sanitary measures and appliances, in the form of photographs or in other convenient shape for demonstration.

A REORGANIZATION in the teaching faculty of the University of Pennsylvania is to be effected so there will be one professor of surgery and two of clinical surgery. As heretofore arranged the professorships of clinical surgery and the John Rhea Barton Professorship of Surgery have been held by Dr. John Ashhurst, who recently resigned on account of ill-health.

SEVERAL CHANGES have recently been made in the teaching faculty of the Jefferson Medical College: Dr. F. X. Dercum, who for several years held the chair of clinical professor of diseases of the nervous system, has been elected professor of neurology; and Dr. J. Chalmers DaCosta, who held the chair of clinical professor of surgery, has been elected professor of principles of surgery and of clinical surgery.

MORTALITY STATISTICS.

During the past year the number of deaths exclusive of still and premature births amounted to 23,796, an increase of 6 over the previous year. The number of births was 28,441, a decrease of 649 over that for 1898, or a birth-rate of 1 to each 44 living persons. The death-rate in 1899 was 18.78 per 100, or one death to each 52.23 living persons. The death-rate for 1898 was 19.18 per 1000. During the year 4161 cases of diphtheria were reported, an excess of 7 over the previous year. In addition there were 230 cases of membranous croup, as compared with 260 in 1898. There were 2281 cases of scarlet fever, an increase of 381 over the previous year; 142 cases of smallpox, and 251 cases of cerebrospinal meningitis. The following represents the death-rate during the past few years: 1896, 20.17 per 1000; 1897, 18.72; 1898, 19.18; 1899, 18.78. The work of the Municipal Hospital was greatest last year than any other year in its history, the number of admissions being 2357, of

which number 1970 were discharged, 381 died, and 202 remain in the hospital. At present there is one leper there. The mayor recommends an appropriation for enlarging the institution.

MARYLAND.

DR. R. A. DODSON has been appointed school commissioner of Talbot County, for four years.

MEDICAL LEGISLATION.

The bill exempting graduates of Maryland Colleges from examination by the State Board of Medical Examiners was defeated, so that the present law remains in force, at least for the next two years. This law has worked well, although it might be improved on by more exactly defining who are to be regarded as practitioners of medicine, and exacting of candidates for the license a four years' course of lectures. The legislature has also appropriated \$5000 for the aid of the Frederick City Hospital, and has passed the act for the appointment of a sanitary officer for the Thirteenth District of Baltimore County. In addition the following annual appropriations were made for 1901 and 1902—Baltimore institutions except as indicated: Hospital of the Good Samaritan (Women's Medical College), \$1500; Lying-In Hospital (College of Physicians and Surgeons), \$3000; Nursery and Child's Hospital, Hebrew Hospital, and the Home for Incurables, each \$2500; Lying-In Hospital, University of Maryland, \$3000; Hospital for the Women of Maryland, \$4000; Baltimore City Hospital, \$5000; St. Agnes' Hospital (R. C.), \$2500; Home and Infirmary of Western Maryland (Cumberland), Maryland General Hospital (Baltimore Medical College), and Maryland University Hospital, each \$5000; Hospital for Relief of Crippled and Deformed Children, \$2000; Provident Hospital (Colored), \$1500; Maryland Lying-In Hospital (Baltimore Medical College), \$3000; Hospital for Consumptives, \$2000; Peninsular General Hospital (Salisbury, E. S.), \$2500; United Charities and Hospital Association (Cambridge, E. S.), \$5000; Maryland Hospital for Insane (Spring Grove), \$25,000; Springfield Hospital for Insane (Sykesville), \$30,000; Maryland Asylum and Training School for Feeble-Minded, \$15,500; Maryland Temperance Hospital (Maryland Medical College), \$1000; University of Maryland, School of Medicine, \$4000; College of Physicians and Surgeons, \$4000; Baltimore Medical College, \$4000; Johns Hopkins University, \$24,000. Thus it will be seen that the three Baltimore Medical Colleges got their appropriations, although not the amounts they wanted (\$15,000 each).

Baltimore.

THE COLLEGE of Physicians and Surgeons has 230 matriculants this season.

DR. CHARLES E. DOILME has been appointed manager of the Female House of Refuge.

PERSONAL property valued at \$149,465 is distributed by the administration of the estate of the late Dr. J. Pembroke Thom.

DR. EDWARD J. BERNSTEIN will go abroad for six months' study in German hospitals.

DR. WILLIAM OSLER, who has been ill with la grippe, has recovered sufficiently to be up and see a few office patients.

THE WOMEN'S Medical College has resumed its eight months' sessions. About three years ago it cut off the last half-month.

A MEDICAL and surgical dispensary has been established at the southeast corner of Light and Ostend Streets, South Baltimore, by Dr. Clarence E. Downs and others. A fee of 10 cents for each prescription is charged, as at the Johns Hopkins Hospital. There are no hospitals nor other dispensaries in that section of the city. It is hoped to make the institution the nucleus of a hospital.

DR. J. WHITBRIDGE WILLIAMS is writing a text-book in obstetrics, to be the successor of the late Lusk's work on the same subject. It will contain much original work and many original illustrations in histology. There is a large field in this department at the Johns Hopkins Hospital, 500 cases having been registered there last year, 60 per cent. in the out-patient department.

CASE OF CRETINISM.

A case of cretinism was shown at the medical clinic of the Johns Hopkins Hospital, April 4. The patient, the child of Rus-

sian parents and born abroad, in a locality where the disease prevails, was a female, aged 6, but appearing to be not over 2. The protuberant abdomen, stunted growth, short extremities, increased subcutaneous tissue, open mouth, enlarged tongue and mental imbecility were all marked. No thyroid gland could be detected.

DISLOCATED CERVICAL VERTEBRÆ.

A young man is now at the University of Maryland Hospital suffering from a dislocation of the cervical vertebræ, due to a fall from a fence, striking on his head. He is 18 years old and the accident occurred about the middle of the month. He can not turn his head without turning the entire body, and the chin is drawn down upon the chest. The muscles of the neck are drawn tight like cords and a lump can be felt through the mouth in the back of the throat. A diagnosis was made of dislocation of the fourth and fifth vertebræ. There is also a slight lateral dislocation of these bones, one upon the other. The patient was unable to lie on his back and, owing to this and the impossibility of moving his head, there was difficulty in getting an X-ray photograph. Special apparatus was therefore devised. A framework was built about the head, the patient being in a sitting position, on which the sensitive plate might rest, and front and side views were then taken. The photograph confirmed the previous diagnosis. An attempt to replace the displaced bones under an anesthetic is contemplated, by pressure alone, if possible, and if not, by cutting and removing portions of the vertebræ. The patient is able to walk about.

NEW YORK.

THE ANNUAL report of the health officer of Utica states that there were 978 deaths during the year.

THE ASSEMBLY, April 3, passed the bill appropriating \$1,000,000 for the construction of buildings, repairs, and improvements at the state hospitals for the insane.

THE STATE Senate, April 5, passed the bill establishing a hospital to be known as the New York State Hospital for the Care of Crippled and Deformed Children. The sum of \$15,000 is appropriated, and the institution is to be under the supervision of five managers appointed by the Governor.

STATE HOSPITAL FOR CONSUMPTIVES.

The bill to establish a state hospital in the Adirondaeks for the care of persons in the incipient stage of pulmonary tuberculosis has had a rather hard time in the legislature. The bill called for an appropriation of \$150,000. Acting under the pressure of an emergency message from the governor, this measure, known as the Davis-Hill bill, was finally passed by both houses, but not until the bill had been amended to reduce the appropriation from \$150,000 to \$50,000.

THE GERRY SOCIETY.

As a result of the strong personal fight that Mr. Gerry has made in the legislature against the bills aimed to bring his society under the same jurisdiction of the State Board of Charities as other similar societies, previously noted in these columns, these bills have been defeated. The opposition to them seemed to be purely a personal one, as it was not shared in even by some of Mr. Gerry's own trustees, or by officers presiding over almost identical societies in other parts of the state. Governor Roosevelt sent in an emergency message concerning these bills during the closing days of the session, but the opposition managed to raise some technical point by which it became necessary to amend and reprint the bill. As this could not be done before the adjournment of the legislature the matter went by default.

"CHRISTIAN SCIENCE" ABSURDITIES.

At a lecture delivered at the Broadway Tabernacle, before the class for the discussion of present day problems, William A. Purrington, a lawyer, recently laid bare the sophistries and absurdities of "Christian Science" and faith healing. In doing so, he indulged very little in personal comment, but selected his arguments from a consideration of the various statements made by Mrs. Eddy and others high in her "church." He characterized this so-called faith as a product "of ignorance, irreverence, vanity, vulgarity, inconsequence, incoherence, and greed," and asserted that "Christian Science" is the presump-

tuous assertion that in 1866 God revealed to a chronic, hysterical invalid certain truths that for centuries He had hidden from priests and scholars. Like the discoverer of Mormonism, she has a body of apostles, called the Board of Lectureship of the First Church of Christ, Scientist. The lecturer declared that "The cause of the growth of 'Christian Science' lies in the false pretense of the Eddyites to a peculiar divine power of healing all manner of human infirmity." It is well-settled law, however, that the individual's right to believe does not imply a right to manifest bizarre beliefs in acts injurious to the physical and moral welfare of others.

NEW JERSEY.

ON APRIL 4, ninety-two of the insane patients from the lunatic asylum at Trenton were removed to the new home at Bridgeton.

THE ANNUAL report of the directors of St. Michael's Hospital, Newark, shows that 10,294 patients were treated during the year.

THE BOARD of Directors of Muhlenberg Hospital, Plainfield, are planning for the removal of the institution to a more healthful and less noisy part of the town, and have asked for \$13,000 for the purchase of a site in the suburbs, on which to erect a modern building.

OHIO.

THE DEDICATION and opening of the Chas. S. Gray Deaconess Hospital, Fronton, took place April 5.

O. C. Barber, president of the Diamond Match Company, has offered to give to the Akron City Hospital \$100,000 on condition that the present indebtedness of \$15,000 be liquidated.

IN ORDER to increase the efficiency of the Cleveland City Hospital an ordinance is to be introduced in the City Council providing for a chief of staff among the house physicians. He is to receive a salary not to exceed \$500 a year and his board.

Cincinnati.

DR. J. J. BRUAR, who has returned from a two-years' sojourn in the Klondike, has been re-elected assistant health officer, vice Dr. Morris May, resigned.

AT THE monthly meeting of the Ohio Commandery of the Royal Legion, April 4, Dr. A. B. Isham read a paper entitled "Cavalry Operations in the Army of the Potomac."

AT THE meeting of the Board of Directors of the Natural History Society, April 3, Dr. M. H. Fletcher was elected president; Dr. Arch. I. Carson, secretary; Drs. F. W. Langdon and A. J. Woodward, members of the executive board.

DR. J. T. WHITTAKER, professor of theory and practice at the Ohio Medical College, who has been a patient of the Good Samaritan Hospital for the past few months, has so far recovered as to be able to be moved to his home in Clifton.

DR. P. S. CONNER, professor of surgery at the Ohio Medical College, on April 3 gave a lecture before the Mathesis Club, on "Medical Men and Medical Teachers in Cincinnati Prior to 1850." He spoke of the medical schools that were in existence at that time, and mentioned many physicians whose reputations were more than local.

THE COMMITTEE on health, of the general council, has been empowered to build an addition to the branch hospital on the Lexington Pike, to provide for patients suffering from contagious diseases. The building will cost about \$800.

THE REPORT of the superintendent of the City Infirmary, for the month of March, shows that there were 906 inmates in the institution on April 1. There were 22 admitted during March; 14 died and 20 were discharged.

Toledo.

DR. W. G. COOPER has resigned the position of second assistant superintendent of the Toledo State Hospital, located in this city, and has been succeeded by Dr. George R. Love. Dr. Nelson H. Young has recently been appointed a member of the medical staff.

A NUMBER of Toledo physicians will visit England, Berlin and the Paris Exposition this summer. Dr. Christian Storz will sail on the Hamburg-American steamer *Butavia*, May 5; Drs. James C. Reinhart, William H. Fisher and M. M. Dixon on the North German Lloyd *Kaiser Wilhelm der Grosse*, May 8,

and Dr. Charles P. Wagar on the Hamburg-American liner *Deutschland*, June 26.

ILLINOIS.

THE NEW Galesburg sanitarium was formally opened April 6. THE WESTERN Hospital for the Insane, Watertown, was slightly damaged by fire, April 6.

DR. WALTER RYAN has been appointed consulting surgeon to the Wabash Hospital, Springfield.

Chicago.

DR. RUDOLPH W. HOLMES underwent an operation for appendicitis last week.

BY THE will of the late Albert G. Cone, the Presbyterian Hospital will receive \$135,000, and the Chicago Home for Incurables \$50,000.

A CONCERT for the benefit of the Passavant Memorial Hospital, April 3, netted the institution \$1500.

THE DONATIONS for the proposed hospital for consumptives, under the auspices of the Sisters of St. Elizabeth's Hospital, aggregate \$17,147.

THE FINANCE committee of the City Council has taken favorable action on the proposed appropriation of \$2000 for an emergency hospital in the downtown district, as advocated by the Medical Woman's Club.

THE MORTALITY of the past week was 572, or 98 less than that of the preceding week. The principal causes of death, in the order of greatest reduction, are pneumonia, consumption, cancer, diphtheria, Bright's disease and bronchitis.

THE COMMITTEE recently appointed to assist in the work of raising funds for enlarging and improving the Presbyterian Hospital has issued a circular requesting subscriptions. Following are the objects for which the funds are desired: A new electric-light plant, \$6000; for the ladies' furnishing fund, \$3000; for sixteen additional beds, \$1000; for a steam sterilizer, \$1000; to meet the deficit, \$3500.

DISTRICT OF COLUMBIA.

THE REPORT of the health officer for the past week shows the total number of deaths to have been 136, of which number 81 were white and 55 were colored; 39 cases of diphtheria, 59 of scarlet fever, and 1 of smallpox were under treatment.

DR. JAMES S. HAUGH has resigned his position in the local health department, and accepted an appointment in the United States Marine-Hospital Service.

THE REPORT for March shows that in the Central Dispensary and Emergency Hospital new patients numbered 1343; visits, 2279; prescriptions compounded, 3322; emergency cases, 266; ambulance calls, 78; hospital ward cases, 46; deaths, 6; autopsies, 3.

REPRESENTATIVE LITTLE of Arkansas has introduced a bill appropriating \$300,000 for a soldier's hospital at Hot Springs, Ark., in which shall be admitted soldiers of all the wars in the United States, including the Spanish-American War, who desire treatment of the peculiar diseases for which the waters of the springs are efficacious.

WOMAN'S CLINIC.

The board of directors and the attending staff of the Woman's Clinic are indebted to Senator Gallinger for the introduction of an item of \$2000 in the Senate appropriation bill for maintenance of their clinic. The hospital does excellent work and provides for the treatment of women and children by women physicians. The institution has been in operation since 1891, and up to this year has been self-sustaining, but the work has grown so extensively and the hospital has become so popular that in order to meet the demands on it, the above appropriation has been asked. The women physicians constituting the attending staff have demonstrated their ability to meet every medical emergency and have proved themselves the peers of any medical staff in the country. It behooves all doctors to assist them in obtaining the appropriations asked, and further aiding the growth of their hospital.

UNITED STATES PHARMACOEPIAL CONVENTION OF 1900.

The eighth decennial convention for the revision of the United States Pharmacopoeia will be held in this city on May 2. The following physicians are members of the committee of re-

ception and entertainment: Drs. Acker, Atkinson, Ballock, Barnes, Barker, Barton, Bishop, Car, Chappell, Clayton, Collins, Dufour, J. Elliott, L. Elliott, Franzoni, Glazebrook, Harding, Hickling, Holden, Johnson, Kelley, Kober, Kurtz, Leech, Luce, Lynch, Loehboehler, McGee, Mayfield, Morgan, Reisinger, Robbins and Jno. E. Brackett, treasurer. The committee invites \$5 subscriptions from those interested in the project, to defray the expense of entertaining the visiting delegates.

MINNESOTA.

AN EXAMINATION was held by the State Board of Medical Examiners, in Minneapolis, April 3, of fifty-six applicants for license to practice in the State.

AT A RECENT meeting in St. Paul, the Ramsay County Medical Society passed a resolution excluding information from the lay press, except at the discretion of the president of the Society.

THE ANNUAL report of the superintendent of the St. Paul City and County Hospital shows that 1667 patients were treated during the year. A new building for contagious diseases and the establishment of a cooking school in connection with the training school for nurses is recommended.

MICHIGAN.

UNIVERSITY HOSPITAL, Ann Arbor, was burglarized to the extent of \$200, April 6.

THE PROCEEDS of a recent charity ball, amounting to \$1000, will be used to equip the new surgical ward of the Saginaw Hospital.

A TRAINING school for nurses will be introduced into St. Joseph's Hospital Sanitarium, Detroit, as soon as proper arrangements can be made.

HEALTH OF THE STATE.

Including reports by regular observers and others, consumption was reported present in March at 156 places; measles at 203; scarlet fever at 123; typhoid fever at 58; diphtheria at 40; whooping-cough at 33; smallpox at 13, and cerebrospinal meningitis at 13 places. Reports from all sources show consumption reported present at 24 places less; measles at 22 more; scarlet fever at 6 less; typhoid fever at 6 more; diphtheria at 18 less; whooping-cough at 3 less; smallpox at 3 more, and cerebrospinal meningitis at 1 place more, than in the preceding month.

WISCONSIN.

THE ANNUAL commencement of the Milwaukee medical college was held April 3. Thirty-two students received their degrees.

DELAWARE.

THE FOLLOWING named were recently elected officers of the State Board of Health of Delaware: E. W. Cooper, Camden, president; Alexander Lowber, Wilmington, secretary, and Albert Robin, Newark, state bacteriologist.

MASSACHUSETTS.

A NEW home for consumptives, Boston, for which \$150,000 is to be appropriated, has been favorably considered by the committee on public charitable institutions.

GEORGIA.

Atlanta.

THE GRADY Hospital Training School for Nurses will hold its first commencement next month. This training school was organized three years ago, and the present class will be the first to receive diplomas.

THE ATLANTA College of Physicians and Surgeons held its annual commencement on April 3, with a graduating class numbering seventy-one. The annual address was delivered by Rev. Charles Downman, President of Emory College. The college will probably start on its four years' course at the beginning of the next session.

QUACKS MUST GO.

The medical profession of the city has taken actively in hand the matter of ridding the city of men who are practicing il-

legally or are practicing with bogus diplomas. Five true bills have been found by the grand jury, and the men will be tried at an early date. Atlanta has long been infested with the quack and itinerant medico, and this war will be waged for the extermination of all such.

VIRGINIA.

THE CONTRACT for the main building of the new hospital at the University of Virginia has been awarded, and the work of construction will begin at once, the excavation for the foundations having already been made. It will have one of the finest clinical amphitheaters in America. The central building will face East Range and the corridors will parallel the arcade of the row of dormitories.

TENNESSEE.

THE ANNUAL meeting of the State Board of Medical Examiners was held in Nashville, April 3.

COMMENCEMENT exercises of the Tennessee Medical College, Knoxville, were held March 31. Twenty-eight students were graduated.

THE MONTHLY meeting of the Chattanooga Board of Health was held March 30. It was reported that there have been 134 cases of smallpox in the city since the outbreak of the disease, January 1. During March 34 cases were reported, of which number 5 remain in the isolation hospital.

THE COMMENCEMENT exercises of the Medical Department of Vanderbilt University, Nashville, were held April 4. There were 47 graduates.

TEXAS.

DR. C. F. NORTON, El Paso, has been appointed state quarantine officer, to succeed the late Dr. W. M. Yandell.

AS A PRECAUTIONARY measure the governor has issued a proclamation quarantining against yellow fever and prescribing rules of inspection to be maintained by the quarantine officer.

KANSAS.

DR. W. B. SWAN, secretary of the State Board of Health, has issued a bulletin showing that smallpox was reported from thirty-five different localities during March, with a total of 456 cases and 5 deaths. The disease appeared in thirteen new places during the month, and there was great difficulty in getting it under control on account of the insufficient authority of the county boards of health.

A HUMBOLDT carpenter attempted to open a tar barrel, striking one of the heads a heavy blow with an ax. An explosion followed, supposed to be from accumulated gas, and a piece of the barrel head was driven into his forehead, injuring him seriously, probably fatally.

MISSOURI.

THE STATE Board of Health held its quarterly meeting, April 4. Examinations for license to practice were given and delegates were elected to represent the Board at the convention of the National Association of Health Boards.

THE PEOPLE'S Auxiliary Hospital, St. Louis, was formally opened April 2. The institution was established by charitable negroes for the benefit of their race.

AT THE April meeting, in St. Louis, of the Tri-State (Iowa, Missouri and Illinois) Medical Society, there was a very small attendance. The local profession in general is arriving at the conclusion that proper loyalty to the state societies and the AMERICAN MEDICAL ASSOCIATION precludes attendance on the many other supernumerary spring medical meetings.

THE ST. LOUIS medical profession is greatly aroused over the question of a new city hospital. Mass meetings have been held and the city authorities have had evidence that doctors can stand together when vital matters are involved.

CANADA.

NO NEW cases of smallpox have occurred during the last three weeks in New Brunswick, and all the present ones are well under control.

THE RESULTS in the medical examinations at Queen's University, Kingston, have been posted. The graduates number twenty-one.

THE ONTARIO Government has set apart \$4000 to assist municipalities in the erection of district sanatoria, throughout the province.

SMALLPOX still continues its ravages in the lower part of the Province of Quebec. Several new cases are reported from Paspébiac, Banarivertue County, but they are all of a mild type.

MONTREAL is contemplating the erection of a hospital for consumptives. One of the locations is the top of Mount Royal, but objection is offered to locating such an institution so near the city.

THE MEDICAL health officer of Toronto has been granted three weeks' leave of absence, which he will spend in New York. On his return he will prepare plans for a new smallpox hospital, to be situated on the northeastern confines of the city.

MRS. FLEMING, who has been matron at the Civic Hospital, Montreal, for the past three years and a half, left last week for Cape Nome, Alaska, where she will assume the management of the large hospital being erected in that place.

DR. J. H. ELLIOTT, medical superintendent of the Gravenhurst Sanatorium, now in England, has received an appointment on the expedition dispatched to the west coast of Africa by the Liverpool School of Tropical Diseases, to study malaria.

THERE WERE 248 patients admitted to the Montreal General Hospital during March, and 279 discharged. The daily average has been 176, the largest on any one day being 190. There were 24 deaths during the month, 4165 minor operations and consultations in the out-door department, and 94 ambulance calls.

AT THE Protestant Hospital, Ottawa, on February 28, there were 92 patients in residence. During the month there were 106 admittances, making a total of 198. There were 86 discharged cured, 23 relieved and 1 died; 79 remained in residence on April 1. The hospital was never so largely used as at the present time.

THE FOLLOWING, of St. John, N. B., have been appointed on the staff of the new home for incurables: Drs. Bayard, Travers, Berryman, Christie, P. R. Inches, W. G. Addy, Chas. Holden, W. F. Roberts, F. W. Daniel, Murray MacLaren, T. D. Walker, S. S. Skinner, J. Morrison, Nelson and W. L. Ellis.

FORTY PATIENTS have been admitted to the Protestant Hospital for Insane, Verdun, Que., during the past quarter, and 25 discharged. The deaths numbered 12. The following bequests have been received during the quarter: From the estate of the late Miss Sawtell, \$900; estate of E. K. Greene, \$1000; estate of A. McIntyre, \$450; estate of J. C. Wilson, \$900.

SIR WILLIAM MACDONALD, Montreal, on Saturday last wrote his cheque for \$200,000 as a gift to the chemistry department of McGill University. A special provision of the donation is that it will provide for ten additional assistants to be chosen from the best available talent graduating from the practical chemistry course; it also especially provides that the teaching of chemistry will be made more available for the teaching faculty of medicine.

THE MACKAY BILL.

During the past week the most important feature in the medical imbroglio of Trinity and Toronto has been the participation of the senate of Toronto University in the fight and the speech of Dr. MacKay in the legislature on moving the second reading of his bill, noted at length in recent issues of THE JOURNAL. The provincial university authorities have taken a strong ground in the matter and have interviewed the government in order to press upon them, as they think, the advisability of allowing affairs to continue as they at present exist. It is pointed out on behalf of the continuance of the present medical department of the University, as at present constituted, that the students of Trinity have equal right with the other students, in that, if they so elect, they may register as occasional students with the Toronto faculty, and so avail themselves of the privileges of the provincial university. Of course it is a very likely thing that any teaching body like Trinity will advise her students to take their lectures from a rival medical faculty, and be accorded no share in the examination of those students. In his speech in the legislature, Dr. Mackay made

out a strong plea for his bill. That is generally conceded. The Hon. the Minister of Education, Mr. Harcourt, opposed it and championed the cause of the provincial university and the medical department. Altogether, it would seem that there is an effort being put forward to beloud the issue, and not to have it fought out on its just merits, as side issues are being continually hauled in to do service, when they are very far removed from the thoughts of the adherents of the measure. An adjournment of the debate was moved by the Premier, the Hon. Mr. Ross, the ex-minister of education, and it will probably be up for discussion again the beginning of the week. No doubt it will be referred to the private bills' committee, where each will have a better opportunity of explaining their reasons *pro* and *con*, for the legislation. This would be a fair and just procedure, as if any good can be accomplished that will redound to the advantage of the provincial university, and at the same time be a means of forever redressing the grievances against past legislation of the university, it ought in all fairness be accorded to all parties in the present campaign.

GYNECOLOGY AMONG THE INSANE.

In the annual report of the Inspector of Lunatic and Idiot Asylums for Ontario, for 1899, an interesting part is that relating to the gynecologic surgery in the female insane in the asylum at London, Ont., the avowed exponent of this work in Canada. It is now some five years since this work was first introduced into that institution, where it has been prosecuted systematically ever since. Engendered with some doubt and carried on in a somewhat tentative character, it has there come to be looked on as a necessary branch in the treatment of the female insane. During the past year, 40 patients have been operated on. Of these, 14 have recovered, 14 are improved, 1 died, and so far 11 remain unimproved, though it is stated that several of these latter have but just recently been submitted to operations, and there seems to be no doubt that several will either improve or recover completely. A summary of the work of the past five years, which embraces all the gynecologic work performed since its inception, shows that 217 patients have been examined, in 185 of whom organic disease of some one or more of the pelvic organs was found, thus leaving 32 of the number examined absolutely free from disease. Of these 185 patients, 171 have been operated upon, leaving 9 others to be attended to, while there are 5 the subjects of organic disease, considered unsuitable for operation. Of the 171 operated on, the pathologic conditions present (several often in one case) were 17 cases of dysmenorrhoea or menorrhagia; 80 with disease of the endometrium; 90, subinvolution of uterus; 35, hypertrophied cervix; 44, lacerated cervixes; 27, cystic cervixes; 5, polypi of cervix; 14, uterine fibroid; 1, epithelioma of cervix; 1, sarcoma of uterus; 55, retroversion of uterus; 6, complete procidentia of uterus; 31, ovarian tumor, often with disease of the tubes; in 35 there were perineal injuries; in 1, rectovaginal fistula; in 1, ischiorectal fistula. This gives a total of 444 diseased conditions in 171 patients. The operations performed, often several in one case, were as follows: Curettage and divulsion, 132 times; operations on cervix, 53; suspension of displaced uterus, 50; ovariectomy, 22; hysterectomy, 21; perineorrhaphy, 26; laparotomy for tubercular peritonitis, 2; operation for, hematoma of ovarian ligament, 1; myomectomy, 2—a total of 309 operations. As regards the after mental health, 70 patients recovered from their insanity; in 43 others there has been improvement, often very marked in the general health; in 54 there has been no improvement in the mental health. Thus it will be seen that 113 of the 171 who survived the operation (four died as a result of it) either recovered their mental health or had it improved to a considerable extent. A further interesting part of the report is the average recovery rate, including cases improved, in the female halls of the asylum during the four years, 1892-1895, as with that during the four years from 1896-1899. In the former period, the rate calculated on the whole number under treatment each year, was 4 per cent.; whilst for the four years after the operative work had become a factor, it rose to 5.55 per cent. Dr. A. T. Hobbs is the assistant, in the asylum, who carries on this work.

Medical London.

SOUTH AFRICAN DISEASES.

Ever since the Transvaal War broke out there has been keen interest here as to the climate and diseases of South Africa, and the recent meetings of the Committee on Geographical Pathology, at the London Polyclinic, have been chiefly occupied with these subjects. Dr. Alfred Hillier, who was for a number of years in active practice in the Transvaal and Orange Free State, and at one time in partnership with Dr. Jameson of the "Raid" notoriety, opened the discussion with a description of the climate and principal diseases. He brought out most clearly that—as we are rapidly learning of late years, all over the world—the "unhealthiness" of a climate depends not on temperature or moisture but on the degree of prevalence of certain diseases which might almost be reduced to two, malaria and typhoid. As the high central tableland which forms the greater part of the country is almost exempt from malaria, the only serious and at all widely prevalent diseases are those imported by the settlers themselves—typhoid and diphtheria. This has been strikingly confirmed by the experience of the troops so far, as nearly 60 per cent. of their death-rate by disease has been caused by typhoid, 800 cases of the fever being found in Ladysmith alone, when the siege was raised. That the whole of it is due to defective sanitation and polluted water-supply is shown by the fact that it is almost exclusively a disease of towns and villages, cases on isolated farms and in the open country generally being almost unknown. So the Afrikaner has to a large extent his physical fate in his own hands. This is especially true in view of the fact that tuberculosis as an indigenous disease is practically unknown. Dr. Hillier has never met with a case in a Boer or a native Afrikaner, and with only a very small number which originated in South Africa in European settlers; all of the latter were believed to be due to direct contagion from consumptives who had gone there for the climate-cure.

DIPHTHERIA AND ELEVATION.

An interesting peculiarity is the apparent effect of elevation on diphtheria, Dr. Hillier stating that he has never met with the disease at an elevation above 3000 feet. In Kimberly, for instance, which is slightly below this elevation, the disease is frequent, while at Johannesburg, with an elevation of over 4000 feet, it is almost unheard of. In several years' active practice in the latter place, Dr. Hillier had not met a case.

DISADVANTAGES OF SOUTH AFRICAN CLIMATE.

Like everything mundane, the climate, though clear, bracing and healthful to a degree, has its drawbacks. It is liable to fearful dust storms which are frequently followed by acute pneumonias, apparently due to the mechanical irritation of the quantities of fine, flour-like, red dust inhaled. A similar effect may also be produced on the bowels, by the more than "peck of dust" swallowed on food, every article of which, no matter how protected, becomes sifted over with a thick layer. This gives rise to a "dust dysentery" of most irritating and weakening type, though fortunately usually self-limited and free from serious complications.

Another drawback, very real to an unfortunate few, is that washing of the face and neck must be strictly limited to the absolutely necessary. Otherwise most unpleasant reddening and fissuring of the skin leading to chronic ezeematous conditions will develop. Water can no longer be used on the skin *ad libitum*; indeed, in most cases, the general rule has to be adopted of never washing between sunrise and sunset, and this has become an accepted habit with most colonials of experience, though it took years to make an Englishman believe that cleanliness could ever be otherwise than a virtue and a benefit. Indeed, the Boer name for an Englishman, *rooinek* or "red neck," was given because he was always washing himself and had a raw, red and itching neck and face in consequence, a habit from which the Boer himself found not the slightest difficulty in refraining.

TEETH OF SOLDIERS.

The teeth of the recruit have again been alarming the country. This time it is on the naval side, where in answer to a member's question, Mr. Goschen, the present "Ruler of the

Queen's Navy," stated that probably as many as 25 per cent. of the rejections were on account of defective teeth. Of army recruits only 7.7 per cent. of those rejected were refused on this ground, and it was explained that the conditions of service afloat—presumably the long cruises and harder, drier food—made a higher standard of dental perfection necessary in sailors. If this statement leads to an adoption of a proposal already before the House for the appointment of official dentists to every public school, it will be an incalculable benefit to the country. The condition of the teeth of the English working classes is decidedly poor, worse than anything to be found in that supposed home of early dental decay, America, and goes far to shake our faith in the venerable superstition that the human tooth is degenerating under civilization and modern diets.

ARMY MEDICAL DEPARTMENT.

The medical department of the army came in for its first public discussion in Parliament this week, and the result was a positive ovation. A prominent member declared that it had been the success of the war, and the under secretary for war, Mr. Wyndham, one of the most prominent personalities in England at present and the official representative of the war office in the House, "could not pay too high a tribute to the fortitude, courage and efficiency which has been displayed by the medical officers. They were not exalted by the joy and intoxication of battle; they were sustained by their devotion to suffering humanity alone and this rendered their services all the more heroic." This ought to make it plain even to the intelligence of a general that, if he persists much longer in his pig-headed and supercilious refusal to recommend more medical men for the Victoria Cross, he will have to reckon with the war office as well as with an already indignant public.

CANDIDACY OF PROF. WM. OSLER.

The candidacy of Professor Osler, of Baltimore, Md., for the chair of medicine in the University of Edinburgh, left vacant by the death of Sir T. Grainger Stewart, is looked on with universal favor here. It is believed that owing to the nearly equal division of local support between Dr. Byron Bramwell and Dr. John Wylie, and consequent high feeling, the chances of a selection of an outsider are extremely good, and of outsiders Professor Osler is far the likeliest choice. To be elected a second time to a foreign chair would be a high honor indeed, and while America would deeply regret his loss personally, yet the compliment paid to the standing of the medical profession through one of its leading representatives would go far to balance this. It would also be a most graceful demonstration of the practical cosmopolitanism of science and the unity of the English-speaking races all over the world. [Dr. Osler's declination of this call was noted in last week's JOURNAL, p. 885. Ed.]

BOER THERAPEUTICS.

The closer we come to our cousin, the Boer, the more extraordinary survival, brave fighting man as he has shown himself, does he appear to be, not merely of medieval, but positively marsupial times. The rooted distrust of European physicians and their treatment, reported by one correspondent after another as felt by the Boer, which seemed at first almost incredible, begins to be comprehensible when we learn something of his own preference in the way of household remedies. His prime favorites, according to a writer in the *Chemist and Druggist*, are purgatives, the more energetic the better, and one of these is administered as a routine first step in every case of illness. Next on his list comes such cheerful vestigia as *heasjep-tis*, the secretion of the scent-glands of the Cape Hyrax, or so-called "roek rabbit," and *klipsweat* or "roek sweat," a curious secretion which accumulates in the crevices of certain rocks and was originally believed to be the dung of bats, but is now regarded as the secretion of certain insects. A species of Indian hemp, the wax of the Cape myrtle and a choice selection of the crudest of Harlem oils, "crown essences," and black pills complete the equipment of the *Huis Apotek* or family medicine chest. One deliciously primitive instance is related from the writer's own experience, of a patient who, having run the gamut of the medicine chest without relief, was wrapped in the warm skin of a freshly killed goat.

COMPLIMENT TO MEDICAL PROFESSION.

A graceful compliment has been paid to the profession by the election of Dr. Wm. C. Church, president of the Royal College of Physicians, to the membership of the "Athenaeum" Club on the ground of "distinguished scientific attainments." The Athenaeum is one of the most distinguished and exclusive clubs in London, the "celebrities" club par excellence, and admission to it is considered one of the blue-ribbons of intellectual London. Lord Lister is already a member.

DEATH-RATE OF TROOPS.

The low death-rate from disease among the British troops in South Africa has been widely commented on as one of the triumphs of modern sanitation. Of the total deaths to date barely over one-fourth have been due to disease and about one-half of these to typhoid. In view of the fact that typhoid is epidemic in nearly all the towns of Natal and Cape Colony used as camp sites, its prevalence has been remarkably limited, sufficiently so to distinctly support the claim that the anti-typhoid inoculations so widely carried out on the troops by Professor Wright of Netley and the army medical officers are giving positive results. Nearly 6 per cent. of the troops sent out from England are said to have voluntarily submitted to inoculation, and the results from Professor Wright's 3000 inoculations in the army of occupation in India last year have certainly given most encouraging results. Ludicrously enough the wide-spread vaccinations against typhoid among the troops sent out were denounced by the "antis" as the cause of the disasters to the British arms at Stornburg, Magersfontein, etc., by dulling the senses and depressing the vitality of the soldiers so that they walked right into the traps laid for them, like men dazed.

MALARIA INVESTIGATIONS.

The public mind here is getting thoroughly stirred up to the importance of the antimalarial movement headed by Manson and Ross. Especially is this true since the publication of Major Ross' letter showing that in India alone 5,000,000 deaths per annum occur from fever," chiefly malarial and that of the 178,000 men composing the Indian army, 75,800 or 45 per cent. were admitted to hospitals for malaria during the year 1899. The new malaria expedition which has just started for Nigeria, from the Liverpool School of Tropical Medicine, will be watched with the keenest interest, as will also the experiments of the London school in the Roman Campagna during the coming summer. The idea of having infected mosquitoes brought home to bite devoted English experimenters who have volunteered for the service was not only sound science but also a finely dramatic object-lesson to the popular mind and has "caught on" immensely. Dr. Manson's gift of terse and vivid epigram is also of great service in impressing the facts of the situation on the lay mind. His characterization of the sanitary work of tropical medicine against malaria, typhoid and the plague as "a campaign of the mosquito-net, the teakettle and the rat-trap" has spread far and wide, and this recent pithy sentence that "quinin kills the malaria parasite as surely as arsenic does a rat" is scarcely less happy.

PIGMENTS AND THE SKIN.

Some most interesting results have recently been reported at the London Polyclinic, by Dr. Robert Bowles, in reference to the effects of pigments in preventing sunburn, cracking and other exposure-effects on the skin. He has found that in many cases of sensitive skins which burned, chapped and became even eczematous on exposure, and were not relieved in the slightest by ordinary salves, lotions and creams, the addition of a small amount of pigment to the protective application would check the irritation at once and permit exposure with impunity. This was most strikingly seen on the glaciers and snow-flats of the Alps, where tourists are frightfully annoyed by sunburn, which can be completely prevented by coating the face lightly with a film of any pigmental salve or paste. For convenience, he has generally employed the ordinary grease paints used by actors in "make-up." Other experiments have been varied and controlled by painting the face in patches, leaving one side smeared but not colored, etc., and invariably with the same result, i. e., the pigment covered areas escaped all unpleasant effects while the uncovered patches were severe-

ly burned. The color of the pigment seemed to matter little, although red-browns and browns were extremely effective. The hint has been taken by dermatologists in pityriasis, summer prurigo, summer eczema, and the various forms of eruptions which are worse in hot weather, and with the most gratifying results. Mr. Malcolm Morris has recently reported (*The Polyclinic*, January, 1900) the great relief afforded in cases of summer prurigo, by the simple addition of bole Armenian, a vegetable pigment used by actors, to salves which before had given little or no benefit. Contrary to the general impression, it is not the heat, but the chemical action of sunlight which so intensely irritates the skin, and this explains the torturing effects of reflected light from snow or ice on both skin and conjunctiva, and the relief given by colored glasses, etc. It also opens up a most interesting question as to the precise value of pigment in the human epidemics, especially in the races inhabiting the tropics, and also throws new light on the custom of smearing the skin with pigmental oils and greases, colored clays, etc., to which so many savage tribes are addicted, and which formerly seemed so utterly irrational.

NEED OF HOSPITAL REFORM.

An effective little illustration of the need of hospital reform has just been furnished in the police courts, by an action brought by one hospital patient against another. The complainant alleged that he had been robbed, in the Charity Cross Hospital, of a gold watch and chain, a silver match box, a gold ring and a diamond scarf-pin, altogether valued at \$200. No mention is made of a check book or coupons, but one can not help wondering what were the circumstances which justified the admission of a patient with all this ornamentation in plain view into the charity wards. One can imagine many emergencies in which really destitute and deserving patients who were still well-dressed might be admitted to the wards, but such finery ought surely to be left at home, if only for appearances, to say nothing of the temptation placed before poorer patients.

RETURN OF INVALIDED SOLDIERS.

Another transport has just landed its contingent of invalided soldiers at Southampton, with the same cheering record, which has grown so familiar, that out of nearly 150 patients there are only seven "cot cases," the remainder having made rapid progress toward recovery during the voyage. Owing to this high recovery rate on the home voyages the military hospitals have never yet been overcrowded, although the actual accommodations in existence when the war broke out were regarded as entirely inadequate, and hospitals all over London were approached as to how many beds they could spare for soldiers. Once more the utter unpreparedness of the war office has escaped, by sheer luck, the disaster which it invited, even the distance from the scene of war and the slowness of the transports working in its favor. It would not accept nor even acknowledge with thanks the stream of offers of beds from local hospitals, sanatoria, and even private houses, which poured in from all over the country, and now even its stupidity is going to be counted unto it for righteousness.

Correspondence.

The Journal and Ethical Preparations.

NEW YORK CITY, April 3, 1900.

To the Editor: Having noticed, in an editorial in THE JOURNAL of March 31, your determination to somewhat curtail the number and character of advertisements in THE JOURNAL it occurred to me that you were entitled to a word of encouragement, congratulations and best wishes from the advertisers of legitimate remedies, as well as from the members of the ASSOCIATION and the profession generally. That THE JOURNAL should refuse further to encourage or give countenance to the nostrum is as it should be. Representing the most angust body of medical men in the United States, voicing the sentiments and scientific thought of these men, who should head the list of individuals and organized societies in all that appertains to ethics or good morals; alive to the protection of its members

and the profession generally, as well as to humanity, it should be first to show its earnestness in all that appertains to their welfare. As the conservators of public health, the associations and physicians generally have a broad humanitarian duty toward those who look to them to guard their interests. In this sense the physician is his brother's keeper. If you protect the members of the associations, through them you protect the uninformed public. So long as there is a suffering humanity there will be those who prey on their credulity for money. Any educated physician must realize the worthlessness, nay the positive harmfulness of these secret products, made usually from their own prescriptions without a knowledge of why they were originally prescribed, compounded by unscientific men, and offered for all manner of troubles, when if the truth was known the combination or its individual parts, if not actually contraindicated, are useless in most instances.

Now what character of products should be acceptable to the advertising pages of a standard medical journal? There should be but two classes: 1. Definite chemical products; those with an identity which can be expressed in symbols or terms according to chemical nomenclature. 2. Compatible mixtures whose formulæ are given in the body of the advertisement each time it is printed. The formulæ should give the quantities of each ingredient to a given portion, and be so expressed that it is intelligible to the physician. There should be no occult knowledge necessary to compound such a preparation; no statement that "by a process known only to the manufacturers the preparation can be made as offered by them." Nor should a list of the ingredients furnished without the quantities clearly expressed be sufficient, and when this is given let it show in full. Do not pigeon-hole the formula and notify your readers in an editorial that the formula is in your possession and that it will be sent (privately) to any one interested; while, when it is received, they find that it not only does not give the exact quantity of each ingredient used to a given portion, but that it is expressed so obscurely that the reader is no better informed than before securing it. I believe that there would be less substituting if such a policy were strictly adhered to by all medical journals. The druggist resents the imposition of secrecy which is so often a cloak for fraud, as much or more than does the physician, for it clearly implies his incompetency; besides, the physician will not cease to use these products, but will all the more insist on his prescription being dispensed from those whose identity and character they clearly understand, and in which they have confidence. We will thus secure the co-operation of both the professions, that of medicine as well as of pharmacy.

It must appear that in the end both professions will benefit; legitimate and scientific remedies only will be used, and the public soon become an unconscious factor in bringing about this most desirable end, for when they more clearly realize, as they will (for the public is quick to learn when the proper means are employed), that individual persons and individual complaints require individual treatment, that no stock prescription, however scientifically it may be prepared, will answer for the same disease in different individuals much less answer as a cure for a multitude of complaints, they will seek such remedies and from such people as will secure to them the best results, in the same way as they purchase merchandise.

J. W. WALNRIGHT, M.D.

Proposed Leper Law.

LOS ANGELES, CAL., March 27, 1900.

To the Editor: In THE JOURNAL of March 17, p. 694, you say, in regard to the proposed leper law:

It is a question whether leprosy, which numbers among its victims only a few hundred at most in this country, is a sufficiently threatening danger to warrant or call for the elaborate and expensive provisions of this bill. . . . Leprosy does not seem to flourish here. New cases that originate among us are rare. . . . If matters are much worse than here assumed, some such measure as the proposed one may be advisable.

While there is no call for excitement or hysterical action in the matter, it does seem to me that the proposed leper law will fill "a long-felt want." Considering the nature of the disease,

are not "only a few hundred lepers in this country" a great menace to the health of the country at large?

Were the disease generally prevalent, we should be alive to it and the necessity of provision against it; we should all be more or less familiar with the more common phases of the disease, but, as it is, individuals have no certainty that they shall not come in contact with the disease; get it from some straggler or another that comes their way. It is not so much the danger of an epidemic that we should provide against, as the general liability to contagion in hotels and other public places. An isolated case was reported here last week. Dr. McDougal reports two cases in Lexington, Ohio, and another is reported from Philadelphia, of a leper that came from Barbados through Canada. I could go on indefinitely, stating cases that have come to the notice of physicians here and there throughout the mainland. I consider that it is the duty of the state and national governments to protect citizens from unnecessary exposure to all contagious disease, and it would be time to act if there were only one case of leprosy in the whole United States.

The person or persons to whom this particular leper would be a danger make a special provision imperative, no matter whether the disease spread further or not. This applies, less urgently perhaps, but still it applies, to syphilis and tuberculosis. And some day we shall wonder why we were so long indifferent to wise legislation in the matter. The expenditure of money is nothing compared with the extension of such a disease even to one individual. We think nothing of spending money in other directions; and the protection of our citizens from disease, in other words, medical legislation, is one of our first duties.

As to the spread of leprosy in a temperate zone, learned men differ. Why should not the disease increase here as well as in similar latitudes in Europe? Perhaps the cycle has not reached, but it may come. And if matters may be "much worse" here than we know, surely it is time for us to find out exactly the real condition of affairs in the country.

E. S. GOODHUE, M.D.

Association News.

Annual Announcement.

The fifty-first annual session (53d year) of the AMERICAN MEDICAL ASSOCIATION will be held in Atlantic City, N. J., on Tuesday, Wednesday, Thursday and Friday, June 5, 6, 7 and 8, commencing on Tuesday at 11 a. m.

REGARDING REPRESENTATION.

The delegates shall receive their appointment from permanently organized State medical societies, and such county and district medical societies as are recognized by their respective State societies, and from the medical departments of the Army and Navy and the Marine-Hospital Service of the United States.

Each State, county and district medical society entitled to representation shall have the privilege of sending to the ASSOCIATION one delegate for every ten of its regular resident members, and one for every additional fraction or more than half that number; *Provided*, however, that the number of delegates from any particular State, Territory, county, city or town shall not exceed the ratio of one in ten of the resident physicians who are entitled to membership.

PERMANENT MEMBERS.

The permanent members shall consist of all those who have served in the capacity of delegates, and of such other members as may receive the appointment by unanimous vote, and shall continue such so long as they remain in good standing in the body from which they were sent as delegates, and comply with the requirements of the By-Laws of the ASSOCIATION, so long as they shall continue to conform to its regulations, but without the right of voting; and, when not in attendance, they shall be authorized to grant letters of introduction to reputable practitioners of medicine residing in their vicinity, who may wish to participate in the business of the meeting, as provided for members by invitation.

MEMBERS BY APPLICATION.

Members by application shall consist of such members of the State, county and district medical societies entitled to representation in this ASSOCIATION as shall make application in

writing to the Treasurer, and accompanying said application with a certificate of good standing, signed by the president and secretary of the society of which they are members, and the amount of the annual subscription fee, \$5. They shall have their names upon the roll, and have all the rights and privileges accorded to permanent members, and shall retain their membership upon the same terms.

REGISTRATION AT MEETING.

Each delegate or member, when he registers, is requested to record the name of the Section, if any, that he will attend, and in which he will cast his vote for Section officers.

SECTION OFFICERS.

The Chairman of each Section shall prepare an address on the recent advances in the branches belonging to his Section, including such suggestions in regard to improvements or methods of work as he may regard important, and present on the first day of its annual session the same to the Section over which he presides. The reading of such address not to occupy more than forty minutes.—By-Laws.

PRESENTATION OF PAPERS.

A member desiring to read a paper before a Section should forward the paper or its title and length (not to exceed twenty minutes in reading) to the Secretary of the Section at least one month before the annual meeting at which the paper or report is to be read.

No paper shall be read by title in any Section which is not actually in the hands of the officers of the Section.

No paper shall be placed on record for the consideration of any Section unless an abstract or précis of not less than 50 nor more than 300 words accompanies the title and is placed in the hands of the Chairman or Secretary of the Section at least thirty days before the time of meeting of the Section.—By-Laws.

ORATIONS.

The following annual orations will be delivered: On Medicine, John A. Witherspoon, Nashville; on Surgery, W. L. Rodman, Philadelphia; on State Medicine, Victor C. Vaughan, Ann Arbor.

Chairman Committee of Arrangements, Philip Marvel, Atlantic City, N. J.

PROPOSED AMENDMENTS.

Amendment to the Constitution and By-Laws offered by the Committee on Medical Legislation:

Section 3, Standing Committees.—The committee on legislation shall consist of three members: one of whom shall be a resident of Washington, one of Baltimore and one of Philadelphia. It shall be the duty of this committee to represent before Congress the wishes of this ASSOCIATION, regarding pending medical and sanitary legislation. This committee shall also invite to an annual conference to be held at Washington, one delegate each from the army medical service, the navy medical service, the marine-hospital service and from each State society of legally qualified practitioners of medicine; such conference to consider questions of national medical and sanitary legislation and report to their representative bodies for actions.

In By-Laws, Section 3, Standing Committees, insert after "board of trustees" the words, "committee on legislation," and after the duty of "boards of trustees" the following clause: "The committee on legislation shall report annually to this ASSOCIATION its action during the previous year and shall recommend to the ASSOCIATION such action regarding pending legislation as it shall deem proper.

Amendment to the Code of Ethics offered by Dr. Q. C. Smith, Austin, Texas:

Article 4, Section 9.—Be it

Resolved, That attending physicians are entitled to charge a consultation fee for each consultation, in addition to visit fee, equal in amount to that ordinarily charged in similar cases by consulting physicians residing in the same city, locality or community where the service may be rendered.

OFFICERS OF SECTIONS.

Practice of Medicine—George Dock, Ann Arbor, Mich., Chairman; T. B. Futcher, Baltimore, Secretary.

Surgery and Anatomy—H. O. Walker, Detroit, Mich., Chairman; Ramon Gutiérrez, New York City, Secretary.

Obstetrics and Diseases of Women—W. E. B. Davis, Birmingham, Ala., Chairman; F. F. Lawrence, Columbus, Ohio, Secretary.

Material Medica, Pharmacy and Therapeutics—Leon L. Solomon, Louisville, Ky., Chairman; J. W. Wainwright, New York City, Secretary.

Ophthalmology—H. V. Wüldemann, Milwaukee, Chairman; C. F. Clarke, Columbus, Ohio, Secretary.

Laryngology and Otology—Christian R. Holmes, Cincinnati, Chairman; J. A. Stucky, Lexington, Ky., Secretary.

Diseases of Children—Edwin Rosenthal, Philadelphia, Chairman; Louis Fischer, New York City, Secretary.

Physiology and Dietetics—Elmer Lee, New York City, Chairman; R. Harvey Cook, Oxford, Ohio, Secretary.

Neurology and Medical Jurisprudence—Hugh T. Patrick, Chicago, Chairman; F. S. Pearce, Philadelphia, Secretary.

Cutaneous Medicine and Surgery—L. Duncan Bulkley, New York City, Chairman; R. R. Campbell, Chicago, Secretary.

State Medicine—W. C. Woodward, Washington, D. C., Chairman; Armand Ravold, St. Louis, Secretary.

Stomatology—M. H. Fletcher, Cincinnati, Chairman; Eugene S. Talbot, Chicago, Secretary.

MEDICAL SOCIETIES ENTITLED TO REPRESENTATION IN THE AMERICAN MEDICAL ASSOCIATION APRIL 14, 1900.

In accordance with the Constitution, this list is prepared as certified by the secretaries of the State and Territorial medical societies.

ALABAMA.	Southern California M. S.
Alabama State M. S., and all County Societies.	Tulare County M. S.
	Yuma County M. S.
	Yolo County M. S.
	Yuba and Sutter Counties M.S.
ARIZONA.	COLORADO.
Arizona Territory M. A.	Colorado State M. S.
Maricopa County M. S.	Alumni Ass'n of the Gross M. College.
Pima County M. S.	Cripple Creek M. S.
Yarapai County M. S.	Denver Clin. S.
ARKANSAS.	Denver Clin. and Path. S.
Arkansas State M. S.	Denver and Arapahoe M. S.
Baxter County M. S.	Denver Med. Col. Alumni Association.
*Benton County M. S.	El Paso County M. S.
*Boone County M. S.	Fremont County M. S.
*Craighead County M. S.	Lake County M. S.
Crawford County M. S.	*Larimer County M. S.
*Eureka Springs, Carroll County M. S.	Las Animas County M. S.
*Hempstead County M. S.	Morgan County M. S.
Hot Springs M. S.	*Otero County M. S.
*Independence County M. S.	Pueblo County M. S.
*Jefferson County M. S.	Weld County M. S.
Lee County M. S.	CONNECTICUT.
*Little Rock M. S.	Connecticut State M. S.
Phillips County M. S.	*Bridgeport M. A.
*Polk County M. S.	*Danbury M. A.
Sebastian County M. S.	Fairfield County M. A.
Washington County M. S.	Hartford County M. A.
*White County M. S.	Hartford M. S.
CALIFORNIA.	Litchfield County M. A.
M. S. State of California	Middlesex County M. A.
Alameda County M. S.	New Haven County M. A.
California Acad. of Med.	New London County M. A.
*California Northern District M. S.	Norwich M. A.
El Paso M. S.	*Stamford M. S.
Fresno County M. S.	Tolland County M. A.
Humboldt County M. S.	*Waterbury M. A.
Kern County M. S.	Windham County M. A.
Lake County M. S.	DISTRICT OF COLUMBIA.
*Los Angeles County M. S.	Med. Ass'n of D. C.
Marin County M. S.	DELAWARE.
Medico-Chirurg. M. S.	Delaware State M. S.
*Monterey County M. S.	FLORIDA.
Orange County M. S.	Florida State M. S.
Pasadena M. A.	Alachua County M. S.
Placer County M. S.	Duval County M. S.
Pomona Valley M. S.	Hillsborough M. S.
Riverside County M. S.	Osceola County M. S.
San Diego County M. S.	St. John County M. S.
Sarcamento S. for Med. Improvement.	GEORGIA.
San Bernardino County M. A.	Georgia State M. A.
San Francisco County M. S.	Atlanta Soc. of Med.
San Francisco Clin. S.	Macon M. S.
San Joaquin County M. S.	IDAHO.
San Joaquin Valley M. S.	Idaho State M. S.
San Louis Obispo and Northern Santa Barbara County M. A.	ILLINOIS.
Santa Barbara County M. S.	Illinois State M. S.
Santa Clara County M. S.	Adams County M. S.
Santa Cruz County M. S.	*Esculapian S. of Wabash Valley.
*Society of German Physicians of San Francisco	Aurora M. S.
Sonoma County M. S.	

Belleville M. S.
 Brainard Dist. M. S.
 Bond County M. S.
 Bureau County M. S.
 Cairo M. S.
 Calhoun County M. S.
 Capital Dist. M. S.
 Central Dist. M. S.
 Champaign County M. S.
 Chicago Acad. of Med.
 Chicago Gynecological S.
 *Chicago Laryngological Soc.
 Chicago M. S.
 Chicago Medico-Legal S.
 Chicago Neurological S.
 Chicago Ophthal. and Otol. S.
 Chicago Orthopedic S.
 Chicago Pathological S.
 *Chicago Pediatric Society.
 Chicago Physicians' Club.
 Chicago Soc. Internal Med.
 Chicago Soc. Med. Examiners.
 *Chicago Therapeutic Society.
 Clay County M. S.
 Clinton County M. S.
 Coles County M. S.
 *County Hosp. Alumni S.
 Crawford County M. S.
 Decatur M. S.
 Dewitt County M. S.
 Douglas County M. S.
 E. St. Louis M. S.
 Egyptian M. S.
 Fox River Valley M. S.
 Fulton County M. S.
 Galva Dist. M. S.
 Galesburg M. S.
 Gallatin County M. S.
 Green County M. S.
 Hancock County M. S.
 Hardin County M. S.
 Iowa and Ill. Cent. Dist. M. S.
 Jackson County M. S.
 Jacksonville Med. Club.
 Jersey County M. S.
 Kankakee County M. S.
 Lake County M. S.
 La Salle County M. S.
 Lawrence County M. S.
 Macoupin County M. S.
 Marion County M. S.
 Massac County M. S.
 McDonough County M. S.
 McLean County M. S.
 Med. and Sur. S. of Western Ill.
 Military Tract M. A.
 Monroe County M. S.
 Morgan County M. S.
 Moultrie County M. S.
 North Central Illinois M. S.
 *North Chicago M. S.
 Ogle County M. S.
 Ottawa City M. S.
 Peoria M. S.
 Peoria County M. S.
 Perry County M. S.
 Pullman Dist. M. S.
 Quincy Med. and Lib. Ass'n.
 Rock River Valley M. A.
 Saline County M. S.
 *Sangamon County M. S.
 Scandanavian M. S. Chicago.
 Scott County M. S.
 Shelby County M. S.
 Southeastern Illinois M. S.
 Southern Illinois M. S.
 *Springfield Med. Club.
 St. Clair County M. S.
 Stephenson County M. S.
 Tri-County M. S.
 Twin City Clin. Ass'n of
 Champaign and Urbana.
 Vermillion County M. S.
 Wabash County M. S.
 Warren County M. S.
 Washington County M. S.

Western M. and S. S.
 White County M. S.
 Whiteside County M. S.
 Williamson County M. S.
 Winnebago County M. S.
 Woodford County M. S.
 Will County M. S.

INDIANA.

Indiana State M. S.
 Allen County M. S.
 Bartholomew County M. S.
 Benton County M. S.
 Blackford County M. S.
 Boone County M. S.
 Carroll County M. S.
 Cass County M. S.
 Clark County M. S.
 Clay County M. S.
 Daviess County M. S.
 Dearborn County M. S.
 Decatur County M. S.
 DeKalb County M. S.
 Delaware County M. S.
 Dubois County M. S.
 Elkhart County M. S.
 Fayette County M. S.
 Floyd County M. S.
 Fountain County M. S.
 Franklin County M. S.
 Gibson County M. S.
 Grant County M. S.
 Greene County M. S.
 Hamilton County M. S.
 Hancock County M. S.
 Hendricks County M. S.
 Henry County M. S.
 Howard County M. S.
 Huntington County M. S.
 Jackson County M. S.
 Jay County M. S.
 Jefferson County M. S.
 Jennings County M. S.
 Johnson County M. S.
 Knox County M. S.
 Kosciusko County M. S.
 Lagrange County M. S.
 *Lake County M. S.
 Laporte County M. S.
 Lawrence County M. S.
 Madison County M. S.
 Marion County M. S.
 Marshall County M. S.
 Martin County M. S.
 Miami County M. S.
 Monroe County M. S.
 Montgomery County M. S.
 *Morgan County M. S.
 Newton County M. S.
 Noble County M. S.
 Orange County M. S.
 Owen County M. S.
 Parke County M. S.
 Perry County M. S.
 Pike County M. S.
 Porter County M. S.
 Posey County M. S.
 Putnam County M. S.
 Rush County M. S.
 Randolph County M. S.
 Ripley County M. S.
 Shelby County M. S.
 St. Joseph County M. S.
 Steuben County M. S.
 Sullivan County M. S.
 Switzerland County M. S.
 Tippecanoe County M. S.
 Tipton County M. S.
 Vanderburg County M. S.
 Vigo County M. S.
 Wabash County M. S.
 Warrick County M. S.
 Washington County M. S.
 Wayne County M. J.
 Wells County M. S.
 White County M. S.
 Whitley County M. S.

INDIAN TERRITORY.
 Territorial Ass'n.

IOWA.

Iowa State M. S.
 Austin Flint M. S.
 Blackhawk County M. S.
 Boone Valley M. S.
 Botna Valley M. S.
 Buchanan County M. S.
 *Cedar Rapids M. S.
 Cedar Valley M. S.
 Central District M. S.
 Cherokee County M. S.
 Clark County M. S.
 Clinton County M. S.
 Council Bluffs M. S.
 Dallas County M. S.
 Delaware County M. S.
 Des Moines County M. S.
 *Des Moines Valley M. S.
 Dubuque M. S.
 *Eastern Iowa M. S.
 Fayette County M. S.
 Fort Dodge M. S.
 *Fremont County M. S.
 Gate City M. S.
 *Guthrie District M. S.
 *Hummiston & Shenandoah M.S.
 Iowa Central M. S.
 *Iowa Union M. S.
 Iowa and Illinois M. S.
 Jasper County M. S.
 *Jefferson County M. S.
 *Johnson County M. S.
 Julien M. S.
 *Julien Med. & Surg. Ass'n.
 *Keokuk County M. S.
 *Keokuk M. S.
 Lyon County M. S.
 Missouri Valley M. S.
 Mitchell County M. S.
 North Iowa M. S.
 *Northwestern M. A.
 *Plymouth County M. S.
 Pocahontas District M. S.
 Polk County M. S.
 Ringgold County M. S.
 *Scott County M. S.
 *Sioux City M. S.
 Sioux Valley M. S.
 Southwestern Iowa M. S.
 Spirit Lake Med. Association.
 *Story County M. S.
 Wapello County M. S.
 Wapsie Valley Med. Ass'n.
 Warren County M. S.
 Washington County M. S.
 Winnebago County M. S.
 *Worth County M. S.

KANSAS.

Kansas State M. S.
 Bourbon County M. S.
 Golden Belt M. S.
 Leavenworth County M. S.
 South-East Kansas M. S.
 Topeka Acad. of Med. & Surg.
 Wyandotte M. S.

KENTUCKY.

Kentucky State M. S.
 *Anderson County M. S.
 Boyle County M. S.
 *Brashear M. S.
 *Carlisle County M. S.
 *Carter County M. S.
 Central Kentucky M. S.
 Clark County M. S.
 *Garrard County M. S.
 Hardin County M. S.
 *Henderson County M. S.
 *Kentucky Valley County M.S.
 Lexington and Fayette Counties M. S.
 *Lincoln County M. S.
 *Louisville M. S.

Marion County M. S.
 Mason County M. S.
 *Midland District M. S.
 Muhlenberg County M. S.
 *Muldraugh's Hill M. S.
 *Nelson County M. S.
 Northeast Kentucky M. S.
 Owensboro M. S.
 Paducah M. and S. S.
 *Pulaski County M. S.
 *Scott County M. S.
 Southeast Kentucky M. S.
 *Southwestern District M. S.
 *Union County M. S.

LOUISIANA.

Louisiana State M. S.
 *Attakapas M. S.
 *Avozelles M. S.
 *Baton Rouge M. S.
 *Morehouse M. S.
 *N. Louisiana M. S.
 *Onachitta M. S.
 Orleans Parish M. S.
 *Shreveport M. S.
 *Tensas M. S.
 *Warren Stone M. S.

MAINE.

Maine State M. S.

MARYLAND.

Maryland Med. and Chir. Faculty (the State Society).
 *Baltimore Med. & Surg. A.
 *Clinical Society of Maryland.

MASSACHUSETTS.

Massachusetts M. S.
 Barnstable District M. S.
 Berkshire District M. S.
 Bristol North District M. S.
 Bristol South District M. S.
 Essex North District M. S.
 Essex South District M. S.
 Franklin District M. S.
 Hampshire District M. S.
 Hampden District M. S.
 Middlesex South District M. S.
 Middlesex East District M. S.
 Middlesex North District M. S.
 Norfolk District M. S.
 Norfolk South District M. S.
 Plymouth District M. S.
 Suffolk District M. S.
 Worcester District M. S.
 *Worcester North District M.S.

MICHIGAN.

Michigan State M. S.
 Bay County M. S.
 *Berrien County M. S.
 Calhoun County M. S.
 Cheboygan County M. S.
 Detroit Acad. of Med.
 Detroit Gynecological Society.
 *Detroit Med. & Lib. A.
 Grand Rapids Acad. of Med.
 Kalamazoo Acad. of Med.
 Marshall Acad. of Med.
 Northeastern District M. S.
 Pontiac M. S.
 *Upper Peninsula M. S.
 Washtenaw County M. S.
 Wayne County M. S.

MINNESOTA.

Minnesota State M. S.
 *Cannon Valley M. S.
 Crow River Valley M. S.
 Fillmore County M. S.
 Minnesota Acad. of Med.
 Minnesota Valley Med. Ass'n.
 Hennepin County M. S.
 Interurban M. S.
 Olmsted County M. S.
 Ramsey County M. S.
 Southern Minnesota M. S.
 South-Western Minn. M. S.

St. Louis County M. S.
Wabasha County M. S.
Winona County M. S.

MISSISSIPPI.

Mississippi State M. S.
MISSOURI.
Missouri M. A.
Atchison County M. S.
*Boone County M. S.
*Buchanan County M. S.
*Carroll County M. S.
Cedar County M. S.
Central Missouri District M. S.
Clariton County M. S.
*Clay County M. S.
*Dade County M. S.
*Eldorado Springs M. S.
Franklin County M. S.
Grand River District M. S.
Hannibal M. S.
*Harrison County M. S.
Henry County M. S.
Hodgen M. A.
Howard County M. S.
Independence Med. S.
Jackson County M. S.
Jasper County M. S.
John McDowell M. A.
*Joplin M. S.

Kansas City Acad. of Med.
Kansas City District M. S.
Lafayette County M. S.
Linton District M. S.
Macon County M. S.
Memphis M. S.
Montgomery County M. S.
North Missouri District M. S.
*Northeast Mo. Dist. M. S.
Northwest Missouri M. S.
Pettis County M. S.
Pike County M. S.
Putnam County M. S.
Rolla District M. S.
Saline County M. S.
Shelby County M. S.
Southwest Mo. Dist. M. S.
Springfield M. S.
*State Line M. S.
*St. Louis Acad. of M & S. Sci.
St. Louis M. S.
St. Charles County M. S.
St. Joseph M. S.
Western Surg. and Gyn. A.

MONTANA.

Montana M. S.
Fark County M. S.
*Silver Bow County M. S.

NEBRASKA.

Nebraska State M. S.
Elkhorn Valley M. S.
Omaha M. S.
*Otoe County M. S.
Southeastern Neb. M. S.
Lincoln M. S.
Loup Valley District M. S.
*York County M. S.

NEVADA.

Nevada State M. S.
NEW HAMPSHIRE.
New Hampshire State M. S.
Carroll District M. S.
Central District M. S.
Cheshire County M. S.
Conn. River Valley M. S.
Manchester M. A.
Nashua M. A.
Rockingham District M. S.
Strafford District M. S.
White Mountain M. S.
White River District M. S.
Winnepesaug Acad. Med.

NEW JERSEY.

New Jersey State M. S.

Atlantic County M. S.
Bergen County M. S.
Burlington County M. S.
Camden County M. S.
Cape May County M. S.
Cumberland County M. S.
Essex County M. S.
Gloucester County M. S.
Hudson County M. S.
Huntdon County M. S.
Mercer County M. S.
Middlesex County M. S.
Monmouth County M. S.
Morris County M. S.
Ocean County M. S.
Passaic County M. S.
Salem County M. S.
Somerset County M. S.
Sussex County M. S.
Union County M. S.
Warren County M. S.

NEW MEXICO.

New Mexico M. S.
Bernalillo County M. S.
*Las Vegas M. S.

NEW YORK.

New York State M. A.
*Genesee County M. A.
Hornellsville M. and S. A.
Kings County M. A.
New York County M. A.
Ontario County M. S.
Med. Ass'n of Troy and Vicinity

*Wyoming County M. A.

NORTH CAROLINA.

North Carolina State M. S.
Buncombe County M. S.
Charlotte M. S.
Raleigh Acad. of Med.
*Rowan County M. S.

NORTH DAKOTA.

North Dakota State M. S.

OHIO.

Ohio State M. S.
Adams County M. S.
Allen County M. S.
Ashland County M. S.
Ashtabula County M. S.
Belmont County M. S.
Brown County M. S.
Butler County M. S.
Central Ohio M. S.
Champaign County M. S.
Cincinnati Acad. of Med.
Clarke County M. S.
Clermont County M. S.
Cleveland M. S.
Clinton County M. S.
Columbus Acad. of Med.
Crawford County M. S.
Cuyahoga County M. S.
Defiance County M. S.
Delaware County M. S.
Eastern Ohio M. S.
East Liverpool M. S.
Erie County M. S.
Gallia County M. S.
Greene County M. S.
Hancock County M. S.
Hempstead Mem. Acad.
Highland County M. S.
Holmes County M. S.
Jackson County M. S.
Jefferson County M. S.
Lorain County M. S.
Lucas County M. S.
Mahoning County M. S.
Mansfield Acad. of Med.
Marion County M. S.
Meigs County M. S.
Miami County M. S.
Miami Valley M. S.
Montgomery County M. S.
Morrow County M. S.

Muskingum County M. S.
North Central Ohio M. S.
Northwestern Ohio M. A.
Perry County M. S.
Piekaway County M. S.
Pike County M. S.
Portage County M. S.
Ross County M. S.
Sandusky County M. S.
Shelby County M. S.
*Springfield Acad. of Med.
Stark County M. S.
Stillwater M. A.
Toledo M. A.
Tuscarawas County M. S.
Union M. A.
Union M. A. of N. E. Ohio.
Warren County M. S.
Washington County M. S.
Wayne County M. S.

OKLAHOMA.

Oklahoma Territorial M. S.

OREGON.

Oregon State M. S.
Portland M. S.
South Oregon M. S.

PENNSYLVANIA.

Pennsylvania State M. S.
Allegheny County M. S.
Armstrong County M. S.
Beaver County M. S.
Bedford County M. S.
Berks County M. S.
Blair County M. S.
Bradford County M. S.
Butler County M. S.
Bucks County M. S.
Cambria County M. S.
Carhon County M. S.
Centre County M. S.
Chester County M. S.
Clarion County M. S.
Clearfield County M. S.
Clinton County M. S.
Columbia County M. S.
Crawford County M. S.
Cumberland County M. S.
Dauphin County M. S.
Delaware County M. S.
Elk County M. S.
Erie County M. S.
Fayette County M. S.
Franklin County M. S.
Greene County M. S.
Huntington County M. S.
Indiana County M. S.
Jefferson County M. S.
Juniata County M. S.
Lackawanna County M. S.
Lancaster County M. S.
Lawrence County M. S.
Lebanon County M. S.
Lehigh County M. S.
Luzerne County M. S.
Lycoming County M. S.
McKean County M. S.
Mercer County M. S.
Mifflin County M. S.
Montour County M. S.
Montgomery County M. S.
Northampton County M. S.
Perry County M. S.
Potter County M. S.
Philadelphia County M. S.
Schuylkill County M. S.
Somerset County M. S.
Susquehanna County M. S.
Tioga County M. S.
Venango County M. S.
Warren County M. S.
Washington County M. S.
Westmoreland County M. S.
York County M. S.

RHODE ISLAND.
Rhode Island State M. S.

SOUTH CAROLINA.

South Carolina State M. S.
Anderson County M. S.
Greenville County M. S.
Laurens County M. S.
Med. Soc. of S. Carolina.
Richland County M. S.
Sumter County M. S.
Union County M. S.

SOUTH DAKOTA.

South Dakota State M. S.
Minchaha M. S.

TENNESSEE.

Tennessee State M. S.

TEXAS.

Texas State M. S.
Austin District M. S.
Brazos Valley M. A.
*Briggs M. S. of Ellis County
*Caldwell County M. S.
Central Texas M. S.
Cooke County M. S.
East Line M. A.
East Texas M. S.
*El Paso County M. S.
Johnson County M. S.
North Texas M. A.
*Phys & Surgs. M. A., Bell Co.
South Texas M. A.
Terrell M. A.
Waco M. S.
Western Texas M. A.
Williamson Bell Milan County M. S.

UTAH.

Utah State M. S.
Salt Lake County M. S.
Salt Lake Acad. Med.
Weber County M. S.
*Weber County Acad. of Med.

VERMONT.

Vermont State M. S.

VIRGINIA.

Virginia State M. S.

WASHINGTON.

Washington State M. S.
Kings County M. S.
Pierce County M. S.
Spokane County M. S.
Thurston County M. S.
Whitman County M. S.

WEST VIRGINIA.

West Virginia State M. S.
Charleston M. and S.
Harrison County M. S.
Ohio County M. S.

WISCONSIN.

Wisconsin State M. S.
Ashland County M. S.
*Barron County M. S.
Brainerd M. S.
Brown County M. S.
Central Wisconsin M. S.
*Douglas County M. S.
Fox River Valley M. S.
Inter-County M. S.
La Crosse County M. S.
*Manitowoc M. S.
Milwaukee M. S.
Northwestern Wis. M. A.
Sheboygan County M. S.
*Vernon County M. S.
Waukesha County M. S.

WYOMING.

Wyoming State M. S.

Societies marked with an asterisk have been added since the last publication of this list.

Any society omitted should send to the office of the Secretary notice to that effect accompanied by a certificate from the secretary of the State society that said society is so recognized in accordance with the above quoted law relating to representation.

Secretaries are earnestly requested to forward at once lists of their delegates.

In order that the Secretary may be enabled to erase from the roll the names of those who have forfeited their membership, the secretaries are, by special resolution, requested to send to him, annually a corrected list of the membership of their respective societies.

GEORGE H. SIMMONS, Secretary,
61 Market Street, Chicago.

Deaths and Obituaries.

JOSEPH HARRISON VONDY, M.D., died at his home in Jersey City, N. J., April 2. He was born in New Brunswick, Canada, in 1829, and was graduated from the New York University Medical College in 1851. As a resident of Jersey City throughout his professional life he became widely known for his public spirit. Among his good works the establishment of the City Hospital is noted. He leaves a widow and two sons.

REFUS W. DASHIELL, M.D., died at Princess Anne, Md., March 28, of Bright's disease. He was born in 1850, educated at St. John's College, Annapolis, studied medicine under Prof. Nathan R. Smith, and was graduated from the College of Physicians and Surgeons, Baltimore, in 1872. He had been a member of the State Lunacy Board since 1893.

JOHN STEERLING BIRD, M.D., College of Physicians and Surgeons, N. Y., 1863, died from pneumonia, April 3. He was born in Winchester, Conn., Aug. 29, 1836. He opened an office in Hyde Park, Dutchess Co., N. Y., in 1865, and in that village passed the remainder of his life.

Q. C. FARQUHAR, M.D., California, Pa., died March 28. He was a graduate of the University of Pennsylvania, class of 1877, and practiced twenty years at Centerville and two at California. He was a member of the AMERICAN MEDICAL ASSOCIATION.

WILLIAM CAMAC, M.D., Philadelphia, died April 3, aged 71 years. Dr. Camac served with distinction in the Civil War, and later located in Philadelphia. He was a graduate of the Jefferson Medical College.

ALEXANDER J. G. DEVRON, M.D., died in New Orleans, La., March 24. He was an ex-surgeon, Confederate States Army, ex-member of the Louisiana State Board of Health, and a member Royal Microscopical Society of England.

JAMES L. DICKEN, M.D., Wabash, Ind., died March 26. He was born in 1821, and was graduated from the Ohio Medical College at the age of 30 years. During the Civil War he was surgeon of the 47th Indiana Infantry.

JAMES CUMMISKEY, M.D., Jefferson, 1856, died from pneumonia, at his home in Philadelphia, March 25, aged 64 years. He was for many years physician-in-chief to St. Mary's Hospital.

JOHN MILTON WORTH, M.D., died at Asheboro, Md., April 5, aged 89. He served five terms in the State Senate and was State treasurer from 1876 to 1884.

BENJAMIN F. SHAW, M.D., University Medical College, Kansas City, Mo., 1892, was fatally shot April 1, by his brother-in-law, once an inmate of a sanitarium.

FRANKLIN B. KELLER, M.D., Pottstown, Pa., died from septicaemia, March 24. He was a graduate of the Jefferson Medical College, class of 1874.

J. N. FOLWELL, M.D., died in New Orleans, La., March 51, aged 71 years. He was graduated from Jefferson Medical College in 1847.

G. L. HUMPHREY, M.D., died in Monroe, Neb., March 30. He was graduated from Jefferson Medical College in 1874.

EDWARD MULHERON, M.D., University of Buffalo, N. Y., 1872, died at his home in Binghamton, N. Y., April 6, aged 53 years.

A. J. BACON, M.D., Rush Medical College, 1864, died at his home in Gardina, Cal., March 30.

BENJAMIN A. CABR, M.D., of Anne Arundel County, Md., University of Maryland, 1853, was found dead in bed March 21. He was 68 years of age.

A. J. MURBACH, M.D., Archbold, Ohio, of pneumonia, March 26, aged 62 years.

GEORGE A. WILSON, M.D., Rush Medical College, 1866, died at his home in Peoria, Ill., April 7.

FRANCIS G. WARREN, M.D., Jefferson, 1861, died in Biddford, Me., aged 72 years, April 2.

FRANK B. KELLER, M.D., Jefferson Medical College, 1874, died in Pottstown, Pa., March 24, aged 51 years.

ALPHONSUS JOSEPH FITZGERALD, M.D., Bellevue, N. Y., 1889, died at his home in New York City, from pneumonia, March 29.

We also note the following deaths:

J. M. LAYMAN, M.D., Maysville, Ala., March 23, aged 74 years.

EDWIN M. SMITH, M.D., Philadelphia, died March 29, aged 77 years. He was a graduate of the Jefferson Medical College.

JAMES HAMER, M.D., Collegeville, Pa., died March 24, aged 81 years. He was a graduate of the University of New York.

CHARLES WOOSTER BUTLER, M.D., in Jamaica, N. Y., March 25.

DEATHS ABROAD.

The prominent Munich physician, Dr. F. E. Aub, succumbed to an apoplectic attack, March 16, in the Bavarian legislature, of which he had been a member for thirty years.

PROF. J. HOEFOCKL, a prominent Vienna surgeon, recently died from heart disease, which compelled him to resign his chair a year ago.

Among other recent deaths abroad we note that of Prof. K. v. Mosengeil, of Bonn, and Professor Tschurtschenthaler, of Innsbruck.

Miscellany.

Unna's Prize.—The prize of 300 marks, offered by Unna for 1900, is for the best study of the finer architecture of cutaneous cancers, with special regard to the connection between proliferation of epithelium and resistance of connective tissue. Articles are to be sent to Leopold Voss, Hohe Bleichen 34, Hamburg, before December 1.

Position and Presentation.—In the article by Dr. F. A. Stahl, in last week's JOURNAL, the following descriptive text should accompany the illustrations on pages 841 and 842: "Fig. 1—Position: First vertical (a). Presentation: Originally either a left occipito-anterior or a right mento-posterior." instead of right occipito-posterior. "Fig. 4—The controlling tape passed about the wrist is held here by the right hand of an assistant; to turn, the operator enters the uterine cavity with his right hand, etc."

Hospital Hygiene.—Letulle asserts that various signs tend to indicate that the year 1900 will inaugurate a new era in hospital hygiene at Paris, and as surgical and obstetric services have now reached the limits of perfection, compulsory asepsis in the medical wards will in time be accomplished. As at present conducted, he states in a communication to *Presse Med.*, March 29, if subjects with cancer or any lingering non-bacillary affection sojourn for a few weeks in a Paris hospital, the rule is that they finally die of pulmonary tuberculosis. He draws a picture of the enormous proportion of hospital attendants who succumb to tuberculosis. Among the Augustin nuns at the Hôtel Dieu, who number about 113, there have been 102 deaths during the last twenty-four years, and over 80 per cent. were due to pulmonary tuberculosis. It also affects numbers of medical students from the country, who arrive in superb health but succumb to the infection in two or three years.

Preliminary Training for Medicine.—The *Deutsche Revue* publishes an article by Prof. Hans Buehner, on this subject, which is a strong plea for higher standards of admission to the study of medicine, instead of lowering the standards, as has been done in France and Russia, which have decided to

accept the diploma of the technical schools. This step is being urged also in Germany in certain non-medical circles. The tendency of the day, he observes, is to regard medicine more and more as a technical profession. All physicians protest against this view. They realize that, as Herbert Spencer prophesied, they are to be the guides of the people, and for this exalted task the broadest educational foundations are required. Pettenkofer compares the study of the classics and mathematics to mother's milk, "part of the living body and indispensable to the nourishment of the developing intellect," and Buchner warmly endorses his views.

NEW PATENTS.

Patents of Interest to physicians, etc., March 20 to 27.
 645,908. Fracture apparatus, Carl Boegle, Munich, Germany.
 645,644. Vaporizer, Olin A. Johnston, New York, N. Y.
 645,901. Hernal truss, Patrick Madden, Soldiers' Home, Los Angeles, Cal.
 645,566. Device for injecting powders into the nasal passages, Charles H. Murphy, Madisonville, Ky.
 645,740. Artificial hand and arm, Henry Schenk, Sandusky, Ohio.
 645,741. Inhaler, Walter W. Winton, Scranton, Pa.
 646,073. Pessary, Henry A. Hempel, Gotha, Fla.
 646,034. Making medicinal products, Heinrich Oppermann, Bernburg, Germany.
 646,194. Bed-robe for invalids, Mary E. Sims, San Angelo, Texas.
 32,399. Design, Atomizing tip for spraying apparatus, Wayne H. Rice, assignor to R. W. & S. M. Rice, Windsor, Conn.

Queries and Minor Notes.

FOR SALE TO BEST BIDDER.

The following advertisement, which appeared in an Ohio newspaper, shows the way it is going in that state:

"NOTICE."

Ohio, March 19, 1900.
 The Trustees of _____ Township will receive bids until 12 o'clock noon, on Tuesday, April 3, 1900, from those who will furnish the necessary medical and surgical skill, and perform the duties of Health Officer for the poor of _____ Township, and all who may come under our care for one year from April 15, 1900.
 Specifications may be obtained from the clerk."

PRACTICE IN WEST VIRGINIA.

Detroit, Mich., April 6, 1900.
 To the Editor.—Would you kindly inform me regarding the medical laws of West Virginia? I am a graduate of the Detroit Medical College, four years' course, and am thinking of locating in the South and would like to know whether it will be necessary for me to take a state examination or not. F. J. MCD.

ANSWER:—No one is allowed to engage in the practice of medicine in West Virginia without having passed an examination by the State Board of Health and received its certificate. The charge for the examination is \$10. Examinations are held at least three times a year. The secretary of the Board is Dr. A. R. Barbee, Point Pleasant, W. Va.

BOOK ON CANCER CURES WANTED.

H. B. W., Oxford, Me., desires to procure a late work on the "cure of cancers," one that contains formulæ for the removal by topical applications.

The Public Service.

ARMY CHANGES.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., March 23-29 inclusive:
 Frederick J. Combe, major and surgeon, Vols., from New York City, to the Department of California.

Douglas F. Duval, lieutenant and asst.-surgeon, U. S. A., from San Francisco, Cal., to Manila, P. I., reporting on arrival for temporary duty in the Department of the Pacific until the hospital ship *Missouri* returns to Manila.

Euelld B. Frick, captain and asst.-surgeon, U. S. A., member of a promotion board at Governor's Island, N. Y.
 Harry C. Gemmill, acting asst.-surgeon, from Loganport, Ind., to Fort Thomas, Ky.

Chester L. Hodgkins, acting asst.-surgeon, from Washington, D. C., to the Department of California.
 Henry S. Kilbourne, major and surgeon, U. S. A., member of a board to inquire into all the facts relating to the fitting up and equipment of the hospital ships *Relief* and *Missouri*, including their condition at the time of purchase by the United States, and particularly to report upon the present condition of these ships, their seaworthiness, their adaptation for hospital purposes and the sums necessary to put them in condition to meet the requirements of the hospital service, the reasons why they are not seaworthy or in condition for hospital service, if such be the case, and if such reasons are found in the character of the work done upon them since their purchase by the Government, to fix the responsibility therefor.

William L. Kneedler, captain and asst.-surgeon, U. S. A., from San Francisco, Cal., to Manila, P. I., reporting on arrival for temporary duty in the Department of the Pacific until the hospital ship *Missouri* returns to Manila.

Millard Langfield, acting asst.-surgeon, from Omaha, Neb., to the Department of California.

Edward Lyon, Jr., acting asst.-surgeon, Fort Schuyler, N. Y., leave of absence granted.

James N. McCall, acting asst.-surgeon, from St. Francis Barracks, Fla., to Fort Schuyler, N. Y.

John L. Phelan, captain and asst.-surgeon, U. S. A., member of an army promotion board at Governor's Island, N. Y.

NAVY CHANGES.

Changes in the Medical Corps of the U. S. Navy for the week ending March 31, 1900.

Assistant-Surgeon J. T. Kennedy, ordered to additional duty at the marine recruiting rendezvous, San Francisco, Cal.
 Pharmacist J. F. Pearson, appointed pharmacist from March 26.

MARINE-HOSPITAL CHANGES.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital Service for the seven days ended March 29, 1900.

Surgeon Eugene Wasdin, to report at Washington, D. C., for special temporary duty.

Surgeon L. L. Williams, leave of absence for two days (paragraph 179, Regulations, M.H.S.) from March 27, 1900.

Asst.-Surgeon T. D. Berry, to proceed to New Orleans, La., and report to the medical officer in temporary charge for duty and assignment to quarters.

APPOINTMENT.

Thomas D. Berry, of Texas, commissioned as assistant-surgeon.

HEALTH REPORTS.

The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ended April 7, 1900.

SMALLPOX—UNITED STATES.

Alabama: Mobile, March 24-31, 1 case.
 Florida: Jacksonville, March 24-31, 2 cases.
 Indiana: Evansville, March 24-31, 5 cases.
 Kansas: Wichita, March 24-31, 8 cases.
 Kentucky: Covington, March 24-31, 12 cases, 1 death; Lexington, March 24-31, 1 case.

Louisiana: New Orleans, March 24-31, 64 cases, 21 deaths.
 Massachusetts: Boston, March 24-31, 1 case.

Michigan: Detroit, March 24-31, 4 cases.
 Nebraska: Omaha, March 24-31, 1 case.

New Mexico: Catskill, March 21, 2 cases; Folsom, March 21, 5 cases.

New York: New York, March 24-31, 1 case.
 Ohio: Cleveland, March 24-31, 17 cases.

Utah: Salt Lake City, March 24-31, 1 case.
 Washington: Spokane, March 24-31, 1 case.

SMALLPOX—FOREIGN.

England: Liverpool, March 10-17, 1 case; London, March 3-17, 12 cases.

France: Lyons, March 3-10, 2 deaths; Rheims, March 3-10, 8 deaths.

Gibraltar: March 4-18, 14 cases.

India: Bombay, February 20-27, 263 deaths; February 27 to March 6, 269 deaths; Calcutta, February 10-24, 26 deaths; Kurra- chee, February 18 to March 4, 32 cases, 15 deaths.

Japan: Yokohama, February 24 to March 3, 1 case.
 Korea: Seoul, January 20-27, 2 cases, 1 death.

Spain: Madrid, March 3-17, 22 deaths.

YELLOW FEVER.

Colombia: Panama, March 7-14, 7 cases.
 Cuba: Havana, March 17-24, 2 cases, 1 death.

CHOLERA.

India: Bombay, February 20 to March 6, 19 deaths; Calcutta, February 10-24, 130 deaths.

PLAGUE—INSULAR POSSESSIONS, U. S.

Hawaii: Honolulu, March 10-17, 2 cases, 1 death.

PLAGUE—FOREIGN.

Arabia: Adea, February 22 to March 10, 22 cases, 13 deaths.
 India: Bombay, February 22 to March 6, 1468 deaths; Calcutta, February 10-24, 460 deaths; Kurra- chee, February 18 to March 4, 92 cases, 73 deaths.

Japan: Formosa, January 1 to February 28, 97 cases, 78 deaths.

CHANGE OF ADDRESS.

Dr. W. E. Baxter, from 553 to 419 Boylston St., Boston, Mass.
 Dr. J. C. Bird, from Kansas City to 925 N. 19th St., St. Louis, Mo.

Dr. R. C. Elmore, from Nashville, Tenn., to Acona, Mis.
 Dr. C. C. Echols, from Augusta to Athens, Ga.

Dr. M. D. Fletcher, from 2264 to 2248 Central Ave., Alameda, Cal.

Dr. H. B. Graesser, from Keusett to 947 W. 19th St., Des Moines, Iowa.

Dr. R. F. Godard, from Augusta to Hazelhurst, Ga.
 Dr. W. D. Gholston, from Augusta to Danielsville, Ga.

Dr. H. F. Glens, from Atlanta, Ga., to Bethel, S. C.
 Dr. B. M. Hopkinson, from 1325 Park Ave. to 1435 Balton St., Baltimore, Md.

Dr. Lee Haynes, from St. Louis to Unionville, Mo.
 Dr. W. P. Kemp, from St. Louis to Hale, Mo.

Dr. C. W. McCarty, from Kansas City, Mo., to Scottsville, Kan.
 Dr. R. H. Mobley, from Augusta to Lumber City, Ga.

Dr. H. H. Moody, from Mobile to Bailey Springs, Ala.
 Dr. W. A. Robinson, from Kansas City to Amsterdam, Mo.

Dr. C. Trueblood, from Chesterfield to Anderson, Ind.
 Dr. J. B. Wharton, from Atlanta, Ga., to Arcadia, La.

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Original Articles.

AFFECTIONS OF THE KIDNEY IN RELATION TO PREGNANCY.*

BY J. CLARENCE WEBSTER, M.D., EDIN., F.R.C.P.E.
Professor of Obstetrics and Gynecology in Rush Medical College.
CHICAGO.

CHANGES IN THE KIDNEYS DURING PREGNANCY.

For many years there has been much discussion as to the alterations occurring in the kidneys during pregnancy, and, at the present time, there is considerable difference of opinion as to the nature of these changes, their frequency, causation and significance. The literature of the subject is abundant in speculative inquiries, while records of trustworthy facts derived from careful and systematic observation are scanty. Indeed, though theories have multiplied, it is doubtful whether we are very much wiser than we were fifty years ago, for the latest and most favored views, originating among French workers, are only an elaborated expression of the opinion published by Virchow in 1848.

This authority then pointed out that, of all the organs in the female organism, the most frequent functional or structural alterations due to pregnancy were found in the kidneys. He regarded the cause mainly as connected with altered metabolism, changes being induced not only in the kidneys, but in the liver, spleen and other parts. In association with these alterations, he pointed out the frequency of albuminuria.

In view of the time limits which the present occasion demands it is impossible to do more than present a summary of the main lines of investigation along which workers have moved in their efforts to throw light on a difficult subject.

That the kidney becomes somewhat hypertrophied as a result of pregnancy all are agreed, though the nature of the enlargement and range of variations are not at all definitely known. The quantity of urine is increased and it is of a lower specific gravity.

Sugar is found in a considerable number of cases of pregnancy, and more frequently after delivery, but this is only milk-sugar absorbed from the breasts, not true glucose. The latter is no more frequent in pregnancy than in the non-pregnant state.

Peptones are occasionally found in pregnancy; by many being thought to indicate death of the fetus, though there is no proof whatever of this. They are very frequent after the first three or four days of the puerperium, when they are derived from the involuting uterus.

With regard to occurrence of albumin in the urine and its significance, there is an amazing difference of opinion. Its frequency has been variously estimated by different workers.

The following statistics are given by different German authorities: Meyer, in 76 parturient women found albumin in 40.78 per cent.; Litzmann, in 100 parturient women found albumin in 43.7 per cent.; Löhlein, also in 100 parturient women found albumin in 37 per cent.; Flaischen, in 537 parturient women found albumin in 16.9 per cent., and Winckel, in 367 parturient women found albumin in 19.4 per cent.

These percentages are noticeably higher than those given by leading French obstetricians. Thus, Pinard states that out of 1249 parturient women in the Baude-locque Clinic in 1890, only 73 cases of albuminuria—6 per cent.—occurred: of these slightly less than 3 per cent. were associated with pregnancy, the rest with labor.

So far as may be gathered from more recent observations, it may be stated that serum-albuminuria occurs in about 2 per cent. of all pregnant women who are healthy at the beginning of pregnancy. The process of labor causes albuminuria in a still larger percentage of cases. Aufrecht found it was produced in 18 out of 32 women examined; Ingersley in 50 out of 153 cases of labor. It is most frequent in women during the first pregnancy, especially in those who are no longer young or in those who are very young. Of all cases it is believed to be most associated with the presence of more than one fetus *in utero*. It occurs mainly in advanced pregnancy, only rarely in the early months.

What is the significance and explanation of this albuminuria of pregnancy? Is it, as some hold, a physiologic process of no importance, or is it to be regarded as many authorities consider it, as the result of pathologic changes induced in the cortical portions of the kidneys? In favor of the former view may be adduced the cases of healthy men and non-pregnant women in whom a temporary albuminuria may be caused by various factors, e. g., changes in temperature, food, exercise, etc. The investigations of the late Grainger Stewart undoubtedly appear to justify the view that there may be an albuminuria, which is to be regarded as a physiologic peculiarity and not the indication of a pathologic process. *A priori*, then, it must be conceded that a like explanation may suffice for some cases of the albuminuria in pregnancy.

Regarding the view that a morbid process in the cortices of the kidneys is the essential cause the following facts may be stated: In very many cases of albuminuria other signs of renal diseases may be present. Thus edema may be frequently met with. Winckel's statistics may be noted: In 1874, in 319 pregnant women edema occurred in 20 per cent.; in 1876, in 1058 pregnant and parturient women it occurred in 4.35 per cent.; in 1877, in 1091 pregnant and parturient women it occurred in 6.96 per cent., and in 1878, in 1050 pregnant and parturient women it occurred in 5.52 per cent. Leiden is of the opinion that anasarca is much more common than albuminuria and that when they co-exist the edema has appeared first. Then, again, there is

* Read before the Chicago Medical Society.

often a deficiency in the quantity of urine passed and in the total solids excreted. But most important of all is the occurrence in the urine of various formed elements, viz.: casts and blood-corpuscles. Fischer, who has given much attention to this subject points out that these are mostly found in the last weeks of pregnancy, when they often show progressive increase. Hyaline casts are frequent, while granular and epithelial ones and broken-down epithelium may also occur. Red blood-corpuscles and leucocytes may be passed continuously or at intervals.

Now, as to the relationship between the above findings of physical examination on the living subject and those obtained by post-mortem investigation it is impossible to speak with absolute certainty. The great majority of such patients do not die and, comparatively, only a small number of post-mortem studies have been made. There can, however, be no doubt that sufficient work has been done to establish the probability that renal cortical lesions generally occur, though with a considerable range of variation.

The most frequent changes found are as follows: The kidneys are enlarged and less firm than normal; the cortices are swollen, anemic and of pale gray color; cloudy swelling and granular changes are found in the cells of the tubules and, often, fatty degeneration. In a small number of cases it is certain that the kidneys may not recover from this condition after labor, but may pass into a permanent, true parenchymatous nephritis. In the majority of instances, however, there is every reason to believe that they may be restored to their normal condition in a short time. Olshausen has described an interesting case in which the urine contained abundant albumin, casts and blood-corpuscles at the time of labor, eclamptic phenomena being also present. The patient died five days after delivery and at the post-mortem examination no changes whatever were found in the kidneys.

Of extreme interest is the consideration of the etiology of the albuminuria and renal changes above described. The subject is an extremely difficult one and has been the occasion of much speculation and much polemical writing. Only a brief reference to the most important views is here possible.

Compression of the ureters.—Halbertsma of Utrecht, from his studies of eclampsia, believes that increased intra-abdominal pressure due to the pregnant uterus, may by interference with the functions of the ureters, lead to alterations in the renal structure. He thinks that the special tendency to these alterations in primiparæ, hydræmia, multiple gestation, contracted pelvis—in all of which the pressure is increased—strengthens his view. Ries, holding somewhat similar views, believes that in some cases compression of the ureters by the presenting part of the fetus is the most important factor. These views have not been accepted by most authorities. Halbertsma's statement that dilatation of the ureters is frequent in such cases has not been corroborated. Olshausen found dilatation only seven times in 37 post-mortems.

For my own part, I believe that too little attention has been given to the opinions of Halbertsma and Ries.

While it is true that the anatomic relationships of the ureters are such that they are generally protected from the pressure of the pregnant uterus or its contents at any special point, the possibility of an abnormal pressure over a considerable extent of the ureters in certain cases can not be denied. Though the projecting vertebral bodies are the main safeguard from pressure on the

ureters, they can not entirely protect it. My frozen sections and casts of pregnant women show that the enlarged uterus moulds itself accurately along the spine and on each side of it. At the brim this moulding is particularly well shown. In conditions of tense abdominal wall, such as is found in young or old primiparæ, or of abnormally large uterus, as in hydræmia or multiple pregnancy, it is very evident that the general pressure on the ureters must be increased. In the late weeks of pregnancy, as is well known, the fetal head lies in the pelvic cavity in primiparæ, and, if the pelvis be just-minor or funnel-shaped in type, or the head be abnormally ossified or enlarged, the ureters can scarcely escape being unduly compressed against the pelvic wall. Even though in these various conditions there may not be a local interference with the flow through the ureters, there may be produced a paresis of their walls, as Halbertsma first suggested, leading to a marked weakening of their peristaltic action.

The earlier critics of this worker pointed out that the pressure theory could not explain the cases in which renal disturbances developed in the puerperium. My recent studies of the puerperal woman by means of frozen sections supply a very evident explanation. I have shown that the post-partum uterus in its retracted and contracted condition fills the greater part of the normal pelvic cavity to such an extent as to form a ball plug compressing all extrauterine tissues firmly against the pelvic wall, interfering considerably with the circulation of blood through them. The ureters share in this compression. This condition of affairs lasts for three or four days, during which period renal disturbances mostly occur. The postpartum uterus varies somewhat in size and, therefore, if it be rather larger than normal or if the pelvis be just-minor or funnel-shaped in type, greater compression is produced. Ries, Halbertsma and others have shown that pelvic inflammatory exudates may cause compression of the ureters, and consequent renal disturbance in the puerperium. It is interesting to note, in this connection, that large fibroid and ovarian tumors, especially the former, are not infrequently associated with changes in the urine, kidneys and ureters similar to those found in pregnancy; and in some cases the renal function may be completely destroyed.

Finally, it is interesting to note certain experiments on animals: Aufrecht ligated a ureter in a dog and killed the animal three days later. The corresponding kidney was much swollen, its pelvis along with the upper part of the ureter distended. The cortical tubules of the kidney were damaged, being somewhat dilated, and containing abundant hyaline—fibrinous—casts, their epithelium showing granular and fatty changes.

Apart from compression of the ureters it may be that the kidneys themselves are so affected by certain degrees of increased intra-abdominal pressure as to undergo degeneration: or, it may be, that in the same manner the renal circulation is interfered with. Compression of the renal arteries or interference with the flow of blood in the veins is sufficient to induce albuminuria and degeneration in the kidneys if continued long enough.

Influence of the Products of Metabolism.—Virchow, in 1848, stated that disturbances in the kidneys during pregnancy were mainly due to the influence of altered body metabolism, and he pointed out the frequency with which the renal changes are accompanied by corresponding conditions in the liver. During the past fifty years different theories have been advanced to explain the nature of the alterations induced by the metabolic processes in pregnancy. At the present time the majority of

authors hold to this theory in a general way, though there is very great divergence of opinion as to its actual application.

In pregnancy the increase in maternal metabolic activity is evident. This means a greater quantity of excrementitious matter to be eliminated. As the ovum develops fetal metabolism becomes a more and more important factor. Fetal waste products almost entirely enter the maternal blood by transmission through the walls of the villi from the fetal circulation. An extra burden is therefore thrown upon the maternal kidneys, and if they can not respond to the increased demand on their activity, they are apt to suffer. The waste products may exert a direct poisonous action on the cells of the tubules, or, indirectly, through their influence on the arteries in the kidneys, constricting them and thereby interfering with the nutrition of the tubules. The changes are believed to be similar to those found in such conditions as ptomain poisoning and acute yellow atrophy where the destruction of the kidney tissue may be very rapid.

The influence of the skin, lungs, liver and intestines aids in getting rid of the waste products of metabolism, and it is evident that interference with their functions will throw greater burdens on the kidneys. It is in pregnancy especially that these functions are apt to be interfered with. In most civilized countries a large number of pregnant women have a prejudice against cleansing the skin of the body. The production of albuminuria in a healthy dog by varnishing its skin is a well-known experiment. Then the tendency to irregularity in the digestive tract and to constipation in pregnant women is a very common one. Clinically, it is very easy to prove, in the albuminuria of pregnancy, that promotion of free action of skin or bowels, or of both combined may lead rapidly to a diminution in the quantity of albumin in the urine.

With regard to the influence of the fetal waste products it has been noted in cases of albuminuria that death of the fetus may lead to a rapid diminution or disappearance of the albuminuria, and this is believed to be due to the cessation in the transmission of the waste products from the fetus to the maternal blood. There is much speculation as to the nature of the waste products which exert the destructive influence. Various subjects are mentioned, e. g., leucomains and ptomains formed in the bowel and reabsorbed when the bowel action is faulty; also creatin, creatinin, inorganic salts of potash, various alkaloidal products of digestion, etc.

The extent to which the kidneys may be affected depends, therefore, on a variety of factors. In the majority of cases in which they are affected, no permanent damage results nor do serious complications arise. In a certain number of cases serious renal diseases may be induced, and in a considerable number of cases where the disproportion between circulating poisonous waste products and rectal excretory action becomes too great, the serious phenomena known as eclampsia supervene, the woman's life being greatly endangered.

As might be expected, a number of workers have advanced the view that the main factor in producing the toxemia of pregnancy is microbial infection. Some have found germs in the blood, some in the kidneys, others in the placenta. In some cases cultures injected into animals produced general toxemia and changes in the kidneys resembling those found in the altered kidney of pregnancy. Other workers have obtained negative results.

While it is impossible, at the present time, to postulate

any well-ascertained results regarding the relationship of micro-organisms to the toxemia of pregnancy, in view of such experiments as those of Doléris and Poney, Blanc, Favre, Gerdes and others, and in the light of Adami's recent work on subinfection, it can not be denied that in some cases of pregnancy-toxemia, the important agent may be some form of microbe, and that in their effort to destroy and remove the organisms, the kidneys may be so affected as to undergo the pathologic changes to which I have already referred, with consequent accompanying alterations in the urinary secretion.

Finally, after reviewing the most important theories advanced by those who have worked in this difficult sphere, it must be admitted that much is to be said in favor of each. Indeed, it is highly probable that something of the truth is contained in all of them, that in most cases no single factor is causal, but rather a combination of various factors, these varying greatly in different instances. The most important of these is undoubtedly the toxic element. Only from such a standpoint is it possible to group into an intelligible synthesis the heterogeneous clinical phenomena and physical changes found in the abnormal condition of pregnancy under consideration.

Nephritis.—Where true nephritis exists before or begins in pregnancy, the disease, as a rule, is a more serious matter than in the non-pregnant state and the prognosis is unfavorable. In the case of chronic nephritis, an acute exacerbation is usually induced. The patient may die from kidney failure, and uremia is very apt to occur. Only in a small percentage of cases are the phenomena of eclampsia noted, as has been pointed out by Fehling and Leyfert.

As regards the influence on the course of pregnancy the tendency to premature emptying of the uterus is to be particularly noted. According to P. Müller it occurs in more than 40 per cent. of cases. It is attributed to various causes, viz.: hemorrhages into the placenta, causing infarcts and destruction of portions of the chorionic villi, or separation of the placenta. The fetus may die as a result of the accumulation of toxic material in the system, and this is an important cause of the premature expulsion. The fetal mortality is very high. Hofmeier noted that the fetus died in twenty out of twenty-three cases of nephritis. Braun has estimated the mortality at 80 per cent.

Treatment.—The treatment of a pregnant woman with symptoms pointing to disturbed renal functions is to be carried out on the lines followed in the non-pregnant state. The strictest watchfulness on the part of the physician is necessary. With regard to the question of allowing the pregnancy to continue, it is difficult to decide. There are, however, certain indications which point imperatively to the induction of premature delivery, in the interests of the mother, viz.: visual disturbances, and continued headache, pulmonary or other marked edema, marked cardiac disturbance, frequent nose-bleedings, continued increase in the casts and albumin in the urine, uremia. In a number of cases the woman may respond to treatment so satisfactorily as to go to full term and be delivered of a healthy child.

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DISCUSSION.¹

DR. JAMES B. HERRICK said, with reference to the patchy character of the renal changes, that it seems to him that this offers a possible explanation in some cases of so-called functional albuminuria. It is difficult to explain why in certain cases patients have albumin in the urine at a certain hour of the day, after a little exertion, after a particular kind of meal, etc., and yet it is conceivable that in some of these cases only very small areas of the kidney are diseased. These areas are not extensive enough to produce the cardiovascular changes that accompany nephritis.

As to the paper of Dr. Webster, it seems more probable that toxemia has more to do with the production of albuminuria of pregnancy than has pressure, and the facts cited by Dr. Webster lend color to that theory. The carelessness regarding exertion through the skin in pregnancy; the very commonly met with constipation; the increased and altered metabolism; the very commonly met with digestive disturbances of the stomach and of the intestines, and the fact that the pregnant mother has to eliminate for the child as well as for herself, etc., all lend color to the toxic theory and make it more attractive than the pressure theory.

Referring to the statement, Dr. Herrick confessed that the more of these patients he sees, the more it is impressed on him that it is a safer procedure to empty the uterus early. Senator's definition of functional albuminuria was given. On the slightest increase in the albuminuria, in spite of treatment, on the indication of uremic manifestations, whether they be in the form of a persistent headache, anaurosis, nausea and vomiting, or what seems to him a valuable and significant symptom, a severe epigastric pain, even without nausea and vomiting, on the appearance of edema of the face, which can not be ascribed to pressure, he believes it is always a safer plan to empty the uterus. While this may not be in accord with the teachings of obstetricians, yet he has never regretted emptying the uterus early.

Speaking of the paper of Dr. Davis and of the etiology of nephritis, he believes the intestinal tract is frequently at fault. This fits in with the toxic theory of the origin of many cases of nephritis. The diet depends not so much on the percentage of albumin that may be in the food as on the way in which the alimentary tract handles the food. In other words, the diet should depend more on the condition of the alimentary tract than on the food itself.

Referring to the intermittent administration of milk as a diet in chronic diffuse nephritis, he spoke of an acquired tolerance of the kidneys for certain kinds of food. We have a patient, for instance, with chronic nephritis, who is constantly passing albumin; on feeding him with certain kinds of food the amount of albumin increases. On the other hand, put the patient to bed, give him a very restricted diet—a pure milk diet—for a time, and the amount of albumin begins to diminish. The kidney is having a rest, and after a rest of three or four, or possibly six or eight, weeks the patient tolerates articles of food that he could not before tolerate. He can now be given a mixed diet, with perhaps a liberal amount of meat, and the percentage of albumin will not be increased in a way that it would be formerly.

DR. N. S. DAVIS, JR., in closing said that his attention had been drawn to the effect of the condition of the alimentary tract in the production of albuminuria and the appearance of tube casts in the urine, because of the frequent finding of either tube casts alone, or albuminuria alone, or the two combined, in all sorts of maladies in the more acute stages. However, this condition is usually transitory. There is not really produced a genuine nephritis in these cases, but simply a moderately disturbed functional activity of the kidney, and yet enough to produce these symptoms. He has seen them repeatedly in connection with digestive disorders, and in connection with simple and chronic bronchitis, as well as other maladies observed in hospital practice. A study of the records of hospital laboratories would reveal the fact that in a large proportion of the patients who enter hospitals traces of albumin, or tube casts, are found, which disappear—at once, and usually permanently—from the urine as soon as the intestinal tract is thoroughly emptied and the patients are placed on a simple diet that is well assimilated and well digested by the stomach and bowels. These facts have impressed on him the relationship of the condition of the alimentary tract and digestion to the production of nephritis. It is not the only cause, but simply one of the causal factors of renal troubles.

THE EVOLUTION OF THE ANIMAL CELL.*

BY JOSEPH SMITH, M.R.I.A., F.L.S., F.R.S.A. (Ireland).
 WARRINGTON, ENGLAND.

The phenomenon of life, and the interesting features grouped around it—whether examined in relation to either of the subkingdoms, vertebrates or invertebrates, constituting the animal kingdom, or to the vegetable world—while furnishing a wide scope for physiologic research, offers matter for serious and thoughtful speculation. It would be impossible to underrate the diligence with which questions of great import relative to vital phenomena have been examined by the earlier biologists, and the results attained; and because many of their conclusions have of late years been demonstrated to be inaccurate, none the less must their labors be appreciated. Such conclusions, however, must be considered in the light of *crucis*, which brought about the evolution of physiologic research. Aristotle, in his great work on anatomy, wrote concerning *partes similes et dissimiles*, and years afterward, Fallopius discussed the nature of tissues; yet the ideas of these philosophers on tissues, especially those of the human body, were faulty and superficial, and the doctrine of elementary structure, whether in plants or animals, did not excite the serious attention of morphologists previous to the middle of the seventeenth century. At that period the structure of the various animal and vegetable bodies began to excite greater attention, since Malpighi had superseded the simple lens by the simple microscope as an accessory in all anatomic inquiries. This was a decided advance on the earlier methods of investigation, but it would appear no general advantage was attained until the commencement of the eighteenth century, when improvements in the optical parts of the microscope placed at the disposal of the biologist the means to the end. In the meantime we find Leeuwenhoek, a Dutch physioian, had been investigating embryology. Ruch had worked at the same subject to the neglect of the great branch, histology. Later, however, Laeberkuhn, Fontana and Hewson devoted attention to this branch, and many facts hitherto unknown were for the first time brought forward and laid before the scientific world for consideration.

¹ The paper by Dr. N. S. Davis, Jr., was printed elsewhere and is abstracted in our Current Medical Literature Department, this week.* 72.

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Harvey, at the commencement of the present century, enunciated his great axiom, now universally accepted, *omne vivum ex ovo*, as being the fundamental or keystone of the arch on which the development of all animal life rested, but beyond the bare proposition of his theory he was unable to go, and so it remained until some years after his death, when the value of his theory was proved.

In the infancy of biological research the most insurmountable difficulty requiring elucidation was the method of propagation, more correctly speaking, the development of the various species, since in the after phases the question was one fraught with complicated and almost incomprehensible problems. Not only did these difficulties surround the higher differentiated animals, but they were common to the lower organisms of the invertebrates, and amongst which they became more inexplicable. Originally, these difficulties probably arose from the adoption of some of the earlier theories enunciated and accepted to explain the vital problem, for example, spontaneous generation, which taught that all vitality arose spontaneously, assuming and perfecting development in some way equally as mysterious and spontaneous as was the generation, while the want of appreciation of the vast difference existing between the protozoan and metazoan cells only tended to increase and complicate the difficulty. While recognizing that vital phenomenon originated in a so-called cell, the fact that cells could not arise without the aid of pre-existing ones was overlooked, consequently theories had to be elaborated to explain the beautiful phenomenon of propagation of cells necessary for the purpose, which being based on false premises resulted in opposite conclusions. Schwann,¹ however, first applied the cell theory to the development of animal tissues about 1837; Von Mohl had previously written his work on the cell theory of the vegetable world, pointing out that it was by the various changes which took place in these cells, and the evolution so brought about, that the tissues of the animal body were formed, while Marshall,² alluding to this development, affirms that the "differences in the different tissues and organs of plants and animals depend on differences in the chemical and physical activities of the constituent cells."

Schwann assumed that cells might arise in the surrounding matrix or blastema independently, but Godsir, in 1845, clearly showed up the fallacy of all preceding theories bearing on this point, and once for all set at rest speculation by defining the doctrine that cells could not develop or originate without the existence of pre-existing cells, and from which they arose by fission.

In Reenak, Kölliker and Virchow this advanced theory found very able and prominent supporters, and a much-vexed question being set at rest a further development was the result, which Marshall regarded as "one of the grandest generalizations, and the soundest established in morphology." This was the discovery of the mammalian egg, or ovum, by Von Baer. He demonstrated this ovum to consist of a nucleated cell of complicated structure, constituted of two parts, the inner part termed the nucleus, the center of vitality—on this the cell depends for segmentation and aggregation—and the outer or surrounding elementary matter. This was termed the cell slime or protoplasm, a compound of carbon and nitrogen, of efficiency on that period arriving when the potentiality of the nucleus begins to assert itself for the segmentation and consequent aggregation of cellular life, which ultimately reasserts itself in the adult individual. The shape of the nucleus is varied; it is sometimes round, and oftentimes it is oval, even

assuming a spheroid. In constituency it is similar to the surrounding elementary protoplasm, generally slightly more solid, never softer than the cell slime, which remains throughout its existence in the same state of density. The core and the protoplasm are the two essentials of all existence. Every other particle of matter is subservient to these two great elements, the histic, or constituting factors of the cell. They must be regarded as passive, that is to say, in a state of quiescence, having been assumed from without in the active bearing of the protoplasm, or formed by the interchange of movements through which this beautifully constituted attribute of life is continually passing. Life or vitality therefore depends on the growth and development of this original animal cell or ovum.³ It must not, however, be assumed that the cell remains in a constant passive state, that is remains in one continual phase of quiescence. It is an organism of very complicated evolution, and passes through exceedingly interesting physiologic phases in its progression to the complete stage, when it is perfected for the consummating act which releases its embosomed vitality, for which the working of a complicated development has been preparing it.

One of the earliest features in the development is the action of the protoplasm, so important in the economy of cell life. During the progressive formation of the cell contents, a small central point, or pip, becomes observable: this is of equal importance to the elementary body as is the protoplasm. It is the vesicle or nucleus, and was first observed by Purkinje, in 1825, when following out some investigations on the fowl's egg. Further researches eventually accomplished what had hitherto been unsuspected, and demonstrated that this vesicle, which had been considered a structural formative vesicle containing a smaller nucleus, in other words a small cell within a large one, was actually a fact. Shortly after Purkinje's discovery, R. Wagner made the fact, that within the nucleus there existed a nucleolus or germinal spot, clearer. The acquisition of this knowledge regarding the structure of the ovum again assisted in complicating matters, for we then became aware that the nucleus is possessed not only of a very complicated structure, but has, in a sense, a curious and internal evolution of its own,⁴ since its vitality depends far more on certain substances, the arrangement of which may vary considerably according to the condition of the nucleus, whether in an active or quiescent condition, than on its shape. Hertwig,⁵ alluding to these features, remarks: "It is necessary to state at the commencement of my observations as the most important point in classifying the various nuclear forms, that they all possess a certain uniformity in composition, whether the nuclei of animals or plants, or Protista be under examination, it is invariably seen they are composed of a larger or smaller quantity of material which I shall call nuclein substance—nuclein."

The nucleus is not now termed a vesicle within a cell, the definition of Schwann and Schleiden, but it is described as a "portion of a special substance which is distinct from the protoplasm, and to a certain extent separate from it, and which may vary considerably as to form, both in the resting and actively dividing condition."⁶ The great difficulty does not arise in formulating the definition of a nucleus, but in describing the vital substances which are contained therein, just as in defining the cell, the greatest difficulty arises in describing the protoplasm.

The nucleus is constituted of a mass of substances peculiar to it, differing from protoplasm and distinguishable from it.

When the ovum has attained maturity, a feature of the utmost interest begins to reveal itself, and this phase may with certainty be regarded as the completion of the cycle of cell evolution. The process is enigmatic, and several theories have been set on foot to explain it. The nucleus of the ovum, up to this period of maturation generally central, now moves, changes considerably in structure, and after a short duration divides. A minute cell with a small amount of protoplasm is given off with the nuclear matter, and a short period of quiescence follows. Then that portion of the nucleus remaining in the ovum duplicates the process, and another minute cell is similarly expelled. The process is termed the extrusion of the polar globules or bodies, and although the phase has not so far been demonstrated in the ova of reptiles and birds, and is rarely observed in those of fishes and amphibians, it is very probably a feature of universal occurrence.

For a long period it was regarded as absent in Arthropods, but the investigations of Weissmann,⁷ and amongst others Blockmann,⁸ in this direction, clearly established the process taking place. The small cells or globules linger for a time on the outer membrane of the ovum, leading a kind of parasitic existence, but eventually they swage away. Some question has been raised as to the exact period at which the extrusion of the polar globules takes place, but as a general rule, since the remaining female nucleus is now ready to unite with the nucleus of the spermatozoon, it heralds the essential moment of fertilization, and correctly so, since the process is one of the greatest importance in cell structure.

In parthenogenetic ova the same regulation is not observed; from these structures only one polar globule is extended in place of two, a fact demonstrated by Wiessmann,⁹ and Ishikawa,¹⁰ in a series of cases amongst the *Daphnia*, *Ostrocooda* and *Rotifera*. The rule of extending one polar globule only is, on eminent authority, assumed to be general amongst this class of ova. Blockmann¹¹ has succeeded in showing that in non-parthenogenetic eggs of insects, two polar globules become extended, as likewise has Platner.¹² Further, it has been demonstrated that in the parthenogenetic ova of the plant louse, and aphid, one polar globule exists, and one only, in such instances the usual feature of parthenogenetic development being prominent. Eggs, however, developed after fertilization has taken place, follow the law of non-parthenogenetic ova, and extrude two polar globules. The subject of parthenogenesis is one which can only be casually alluded to at the present moment, and surrounded as it is by extremely interesting phenomena, it offers a field of the widest scope for study. One of the phases is the difference existing between parthenogenetic ova and ova which require to undergo the act of fertilization before producing offspring. This difference has been worked out, and is found to exist in the formative matter of the polar bodies themselves, for while in the natural ova two polar bodies are divided off as previously described, in parthenogenetic ova "development of the second polar cell and consequently reduction of the nuclear substance, which is otherwise connected with the process, does not occur." Hence the summer egg of a *Daphnia* possesses, without the assistance of the fertilizing sperm, that nuclear potentiality in the normal nucleus which enables it to develop.

The ova of many animals, if not fertilized, commence to develop parthenogenetically at the normal time for such process to make itself active, and attempts have been made by the ova of many worms, echinoderms, and certain arthropods, to so develop: even the ova of some of

the vertebrates, e. g., birds, in the absence of the male elements, have commenced this mode of development, and began to segment, eventually forming the germinal discs. In support of this peculiar phenomenon Hertwig gives the following remarkable occurrence, which was observed by Boveri during the formation of the polar cells in Nematodes and Pterotrachea, and by himself in *Astera anthron*. "After the separation of the first polar cell, that half of the spindle which was left behind in the ovum, develops into a complete spindle again just as if the second polar spindle was going to be divided off. However this does not occur, for the second spindle only divides into two nuclei, which remain in the ovum itself. After some time they fuse together in this place, and drifting toward the middle of the yolk again produce a single nucleus, as it were by self fertilization. By means of this nucleus the parthenogenetic processes which quickly follow are introduced. Thus in this case, the second division, the purpose of which is to reduce the nuclear mass and to prepare it for subsequent fertilization, is abortive. That by this means no sufficient compensation is made for the absence of fertilization is evident from the subsequent course of parthenogenetic process of fertilization; i. e., from the more or less premature death of the ovum.

"From the circumstance that in parthenogenetic development the formation of the second polar cell does not occur or is abortive, we might conclude that development invariably becomes impossible after the nuclear mass has been reduced to one-half of its normal amount, unless a fresh stimulus is given to the organism by means of fertilization. However, at present this conclusion, which perhaps contains some truths, can not be said to be applicable generally; for Platner,¹³ along with Blockmann and Hewking, has observed that the ova of certain Arthropods—*Liparis dispar*, Bees—develop in a parthenogenetic manner into normal animals, although like ova which require fertilization, they have produced two polar cells. In these cases a more careful investigation of the circumstances with reference to the number of nuclear segments is certainly desirable.

"Hence at any rate, it must be admitted, that it is possible for ova, which contain reduced nuclei as a result of the formation of the two polar cells, to develop further in a parthenogenetic manner, for nuclei which contain a reduced amount of nuclein have in no way lost their capacity for division, as may be easily supposed. An experiment conducted by Richard Hertwig and myself,¹⁴ on the ova of the sea-urchin, proves this in a striking manner. By shaking the ova of sea-urchins violently, they can be split up into small portions, which do not contain nuclei: these then become globular, and exhibit signs of life for a fairly long time; further, they may be fertilized with spermatozoa. By this means we can definitely prove that the sperm nucleus, or as is more frequently the case, the sperm nuclei, which have penetrated into one of the fragments of the ovum, become metamorphosed into small, typical nuclear spindles with a radiation at each pole. The sperm nucleus now splits up into daughter nuclei, which for their part multiply by indirect division, so that the fragment of the ovum breaks up into a number of small embryonal cells. Boveri¹⁵ has pursued this observation further, and has discovered the important fact, that out of rather a large non-nucleated fragment of an ovum, which has been fertilized by a single spermatozoon, a normal although proportionately small larva can be developed."¹⁶ Several theories have been submitted to explain this interesting phase in cell evolution—the extrusion of the polar bodies

—but the researches of such naturalists as Butschli, Hertwig, Giard, Fol and others who have practically investigated the question, prove the extrusion of the polar bodies to be a case of cell development or budding. On the other hand, Van Beneden, who, since the above conclusion was adopted, undertook his investigations on the ovum of the thread-worm, *Ascaris*, criticises the conclusion that the phase is a feature in cell division, and considers it to be a unique process in the development of the ovum, but Boveri and Zacharias adhere to the older view, and in this they are supported by other naturalists. Now, although the structural fact is certain, so far no unanimity exists as to what such a process means, and the end to be attained, but apparently three opinions on the matter exist, each of which receives the support of eminent naturalists. By some the egg cell is regarded as a hermaphrodite form, and such hold that the extrusion of the polar globules is the elimination of the male element. Balfour strenuously adheres to this view and expresses himself in these words: "I would suggest that in the formation of the polar cells, part of the constituents of the germinal vesicle, which are requisite for its functions as a complete and independent nucleus, is removed to make room for the supply of the necessary parts to it again by the spermatoc nucleus. . . . I will venture to add the further suggestion, that the function of forming polar cells has been acquired by the ovum for the express purpose of preventing parthenogenesis." This suggestion has, however, been disproved, for parthenogenesis is not by this extrusion checked. Minot speaks on the matter thus: "In the cells proper both sexes are potentially present, to produce sexual elements the cell divides into two parts, in the case of the egg cell the male polar globules are cast off, leaving the female ovum." He maintains that since in parthenogenetic ova only one polar body is extruded, sufficient male element is retained to enable the ovum to develop. Van Beneden also regards the polar bodies as male elements.

Others consider the formation of polar globules as an atavistic "reminiscence of primitive parthenogenesis," and this is the view adopted by Buschli. He is supported in it by such an authority as Hertwig. Boveri also regards the polar globules as "abortive ova." This view, however, is more morphologic than physiologic. On the other hand, Weissmann adopts a view quite opposed to either of the preceding; his theory, however, embraces a great amount of hypothesis; some of his assertions are merely assumptions, not being substantiated by any evidence whatever. He advocates the idea that in the nucleus of the ovum two species of plasma exist, the one which enables the ovum to accumulate yolk matter and secrete membranes—these he styles the ologenetic or histogenetic substance—the other the germ plasma which is requisite to enable the ovum to develop the embryo.

When the ovum becomes mature the ologenetic substance has fulfilled the purpose for which it was generated, and becomes expelled as the first polar body. This is all that takes place in the parthenogenetic ova. The second polar globule or body is the reduction of the germ plasma which divided, and is reduced by half its volume to be made up for by the addition of the sperm, but a similar reduction—the extrusion of the second polar body—must also take place in the sperm cell.

The changes to which the normal ovum has in the meantime been subjected, and through which it has passed, have greatly reduced its size, but the functional properties are in no way modified in their complexity, nor is the number of its chromatic elements. This is the last stage of its evolution, and in this, its perfected

condition, it awaits the consummating act which releases the inherent potentiality, and introduces fresh phenomena for our consideration in the series of changes which follow on the act of fertilization.

This development of the animal cell, although a highly functional reproduction, has its prototypes in several species of the animal kingdom, for example reproduction or further development of parts is common. Thus in the crab, a potentiality exists in the cells, which exhilarates the growth or replacement of a claw lost through accident or other cause; a starfish possesses the inherent power of reproducing lost parts, the potentiality in some instances being requisitioned for providing the means of defense. As an example, the brittle stars, *Ophiura*, when seized with fear, defend themselves by the voluntary casting of the arms, and afterward the parts lost become renewed. This power of regenerating lost members is not confined to the lower orders; it exists amongst the lizards, many of which can make good the loss of arms and tails. In the *Hydra*, and amongst the *Coelenterata*, the process of budding is in evidence—another feature of the exercise of this potentiality—not only for the purpose of renewing the organism, but likewise for the legitimate purpose of propagating the species, while amongst the *Protozoa* an almost mechanical disintegration takes place, which in the after series of changes becomes more definite, hence "orderly division, both multiple and binary," may be traced to the process of budding.

In the ovum we have the potentiality or inherent power existing which, granted certain conditions, will give rise to cellular division, but in these instances of reproduction amongst multicellular animals, we must not overlook the factors involved in such reproduction, and moreover we must be quite clear as to their concurrent working. Physiologists¹⁷ tell us that special reproductive cells, which are *dimorphic*, are present in more or less *marked contrast* to the ordinary cells making up the body: the organisms which produce them are distinguishable as male and female, and are mutually independent.

If the egg cell or ovum is to develop into an individual, it must in the first instance undergo fertilization by a male element. Now fertilization takes place in a diversity of ways, in some instances the fertilizing elements, or sperm cells from adjacent males, are introduced into the female by means of the current set up by the action of the cilia for the purpose of bringing the nutritive elements into contact with the ova. Amongst some of the *Hydrozoa* the sperm cell adopts a wandering career, eventually fertilizing an equally bohemian ovum. Most fishes deposit virgin ova in suitable places, and in due course the ova so deposited are fertilized by the male shedding the melt on them. With the majority of animals, however—insects and the higher vertebrates—copulation, which is a union with the female takes place, the spermatozoa passing from the male organs into the female. They make their way up the female ducts and soon meet ova liberated from the ovary, which they fertilize: or they may remain for a long period awaiting the favorable opportunity of contact, or eventually perish from the lack of such occasion. Yet a variety of methods exists even under these circumstances, for the sperms after discharge may be stored in a receptacle specially adapted for the purpose, and in which they are retained until demand is made on them, by the passage of the ova down the ovary; or some such similar action releases them from the receptacle to consummate a union. When the spermatozoa have, in any of the above instances, come into close proximity to the ovum, a strong osmotic action,

evidently of attraction, is set up between the separate elements.

Although it has often been suspected that this attraction, illustrated by the union of two filaments of Spirogyra, may have been set up along a line of osmotic current, brought about by the presence of glucose, or some such other substance in appreciable quantity in the water, investigations undertaken to substantiate such suspicions were not fortunate. Rolph describes the spermatozoa as being in so weak and starved a condition that a well-nourished ovum powerfully attracts the sperm cells, and in some instances arises to meet the spermatozoon, in the form of a small cone. This is the observation of Rolph, but the theory would suggest itself that in place of the spermatozoon being in such a condition as to be incapable of resisting the osmotic activity set up, and so become attracted to the ovum, the opposite activity would be really what takes place, for if the sperm is in that "starved" condition which Rolph assumes it to be in, the ovum would not show any attracting influence in the shape of a small excrescence or core on the surface. Assuming the opposite to be the case, and the sperm to possess that strong potentiality with which these elements are endowed, we should expect to find what actually takes place, namely that when the spermatozoon falling under the osmotic influence comes into close proximity to an ovum, its potentiality is such that mutual attraction arises, most emphasized by the small swelling or excrescence in the female organism, which possesses a powerful affinity for the male element. Again, the theory of attraction of the female element by the spermatozoon would appear more feasible on the grounds, that even in the opposite case a batch of spermatozoa in close proximity would not unfrequently find access to the ovum, as was the general belief. The researches of Hertwig and Fol have, however, set this suggestion at rest, and it is now clear that only one spermatozoon affiliates with the ovum, so that as soon as this union takes place access to all others is prohibited. It is, therefore, safe to assert that the female organism is only receptive to one sperm, and that as a rule "the entrance of more than one sperm is impossible." But just as exceptions in other phases of animal development exist, so in the instance of impregnation of the ovum, we find in certain cases more than a single spermatozoon gains access to the organism. When, however, *polyspermy* does occur, only one sperm attains to activity and fulfils the law which brings about development, the others remaining imprisoned in some part of the ovum without further history.

Originally sperms were not considered necessary to the action of fertilization, but by degrees the activity of these organisms was gradually worked out, and their potentiality shown to be essentially necessary to produce the changes, which followed on the act being completed, for when absent from the fluid no changes took place in the ovum. Jacob, in 1784, succeeded in artificially fecundating the ova of salmon trout, and later Spallanzani was successful in similar experiments on the frog spawn; he, however, did not consider the spermatozoon as the factor which produced the after changes, but argued that such changes resulted from the potentiality of the fluid itself, which, when absorbed by the ovum, sets up the activity necessary for its further development. Other physiologists insisted on the sperms being the potential factors in fertilization—Prévost and Dumas in 1824; Leuckart in 1849—and Leuckart directed particular attention to the import of the sperm on such occasions. Kölliker, however, traced the spermatozoa to

the testes, and Martin Barry had previously—in 1843—observed spermatozoa in the ova of the rabbit. The absorption of the spermatozoa by the ovum was observed in the water snail by Bischoff and Meissner, and the same feature is recorded by Newport as occurring in frog-spawn.

The question of sexual affinity has not escaped the attention of naturalists, and none the less interesting are the experiments which have been undertaken to explain the action of the phenomenon. Probably the most worthy of notice are the observations made by Englemann¹⁸ on the conjugation of the *Vorticella microstoma*. In this species small male zoospores are formed by budding, and given off; these fertilize the large female individuals after the same fashion as true spermatozoa. On four different occasions Englemann was successful in tracing the bud after its separation from the mother cell, until it became united to another. He describes his observation as follows: "At first the bud always rotating on its longitudinal axis, wandered with fairly constant rapidity—cir. .6' to 1 mm. per second—and as a rule in a fairly straight line through the drop. This lasted from five to ten minutes or even longer without anything especial happening; then the scene was suddenly changed. Coming by chance into the neighborhood of an attached Vorticella, the bud changed its direction, occasionally even with a jerk, and dancing like a butterfly which plays round a flower approached the fixed form; it then, as if it were feeling it, glided round about it, meanwhile always rotating on its own longitudinal axis. After this had been going on for several minutes and had been repeated with several fixed individuals one after the other, the bud at last attached itself to one of them, generally at the aboral end, near the stalk. After a few minutes the fusion might be deliberately observed taking place." On another occasion, he states, he observed a still more "striking physiological or even psychophysiological exhibition. A free bud crossed the path of a Vorticella which was traveling with great rapidity through the drop, and which had abandoned its stalk in the usual manner. At the moment of meeting, although there was absolutely no contact, the bud suddenly changed its course and followed the Vorticella with the greatest rapidity: then a regular chase ensued which lasted for about five seconds. During this time the bud kept at a distance of about 1/15 mm. behind the Vorticella; however, it did not succeed in overtaking it, but lost it in consequence of its making a sudden side movement. Hereupon the bud continued its path in its original slower pace."¹⁹ This latter observation does tend apparently to weaken any hypothesis, that the spermatozoid is the element which attracts the ovum to activity, but in the instance recorded the phenomenon is exceptional, as is evidenced from the marked description Englemann gives of the event. If, however, we consider the phenomenon as supporting the theory of Rolph, viz.: that it is the female element which, for the purpose of fertilization, attracts a starved spermatozoon, we should expect the male element so reduced in energy, as to be unable to resist the attractive potentiality of the female cell, under whose influence it might chance to fall, and in the instance recorded the only result of such a meeting would, under the circumstances, be the absorption of the male element by the ovum. Fol²⁰ has also observed the attractive influence which is exerted at a distance on animal cells, for example, on the ova of the starfish; while Falkenberg from his observation on the attraction between the ova and spermatozoid of the *Culleria*, concludes that the attraction makes itself felt at a relatively

great distance, and states that this attractive force must have its seat in the cells themselves. Another feature is that such sexual affinity, or attraction, is only exerted between sexual cells of the same species. Experiments have been made which, to some extent, were confirmative of the characterization of Rolph, that the male cells are "hungry," and that consequently they are powerfully attracted by highly nutritive fluids. Granting the sperms be such highly katabolic cells, their long persistence of vitality presents some difficulty. Again, if the ovum concentrates, as suggested, that powerful influence of attractiveness on the starved sperm, we should anticipate, that if the sperm cell is attracted by the ovum, as is conjectured in the case of the Vorticella, it would attach itself at once, being powerless to resist, because of its state, and the powerful influence under which it was thrown. But no, it *gyrates* around the fixed form, Englemann emphasizes, after the fashion of a butterfly about a flower. This lasted some minutes, the sperm cell finally leaving the Vorticella and repeating the gyrating movements around several fixed individuals in succession, until it finally became attached and fusion was consummated. This gives a further share of feasibility to the conjecture that the sperm cell attracts the ovum, for the Vorticella being attached, it could not approach the attracting sperm cell, which would of necessity approach the fixed individual through the working of its own inherent attractive force. Zacharias has made a microchemical comparison between the contents of the male and female elements in characeae, mosses, ferns, phanerogams and amphibians, and the comparison throws open a large field for work on the same lines. The male cells are distinguishable by the "small and absent nucleoli," and by the "rich content of nuclein," the female cell on the contrary exhibits great poverty of nuclein, and possesses an abundance of albumin, and one or more nucleoli, more or less large. The male cells have in relation to their protoplasm a larger nuclear mass than is present in the female elements. This comparative analysis would again suggest the powerful attractive influence as lying rather in the sperm cell, than entirely in the ovum, although further experiments and researches may probably prove this wonderful phenomenal attractiveness to be mutual. Further, Nägeli²¹ has suggested that the sexual attraction may be attributed to the presence of electrical forces in the two elements. This, however, is merely conjectural, and it is better for the present to attribute sexual phenomena in general, "to the reciprocal action of two somewhat differently organized protoplasmic bodies," and to call this action sexual affinity. On this question we must content ourselves with the general expression, since so far, we have been unable to analyze those forces apparently so surrounded with an impenetrable mystery, which comes into activity. In this instance, Hertwig summarizes the matter as not being a simple phenomenon, but one of very great complication. This assertion of such an eminent physiologist should have great weight in urging those who possess leisure for the pursuit of such researches, to bring all their energy to bear on the elucidation of such a great and interesting embryologic problem.

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SUCCESSFUL PYLORECTOMY.*

BY H. O. WALKER, M.D.

DETROIT, MICH.

Mrs. M. R., aged 37 years, from whom I removed the pyloric end of the stomach, Dec. 10, 1898, had been the victim of stomach trouble for four years and, for six weeks previous to the operation she scarcely retained any food taken, and for the last two weeks none at all. Her general appearance was that of marked emaciation. The analysis of stomach contents revealed hydrochloric acid present (1.095), pepsinogen, rennet-zymogen, erythrodextrin, blood, mucus, sarcinae, starch, and yeast. There was absence of lactic, butyric and acetic acids, and the Oppler-Boas bacillus. The tumor was moveable and readily palpable through the abdominal walls. Vomiting and pain had been the prominent symptoms.

Operation.—On December 10, commencing at 10:30, under chloroform, a median incision four inches in length was made and very little difficulty experienced in withdrawing the tumor through the opening. The growth involved the greater part of the stomach walls at its pyloric end, protruding into the pyloric orifice, although there was no apparent involvement of the pylorus, neither was there any apparent involvement of the omentum nor surrounding tissues. The next step was the ligature of the duodenum with gauze strips, one ligature being applied about two inches below the pyloric orifice, the other around the stomach at its middle. Only one tie of gauze was made, and this was held with a catch forceps to prevent its slipping. Between the points of the provisional gauze ligatures the omentum of both the greater and lesser curvatures of the stomach was ligated in sections, with No. 2 sterilized catgut. It was then clipped from its attachments.

By these procedures a perfect control of hemorrhage was obtained. The next step was the incision of that part of the stomach in which the growth was situated well beyond its confines, which included one inch of the duod-

*Read before the Wayne County Medical Society, Jan. 4, 1900.

enum and about one-third of the pyloric end of the stomach. The cut end of the stomach was closed at its upper part, leaving at its lower an opening commensurate with the size of the lumen of the duodenum. The method of suturing was first a running stitch of No. 2, dry, sterilized catgut through the mucous membrane, fastening it at every third stitch, then covering it by sewing together the muscular and peritoneal coats in a similar manner. The opening was approximated in a like manner, by first fastening the cut edges at four points equidistant, thus avoiding puckering of the approximation. In order to be doubly sure, another row of suturing of the serous coat was made. The abdominal wound was then closed without drainage. The time of operation was one hour and twenty minutes.

Although but little blood was lost by operation, the pulse became weak and rapid, necessitating a transfusion

condition was the same when she was allowed two or three teaspoonfuls of hot water at short intervals, by the mouth. On December 14 she received bovine, gtt. x in two ounces of hot water, and on the 15th had a well-formed movement of the bowels after a high enema. During the day she had taken, by the mouth, six ounces



FIGURE 1.

with normal salt solution, under both breasts and an injection of strychnin sulphate, gr. 1/30. Just before leaving the operating-table this was repeated, and an enema of two pints of normal salt solution given. At this time the pulse was 104 and fairly strong. At 3 p.m. the pulse was 128, and very weak and irregular. Transfusions were given in both breasts, one pint of saline with two ounces of whisky. Beef peptonoids and enemas were kept up, and the patient rested fairly comfortably during the night.

December 11 the pulse was better, ranging from 110 to 126. At 8 p.m. she vomited a brown fluid of bad odor. December 12 she had a very comfortable night. The next day the abdomen was somewhat distended with gas, which was relieved by the high rectal tube. The

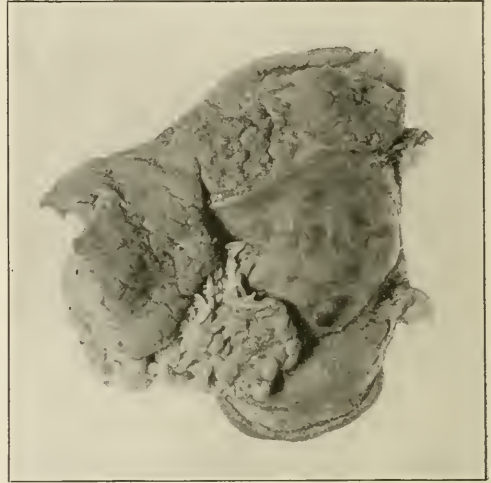


FIGURE 2.

of fluid; this was gradually increased, consisting of broth, beef peptonoids, bovine, milk, orange juice, etc. She sat up in a chair on Jan. 21, 1899.

An analysis of the stomach contents, made Jan. 7, 1899, revealed the absence of hydrochloric acid, sarcinae, blood, and lactic acid; the presence of pepsinogen and



FIGURE 3.

rennet-zymogen. January 8 she weighed 103 pounds. January 30 she left the hospital, walking two blocks to the car. Her weight at that time was 110 pounds and in January, 1900, was 133 pounds. She does all her house-

hold duties and eats anything she desires without distress.

Remarks.—The consensus of opinion regarding the surgical treatment of cancer of the stomach, since the time that Billroth did his first operation, has been that of

that 16 per cent. died from operation, 28 per cent. from recurrence and 56 per cent. are still living. Of this number, one operated on Aug. 27, 1890, still lives. This good showing is undoubtedly due to better technique,

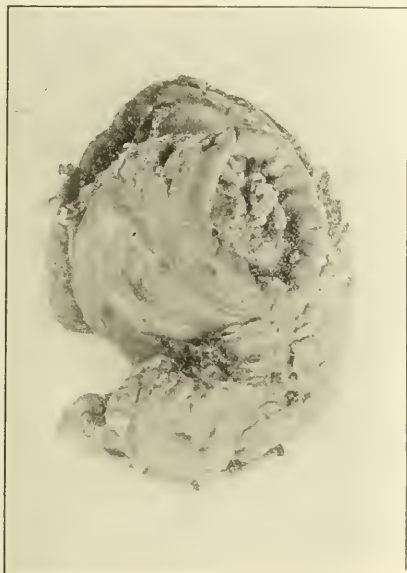


FIGURE 4.

laudation, condemnation and criticism, according to the experience and results of the operator. The causes of death following this operation are shock, exhaustion and sepsis, largely due in the first two instances to the condi-

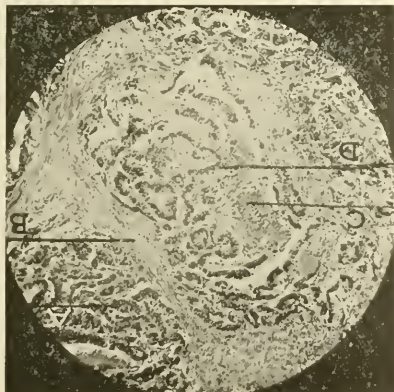


FIGURE 5.

tion of the patient at the time of operation; in the latter to the faulty technique in most cases. The mortality record has gradually improved. Ewald, who condemned the operation, has a death record of 75 per cent., while Maydl, in a recent report of 25 cases operated on, states

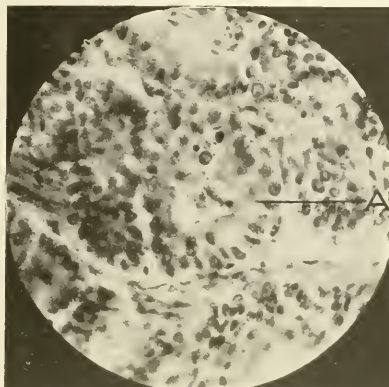


FIGURE 6.

earlier recognition of the presence of cancer, judicious selection of cases, and experience.

To secure success in these operations proper previous purgation and washing out of the stomach is essential, rigid asepsis, thorough removal of all diseased tissues, strict regard for the control of hemorrhage, and proper

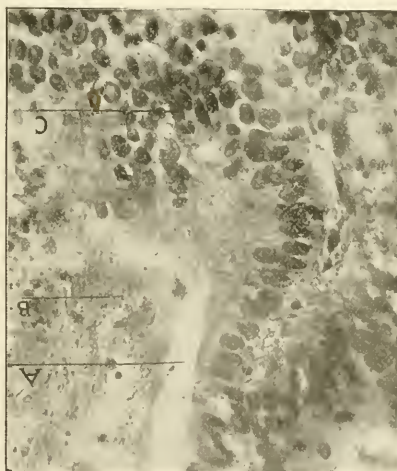


FIGURE 7.

approximation of cut surfaces, using care not to draw the suture too tightly. It is much better to ligate and cut than to cut and ligate as do most operators, for by this means we have a most absolute control of hemorrhage.

CHANCRES of the urethra are found in the first inch and accessible to the physician's touch and eye; deeper ones are very rare, so the "supposedly" deeper ones are probably not chancres, but peri-urethral phlegmons, which do well under appropriate treatment.—*J. N. Hyde.*

URETERECTOMY.

BY J. WESLEY BOVÉE, M.D.

WASHINGTON, D. C.

Surgery of the kidney is practically of recent date, although during the sixteenth, seventeenth and eighteenth centuries the practicability of nephrectomy had been discussed and Zabbeccarius, in 1670, and Roonhnyzen, in 1672, had proved by experiments on animals that one kidney could do the work of both. It may fairly be stated that Simon's successful nephrectomy in 1869, though done in an emergency and for an indication not now recognized, marks the beginning of the surgical treatment of this very important organ.

Surgery of the ureter was the logical sequence to renal surgery. Yet, strangely enough, Gigon¹ had thirteen years previously published a case of calculous anuria, recommending and carefully describing the technique of ureterectomy—called by him "ureterotomie," and practically followed years later by Le Dentu and Pozzi.

The interest in this subject has not lagged, and at the present time nephrectomy for injuries and diseases of the ureter is called for extremely rarely. Now, calculi are removed from the ureter by incision; injuries to it closed by suturing or drainage; strictures relieved by delicate plastic operations, curing many cases of hydronephrosis in this way; resections for complete section of it, either accidental or intentional, are easily and safely done, about twenty cases bearing evidence of this; and even its entire removal has been practiced nine times with gratifying results. It is furnishing the surgical world to-day the richest field for perfect, delicate and scientific operative work.

This paper has essentially to consider the subject of ureterectomy, an operation less than nine years old, one seldom indicated, but offering brilliant results.

By the term ureterectomy is generally understood the partial or complete removal of the ureter. It may be done primarily with nephrectomy, thus making nephrectomy and partial ureterectomy, or, if entirely removed with the kidney, nephro-ureterectomy.

Secondary ureterectomy is practiced some time after nephrectomy or nephrectomy and partial ureterectomy. The sequence of operations in the second case ever done was nephrectomy and primary partial ureterectomy, two months later secondary partial ureterectomy, and five months after that the remainder removed by a third partial ureterectomy. Partial ureterectomy is nearly always done when the kidney is removed, part of the pedicle being formed from the upper end of the stump of this duct. Total ureterectomy was first done in 1893, by Poncet. Partial ureterectomy, first performed by Thuffier² in 1881, has since been done ten times (see table). The writer believes many unrecorded ureterectomies have been done and the chief *raison d'être* of this paper is to prompt the publication of reports of such as well as future ones. As this is as yet a new operation, it would seem to be of the greatest importance to record anything new or additional concerning it. It is this sense of professional duty that prompts me to mention my case, the history of which is as follows:

J. J. T., 48 years of age, was first seen with Dr. Emory Reisinger, of this city, in August, 1898. Three years previously his left kidney had been removed for a renal abscess, and at a subsequent time another operation had been done by the same surgeon for the remaining pus tracts and severe localized pain. He told me he had been an invalid constantly since before the

first operation, and begged for relief. He had never been without pain, and was frequently obliged to resort to the use of morphia. I found him in a very much enfeebled condition, his pulse ranging from 110 to 130, and his temperature from 99 to 101.6 F. On the left anterior and lateral aspects of the abdomen, slightly below the level of the umbilicus, were two scars of the previous operations. One of them was so near the median line that I am inclined to think the nephrectomy had been made transperitoneally. A large hernia had occurred at this site. There were three sinus tracts in the left lumbar region, discharging a thin watery pus. In spite of his general weakness I decided an exploration to be advisable, and accordingly, on Aug. 17, 1898, after free stimulation, he was anesthetized.

With the valuable assistance of Dr. Reisinger a careful exploration was made through an extraperitoneal incision reaching from just above the level of the upper fistulous opening and in front of the left quadratus lumborum muscle to an inch inside the anterior, superior iliac spine. By careful dissection and holding probes in the fistule, the former location of the kidney was reached. Instead of the kidney a large amount of adipose tissue, containing many pus tracts and calculi and much cicatricial tissue was found, and a little below it the upper end of the ureter surrounded by calculi and thickened pus. The ureter was of about one inch in diameter and filled with cheesy pus and calculi. I resolved to remove the duct, and immediately extended the incision along to the inguinal canal, keeping about one inch from Poupart's ligament. With considerable difficulty, but with very slight blood loss, the ureter, in pieces, was removed to the bladder wall. The distended lumen ended abruptly about half an inch from the bladder wall, this portion being a solid cord.

The wound was closed with through-and-through silkworm gut sutures, a strip of iodoform gauze being passed to the lowest point of the pelvic wound and brought out at the lower end of the external incision, and another strip in the space formerly occupied by the kidney. The unusual atmospheric, high temperature and humidity probably assisted in producing the fatal issue seventeen hours later.

Two pieces of the ureter were sent to Dr. H. A. Kelly, who very kindly sent me the following report from his pathologist.

The specimen consists of the ureter in two pieces, 9.5 and 6.5 cm. long and varying from .5 to 1 cm. in diameter. Its walls are from 1 to 2 mm. thick and consist of a dense fibrous coat lined with caseous material which also fills the lumen of the ureter. Histologically, the lining membrane of the ureter consists of diffused tubercular tissue chiefly composed of large epithelial cells and hyaline material, with here and there definite distinct tubercles and an occasional giant cell. This membrane merges into the caseous material which fills the lumen of the ureter and externally is limited to a zone of round-celled infiltration. The remaining portions of the wall consist of fibrous tissue and a few small muscle bundles. The fibrous tissue is poor in cells, and to a great extent has become completely hyaline.

Diagnosis: Caseous tuberculosis of the ureter.

The specimen had very much shrivelled when it was sent to Dr. Kelly, having been kept for about five months in a solution of formaldehyde. At the time of its removal its lumen easily permitted the introduction of a finger. In this case the original trouble was probably renal tuberculosis, or possibly a pyonephrosis from stricture of the ureter complicated by the formation of calculi, some of which were not removed with the kidney, as they were found in that region and in the ureter

at this operation. The tubercular ureteritis descended almost or quite to the bladder, although a stricture near the bladder may have been the original site of the disease. If it was a descending ureteritis, then bladder tuberculosis would probably have ensued if the patient had survived.

History.—Thus far total ureterectomy has been performed nine times, the first being done by Poncet⁴, who, Oct. 18, 1893, did a secondary operation. In 1895 McCosh did a secondary total operation, and in 1895 and 1896 Kelly² operated twice, removing both the kidney and ureter. In the latter year McCosh¹⁶ did the same on a man, and Gerster⁵ the sixth operation, Hartmann⁶ and Morris⁷ two in 1897, and mine, the ninth, was in 1898. In Morris' case, part of the kidney had been previously removed by another surgeon, and Morris removed the remainder with the ureter. The first ureterectomy, however, was a partial one, done by Tuffier, in 1891, during a nephrectomy. In 1892, Reynier⁸ removed the ureter in piecemeal. Kelly, in 1893, removed a kidney and ureter to the middle of the pelvic portion, and in 1894 Postnikow⁹ removed the kidney and a large portion of the ureter. Since then Schiller¹⁸ has done a primary partial, Morris one primary and one secondary, Sommers¹⁹, Pouisson¹⁹, Elliott¹¹, and Abbe¹⁷, each one, the two latter removing the kidney at the same time. Thus, as seen from the adjoining table, the total operation has been done 9 times with 1 death, and the partial 11 times with 1 death. Four total nephro-ureterectomies have been done with no death, and partial ureterectomy with nephrectomy 8 times with 1 death.

Indications.—It is generally believed that the ureter should be removed with the kidney whenever it appears, either by inspection, exploration or palpation, to be markedly diseased. If the kidney be removed for tubercular disease, the ureter is extremely likely to be involved in the same pathologic process, to a greater or lesser extent, from above downward. In such cases at least a partial ureterectomy will be demanded. However, as it is often impossible to differentiate between healthy and tubercular ureter, at the time of operation, the whole organ should be removed, other conditions permitting. When the kidney is the primary seat of tuberculosis, and a descending tubercular ureteritis follows, the process advances most rapidly along the mucosa. This being true it is readily understood that the invasion may be far greater than can be detected with the paraphernalia at hand during a nephrectomy. The same applies to malignant disease, only, perhaps, less positively. It would seem that to remove the kidney for malignant disease, and allow an unhealthy ureter to remain, is not calculated to tranquilize the conscience of the surgeon. Yet we know the lymphatic current from the kidney is not toward the bladder, but in the opposite direction. In Abbe's case, done for sarcoma of the kidney, the specimen was examined by Dr. Prudden, who reported: "the ureter springs from the central part of the tumor and is considerably thinned and dilated." Nothing more is said of this duct, removed with sarcomatous kidney weighing four pounds, from a child weighing fifteen. Walker found that in sarcoma of the kidney in children, the ureter and bladder were involved in but three of 120 cases. In the very few patients with sarcoma of the kidney operated on, and who survived beyond three years, the ureter was not removed to any extent, which fact strengthens the improbability of such extension. When we consider that the ureter and bladder are liable to

constant inundation by the products of kidney disease, such freedom from similar lesions is remarkable. Forms of severe ureteritis, other than tubercular, demand removal of this canal. If old dense strictures of cicatricial tissue are formed in the ureter, causing obstruction with consequent dilatations higher up, there can be no better treatment, if the kidney is to be sacrificed, than to remove this duct as well. There are many conditions of the organ that demand its removal. Ordinary urinary fistula in an otherwise normal ureter has no place in the list of conditions justifying nephro-ureterectomy or nephrectomy. Such conditions may be nicely relieved by simply suturing the ureter, or by drainage, or, perhaps, resection. The same plan is applicable when a number of fistulae are present, though one can understand the number of them may be too large for the successful application of either uretero-ureteral anastomosis, transplantation into the bladder or other viscus or even to the periphery. Small ureteral fistulae often close without surgical treatment other than good drainage. This treatment is so satisfactory that some surgeons advocate it in place of suturing the duct even when the latter is quite convenient. Primary malignant disease of the ureter is not very common, if the literature of the subject may be allowed to guide us. Yet as ureteral surgery advances, a different aspect may be presented. It would seem the intimate relation between this duct and the peritoneum would favor early extension of cancer or other form of malignant disease of the ureter, and offer but a short space of time for the possibility of its eradication. Syphilis may play such an active rôle here as to cause incurable or impermeable strictures, and in that event ureterectomy might be indicated, though exceedingly rarely. Hydro-ureter with hydronephrosis will in some cases require entire removal of the ureter and kidney, as in Postnikow's case. Thus far the operation has been done twenty times, in fourteen of which the diagnosis was unequivocally tuberculosis. In four other cases such terms as "empyema ureter," "hydro-ureter and hydronephrosis," and "thick and hard ureter with pus," were employed in explaining the condition. In one it was removed with a sarcomatous kidney, and in another for "traumatic hemato-hydro-nephro-ureterosis." In one case (Reynier's) the condition followed typhoid fever. Excruciating pain in the region of the ureter, especially if similes are present, will often at least call for exploration, and, probably, ureterectomy. It is generally the result of leaving behind a diseased ureter, very common after nephrectomy for kidney tuberculosis. We must not forget, however, that considerable of the lower portion of the ureter may be dispensed with by the employment of some form of anastomosis¹², thus saving the kidney function, and even the bladder has been completely removed with success¹³ for growths of various kinds as well as for tuberculosis. So ureterectomy is not called for in all serious forms of ureteral disease. Just why thirteen of the nineteen persons operated on in whom the sex is given, were females, is not easily explained.

As practically all cases done thus far were for tubercular disease, recognition of the conditions calling for the operation should not be difficult. In this disease, in every case thus far, the enlargement was marked and the duct could be easily palpated in the upper part of its course, especially during nephrectomy. In its lower part the rectum in the male and the vagina in the female offer very good facilities for its palpation. The employment of the ureteral bougie and catheter are

exceedingly valuable adjuncts in exploration and diagnosis. Then the marked symptom of localized pain, often of an excruciating character, changes in the urine, particularly those of a bacteriologic character, lead to a proper conception of the condition. Often troublesome fistulæ are present, which add largely to the valuable data concerning the condition. Pregnancy seems to aggravate the symptoms. In Tuffier's case incontinence of urine had been continuous since childhood, showing some relation of that trouble with the condition of the kidney and ureter. The condition of the opposite set of organs must give the surgeon great concern in ureteral and kidney surgery. This is often quite difficult of determination. Apropos of this the following interesting case of right hydronephrosis in a girl is reported from Czerny's clinic. She had a tubercular history, but no bacilli were found, and she was kept in the hospital for a long time to ascertain the condition of the left kidney. It was obtained accidentally by Koch's tuberculin. The general reaction was not violent, but locally sensations present in the region of the right kidney were increased. In a few hours after the

in practically an unknown field gives such good results, it is not over-sanguine to expect the mortality rate to markedly decrease as experiences multiply.

Methods.—For removal of the ureter, two principal methods have been employed—the transperitoneal and the extraperitoneal. It would seem that the former would but rarely be indicated, especially as pus, either tubercular or otherwise, is so constant in the condition demanding the operation, the danger of infecting the peritoneum very marked and, as the ureter lies completely outside this structure, its removal by the extraperitoneal route would seem to be the proper one from an abstract surgical standpoint. In the primary operation, however, with a large kidney tumor, the transperitoneal is the most convenient. Seventeen cases have been done by the extraperitoneal route, one by combined extraperitoneal and vaginal and two by the transperitoneal. Certainly the upper part of the duct is reached with greater facility through the loin, especially in the primary operation. In women, the lower end is most easily reached through the vagina, and Kelly found a small opening into the peritoneal cavity, just above the

Date.	Name.	Operation.	Indications.	Result.	Sex.	Remarks.
Feb. 22, 1891.	Tudler.	Primary.	Intermittent pyonephros and ureter, stricture.	R.	F.	Extraperitoneal; removed upper part of ureter with kidney.
1892.	Reynier.	Secondary.	Descending tubercular ureter.	R.	M.	April 27, 1892, excision kidney and part of ureter. June 8, 29 and November 18, partial excisions of ureter; extraperitoneal.
March 30, 1893.	Kelly.	Primary.	Tuberculosis of kidney and ureter.	R.	F.	Transperitoneal; removed all but lower half of pelvic portion of ureter; ovarian vessels ligated in abdomen.
Feb. 18, 1894.	Postnikow.	Primary.	Hydroureter and hydronephrosis.	R.	M.	Extraperitoneal; removed 13 stones and ureter to 2 cm. from bladder.
April 4, 1894.	Schiller.	Primary.	Tubercular kidney and ureter.	R.	F.	Extraperitoneal; removed ureter to edge of pelvis and kidney.
July 6, 1895.	Morris.	Primary.	Tubercular ureter and kidney.	D.	F.	Extraperitoneal.
March 11, 1896.	Morris.	Secondary.	Tuberculous ureter.	R.	F.	Intracapsular nephrectomy, Feb. 8, 1896, then extraperitoneally, ureter to broad ligament.
April, 1896.	Elliott.	Primary.	Tuberculous ureter.	R.	F.	Extraperitoneal; ureter removed to pelvic brim, stitched 1 mm. of end of stump.
July, 1897.	Pouisson.	Secondary.	Thick and hard ureter and pus.	R.	F.	Nephrectomy 3½ mos. before; ureter removed to 3 or 4 cm. from bladder extraperitoneally.
Nov. 19, 1898.	Abbe.	Primary.	Sarcoma of kidney.	R.	F.	4½. tumor from child 8 mos. old and weighing 15 lbs. Removed ureter to near bladder; extraperitoneal.
Dec. 21, 1898.	Sommers.	Primary.	Traumatic hemato-hydro-nephro-ureterosis.	R.	F.	Dilatation of kidney and ureter by many quarts of dark colored watery fluid; ureter much thickened and distended.
Oct. 18, 1893.	Poucet.	Secondary.	Chronic descending tubercular ureteritis.	R.	F.	Extraperitoneal; removal of tubercular kidney in March, 1891.
1895.	McCosh.	Secondary.	Tubercular ureter.	R.	R.	Nephrectomy 3½ mos. before; ureter removed to 3 or 4 cm. from bladder extraperitoneally.
Dec. 18, 1895.	Kelly.	Primary.	Tubercular ureter.	R.	F.	Extraperitoneal; sharp oozing from external iliac vein.
1896.	Kelly.	Primary.	Renal tuberculosis.	R.	F.	Combined extraperitoneal and vaginal with short abdominal incision.
1895 or 1896.	McCosh.	Primary.	Tubercular kidney and large perinephrotic abscess.	R.	M.	Ureter the size of small intestine, obstructed ½ inch from bladder.
Nov. 13, 1896.	Gerster.	Secondary.	Empyema ureter.	R.	M.	Extraperitoneal; nephrectomy and nephrectomy in 1893.
Jan. 14, 1897.	Hartmann.	Secondary.	Tuberculosis.	R.	F.	Extraperitoneal; nephrectomy and fixation of ureter in bottom of wound one month before.
Sept. 21, 1897.	Morris.	Primary.	Tubercular kidney and ureter.	R.	M.	Extraperitoneal; part of kidney removed in Jan., 1897.
Aug. 15, 1898.	Bovce.	Secondary.	Tubercular ureter.	D.	M.	Extraperitoneal; (see case history).

The first eleven cases are a table of incomplete ureterectomies. The last nine cases constitute another table of complete ureterectomies, as will be readily seen by referring to my paper.

injection she passed perfectly clear urine, free from pus, in considerable quantity, of normal specific gravity and containing no albumin. The experiment was repeated several times with the same result. The diagnosis made was tuberculosis of the pelvis of the right kidney and part of the ureter. The explanation offered for these phenomena is that the tuberculin caused swelling and occlusion of the right ureter, thus permitting the urine from the healthy side to be passed uncontaminated. After the pain subsided and pus again appeared, tubercle bacilli were found, which was thought to be due to disintegration of tubercles. Czerny did a nephrectomy and found multiple cheesy abscesses in the kidney and a thickened ureter.²⁰

Prognosis.—The operation is not necessarily a dangerous one, depending largely on the general condition of the patient. The mortality rate thus far is 10 per cent., the two deaths being in very much enfeebled patients; it would probably have resulted differently in an early stage of the disease. When an operation done

pubes, of great assistance in one case. The whole length of the duct is much more easily treated in the male as the broad ligament and ovarian and uterine vessels furnish difficult complications. The parasacral route for reaching the lower part of the ureter has been recommended by Morris¹⁴ and others, but is probably inferior to the combined inguinal extraperitoneal and the vaginal. Probably the best incision for total extirpation of the ureter begins about one inch below the twelfth rib, just to the outside and front of the sacrolumbar mass of muscle. Its course is then directed downward to an inch inside and above the anterior superior spine of the ilium and, paralleling Poupart's ligament one inch above it, it may be carried inward as far as necessary. Usually to its middle is sufficient, but a longer distance is easily secured. In the male this incision will give access to the whole length of the ureter, and in the female to all of it above the broad ligament.

Technique.—After making the incision mentioned, through the fascia, muscle, etc., care is necessary not

to penetrate the peritoneum. By careful, dull dissection it will be recognized, and the ureter, if large, will be quite easily noticed. If smaller, it can still be detected attached to the separated peritoneum. When the kidney has been removed some time, the search for the upper end of the duct is very often perplexing. Concerning his case Gerster says: "The most difficult portion of the task was to find the renal end, which was searched for in a large cicatricial mass closely connected with the peritoneum," and Abbe found the same difficulty. This may be avoided if in nephrectomy the practice of fastening the end of the ureter in the lower end of the incision is followed. This procedure furnishes a definite location for it, a secondary ureterectomy being much more easily accomplished. When the peritoneum has been raised from the rest of the abdominal wall all along the duct, care being necessary to avoid injury to the round ligament and arteries about the inguinal canal as well as the spermatic cord in prolonged incisions, the ureter may be completely separated, though much danger of opening the peritoneum exists. In the female, if complete exsection seems necessary, the vaginal roof is incised along the course of the ureter. The ureter is to be ligated before being severed, and as further precautions cauterization of the stump and suturing of the mucosa of it have both been recommended. In my case these were unnecessary, as the intravesical portion was solid. The uterine artery is in a dangerous location and may require ligation. Great care is necessary to avoid injuring the sigmoid flexure or the cecum, under which the ureters pass, the ovarian vessels which cross and recross them and the uterine arteries which also cross them. Kelly found it necessary to split up the bottom of the broad ligament in order to remove the portion of the ureter passing through it. As in many of these cases considerable pus is present and a large cavity left, owing to separation of the peritoneum, which permits oozing to occur and fluids to accumulate in the pelvis, it is best to carry a strip of gauze down to the lower end of the wound. Another may be needed in the upper end. The wound, except drainage spaces, may be closed by buried or through-and-through suture.

NOTE.—Since the above paper was written I have found four additional cases of complete ureterectomy:

Garcau, E.: Secondary operation on a woman for tubercular ureter, combined loin, experitoneal and vaginal. Nov. 24, 1897; recovery. Boston Med. and Surg. Journal, 1899.

Le Dentu: Primary operation on a man for papillomatous tumor at vesical orifice of ureter; recovery. Semaine Méd., 1899.

Noble, G. H.: Primary operation for tubercular kidney and ureter; recovery. December, 1899.

Montgomery, E. E.: Primary operation on a woman, January, 1900, for tubercular kidney and ureter; recovery.

The last two cases are unpublished.

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- 1404 H Street.

SUGGESTIONS ON RIGHTS AND LIABILITIES OF SURGEONS.*

BY T. J. MAHONEY.

ATTORNEY AND COUNSELOR AT LAW.
OMAHA, NEB.

The lawyer is nothing if he is not generous. He is willing to help you out of your difficulties—for a retainer. If, so be it, he can not get a retainer, he will tell you how to keep out of difficulties, for glory; and if there is neither retainer nor glory in sight, he will do it out of pure force of habit.

It is doubtless true that the surgeon is more often compelled to face a situation in which he must consider his own rights and liabilities than is the general medical practitioner. He is often called on to make an election between taking desperate chances and doing nothing. He is called to treat a man who has met with a serious accident. The patient is unconscious. An operation of an important and serious character, involving elements of danger, seems to be necessary. The man is in a critical condition, and if the operation is to be performed at all, it must be without loss of time. The patient is not in a condition to give his consent to the operation. What shall the surgeon do in such a case? What are his rights, and what are his liabilities? Will he be charged with neglect if he refuses to act, or will he be held liable for malpractice if he takes off a limb or opens the abdomen without the patient's consent?

Surrounding circumstances will often assist in resolving these doubts. If the injured man is at his home or surrounded by members of his family, the law will constitute his family his agents to consent for him, that the operation may proceed, and such consent will protect the surgeon to the same extent as if it were given by the patient himself, in the full possession of his mental faculties. But the injured man may be a guest at a hotel or a passenger on a railroad train. He is not in a condition to speak for himself, and there is no one present with either express or implied authority to represent him. Neither is it practicable to communicate with his relatives with any hope of receiving a response in time to be available. In such a case the difficulties of the situation are quite serious. If an important operation is attempted and it should turn out badly; if a limb is removed and the patient, on recovering, can make it appear that the surgeon's judgment was erroneous, even though honestly exercised and with average skill and care, the surgeon is liable and may be compelled to respond in damages, as for malpractice.

The rule as to consent may be briefly stated thus: Where the operation is consented to either by the patient or by those authorized to speak for him, the surgeon is not bound to an unerring judgment; he is protected, if, in his diagnosis, in obtaining consent, and in the operation itself, he exercises average professional knowledge, skill and care. But where he has no consent to operate, he will be bound to the exercise of an absolutely correct and unerring judgment, and he takes on himself the risk that it may afterward be established, even by the aid of

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facts not known to or discoverable by the surgeon at the time, that the patient would have been better off had the operation been omitted, and that damages may be recovered where no want of skill or care is shown. Cases may no doubt arise in which the desire to save human life—an impulse of humanity—coupled with such certainty that the operation is necessary, will justify proceeding without the patient's consent. But in every such case, the surgeon, by proceeding without consent, takes the risk of any evidence that may be afterward discovered tending to show that the patient was, in fact, damaged by the operation.

On the other hand, where the consent is obtainable, either from the patient himself, or from those who have a right to speak for him, a surgeon would be liable for malpractice for failing to operate where the exercise of average professional knowledge and skill would disclose the necessity for an operation; but where consent is not obtainable—where all the risks of an operation are thrown on the surgeon—he will never be held guilty of malpractice for failing to operate.

Consent may be implied as well as expressed. If a conscious patient puts himself in the charge of a surgeon, and afterward becomes unconscious, he has by that act given implied consent that the surgeon shall take such course as his best judgment suggests, and he has, in like manner, imposed on the surgeon the obligation of operating if average professional knowledge and skill would indicate that an operation ought to be performed; or if a person, conscious of having received an injury, sends for a surgeon and becomes unconscious before the surgeon arrives, he has thereby given his consent to whatever course of treatment may be reasonably necessary or proper, and has imposed on the surgeon the obligation of so proceeding.

In considering rights and liabilities of surgeons, we are now dealing with legal and not ethical questions. I have no doubt that the surgeon's own code of ethics is sufficient guide in determining the propriety, from a professional standpoint, of making any disclosure respecting information intrusted to him by his patient. But because of the necessary uncertainty of all ethical codes, they are not safe standards in determining legal responsibilities. The law deals with two classes of disclosures; those given on the witness-stand, and those given out of court. As to the former, the surgeon will not experience much difficulty, because the court will in each instance determine whether the information should be disclosed or not. Still, the rules applied by the courts in deciding what matters the surgeon may disclose on the witness-stand afford the only safe way in which to determine what disclosures may be made out of court. These rules may be thus briefly summarized:

1. The relation of physician and patient must be established or there is no restriction in the making of disclosures.

2. The information must come to the physician or surgeon in his professional capacity.

3. The information, to be privileged, must be such as is imparted to enable the physician or surgeon to perform his duties in the usual course of practice.

4. It will include all information imparted, whether orally by the patient, the statements of nurses and attendants, and the facts learned by a physical diagnosis.

5. Even facts not bearing on the ailment for which the treatment is given, but learned incidentally in the course of treatment or diagnosis, are privileged, and may not be disclosed.

It is impossible to fully elaborate or illustrate these

rules here, but a few explanations may be given. The payment, or even promise, of compensation is not necessary to establish the confidential relation. A charity patient is entitled to the same protection as the best paying one. Neither does it matter whether the employment is by the patient or by some stranger, as by a carrier of passengers, as in case of wrecks and other accidents, or by the public, as in the case of paupers. In all such cases, whether the physician or surgeon assumes to treat the patient, or to examine him with a view to deciding whether he shall be treated at all, the relation is established and the obligation of secrecy is imposed. It is not every communication that is privileged. A patient may voluntarily make many disclosures, to his physician, that have no relation to the professional duties of the latter. He may talk about his family or business affairs; but communications of this character are not imparted to the surgeon in his professional capacity and are therefore not privileged. Neither is it true that every communication imparted for the purpose of obtaining treatment is privileged. It must be such as is imparted to enable the surgeon to perform his duties in the usual course of practice. The usual course of practice does not include conspiracies to defraud. Thus, one man may subject himself to treatment for the honest purpose of remedy, and the information imparted by him will be privileged, while another man may inform his physician that he has a certain ailment for which he desires such treatment as will mask the ailment and thereby enable him to perpetuate a fraud on a life insurance company. Such a communication is not privileged, because it is not made for treatment in the usual course of practice.

There is some conflict as to whether confidential communications include anything more than the mere statements of the patient, but the greater weight of authority, as well as the better reasoning, is in harmony with the rule just stated. A more serious difficulty arises in regard to facts incidentally learned. A very strong case in point is that of a woman who brought suit on account of an injury claimed to have caused an umbilical hernia. The defendant sought to prove, by a physician who had attended the patient in childbirth, previous to the accident, that at that time he observed the hernia and it could not, therefore, have been caused by the accident; but the court held that even though the physician had not treated the woman for the hernia, and learned of its existence only incidentally, still it was information which came to him in his professional capacity, and in enabling him to perform his duty in the usual course of practice, and he was therefore not permitted to disclose it.

These suggestions on confidential communications should be qualified by the remark that the privilege did not exist at common law, that where it does now exist it is by virtue of statute, and as statutes as well as their interpretations differ in different jurisdictions, the rules here given can not be regarded as of universal application. They do, however, fairly present the law as most generally enforced in this country. It may be added, also, that no matter how good the motive of the physician or surgeon may be in disclosing confidential communications of his patient, the motive will not protect him. This was well illustrated in the comparatively recent case of a London physician, who, desiring to prevent his wife and daughter associating with a certain woman, disclosed to his wife confidential communications received from his patient. As disclosing the secret to his wife was equivalent to disclosing it to her friends, the physician afterward had the satisfaction of paying a judgment of £12,000, and the costs of the suit.

An enterprising Omaha newspaper recently published a symposium of letters from a number of physicians in answer to the inquiry "whether the doctor is ever justified in refusing to prolong the life of a patient mortally ill." Most of the physicians took the position that in no case should the physician permit the patient to die while it is possible to prolong life. But a few did not fully agree with that doctrine, and one, who discreetly concealed his name, said that in cases of mortal illness, the means of committing suicide might be placed in the patient's reach, and if he is intelligent he will use them promptly. I shall not discuss this subject from a scientific, ethical, or theological standpoint. The rule of law is very simple, and in exact harmony with the commandment: "Thou shall not kill." The statutes defining murder and manslaughter make no distinction between killing a sick man and a well man. Neither do they recognize as legal, in this country, a practice said to prevail among certain tribes of Patagonians who have not sufficient intelligence to stand on the shady side of a tree, by virtue of which those who have grown so old as to be unable to help themselves or others, and who are certain to die soon in any event, are boiled into soup for the nourishment of the rising generation. Permit me to say, in closing, that I am not an advocate of "Jacks of all trades," and that when the surgeon is really in need of a legal opinion, the best advice I can give him is to hire a lawyer.

THYROID EXTRACT IN JUVENILE OBESITY: A CLINICAL NOTE.*

BY I. N. LOVE, M.D.
ST. LOUIS, MO.

Animal therapy is at this time an alluring subject, being unquestionably all in all the most revolutionary made in years toward the physiologic cure of disease. The medical profession should, figuratively speaking, bow its head in humble apology to the great physiologist and psychologist, Prown-Séguard, for when he contributed to his guild views which were the product of long years of delving and study, they were temporarily received with enthusiasm, but after only superficial consideration were laughed at as the product of a brain suffering from senile decay. We are now beginning to realize, as he did, that in the ductless glands lies the entire scheme of tissue building, repair, life. In this department of work the already established value of the thyroid gland in myxedema, obesity, idiocy, some forms of insanity and other conditions due to interrupted or misdirected metabolism is familiar to all, and favorable clinical evidence is accumulating constantly. More recently the reports on the use of the suprarenal glandular extract in Addison's disease opened up additional lines of experimentation. I should enjoy discussing the entire broad field of glandular therapeutics, but it is my purpose only to present brief clinical experience in the use of thyroid extract in the treatment of juvenile obesity.

At the Louisville meeting of the Mississippi Valley Medical Association, in October, 1897, I reported, favorably, the treatment of four cases of this kind, children ranging from 6 to 10 years of age, weighing from 106 to 170 pounds. Since that time three more cases have come under my care, and have been under treatment for from twelve to sixteen months.

The most characteristic one of these, B. W., a boy aged 8 years, weighed on first presentation to me 131 pounds,

was quite tall for his age, but excess of fat was the chief cause of extra weight. He was fairly bright, intelligent and cheerful, but becoming quite sensitive from being called "fatty" by his playmates. I found that his weight had made him quite "luggy," so to speak, and he had gradually become more and more disinclined toward physical exertion. He was quite constipated, not a "hearty" eater, and not specially inclined toward sweets.

I prescribed proper purgation and a course of medication and diet which would antagonize the constipation and favor a general activity of the secretions, regulating the diet by proscribing fats and sweets, and instructing him to eat freely of fruits and vegetables, such as tomatoes, cabbage, spinach, sauerkraut, etc. I also ordered him to pay especial attention to all hygienic rules, such as bathing and massage, and in particular to take plenty of exercise, walking, running, jumping, horseback riding, croquet, and all out-door athletic games.

I then ordered one-half of a 5-grain tablet of thyroid extract to be taken three times a day, and gradually increased the quantity until one tablet was taken four times a day. I observed that with the general increase of the thyroid a general improvement occurred. Within three months he had lost ten pounds in weight, and now, after about fourteen months of treatment, he weighs 106 pounds. The chief feature of his case, however, is that he has developed, very definitely and distinctly, muscle to a considerable degree. He is more active and alert in appearance, both physically and mentally. He lives in an adjoining state, and I see him once every month or two.

This case and the others similarly treated will necessarily be under observation for several years, possibly until complete maturity has been attained, or at least until they have "out-grown" the disposition toward obesity. General attention to exercise and hygiene on the part of the patient has been a factor in the management of the case, but there is no question in my mind that the thyroid has been of great service.

I found, commencing about three years ago, that a most excellent drug to be taken in connection with the thyroid, with a view to prevent depression and unpleasant effects, was strychnia, in doses ranging from 1/150 gr. to 1/50 gr. Not only is strychnia one of our best tonics, but it is almost specific in its helpful effects on the nervous system and on all processes of nutrition. During the past year, for convenience, I have had tablets of thyroid made in two sizes, 2½ and 5 grains respectively. I have combined the strychnia with the tablets, the 2½-grain tablet carrying 1/150 gr. of strychnia, and the 5-grain tablet 1/50 gr. By using either the one or the other of these tablets, in division or without breaking, the thyroid and strychnia have been regulated easily.

We can not too thoroughly appreciate the fact that the best results can be gotten in all of these errors of growth and development in children by commencing the treatment early. The profession and the public should be generally informed that there is a good chance of greatly improving these unfortunates. The results achieved in the treatment of the victims of cretinism and idiocy have been almost brilliant. The results which I have accomplished in my own cases have encouraged me in the hope that, as time passes, we may be able to cure the victims of juvenile obesity, and thus save them for valuable positions in life, rather than their being burdens to themselves and having open to them little in the way of a livelihood save service in the side-shows of circuses or dime museums, with the other freaks and blemished victims of Nature's apparent blunders.

*Presented to the Section on Diseases of Children, at the 116th Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.

DISCUSSION.

DR. A. C. COTTON, Chicago—I have listened to this paper with considerable interest, for I have had a limited experience with the thyroid extract, outside of the treatment of cretinism. I have had three adult cases on thyroids for the reduction of obesity. A more or less marked reduction of the obesity has been effected, but in two of them there has been an unpleasant symptom, i. e., headache. One patient could take 5 gr. of the thyroid extract three times a day, but when this dose was increased to 10 gr. three times a day she complained of headache, and I found no way of correcting that. I would like to ask Dr. Love whether he has observed headache following the administration of thyroid extract.

DR. I. N. LOVE, St. Louis, Mo.—I have had to regulate the dosage with both children and adults according to the effect, one of the disagreeable ones being, at first, headache. I have always observed some depression of the heart. This was why I was led to combine strychnin with the thyroid extract. I consider obesity in itself, in the adult, a misdirection, as it were, of metabolism. The nutritive processes are interrupted, and on general principles we should encourage elimination, activity of the circulation and all that will favor the establishment of the proper equilibrium of tissue building. In the ductless glands—of which the thyroid is one—we have important remedial agents. My experience also leads me to believe that the combination of strychnin with thyroid makes the treatment more favorable.

DR. G. M. BLECH, Chicago—Have you ever examined the thyroid gland in your patient before prescribing the thyroid extract?

DR. I. N. LOVE—I have not been able to observe very much apparent change in the thyroid gland. I do not believe the interruption of metabolism is always dependent on this gland. I feel like emphasizing the point made by one of our pelvic surgeons in America, in a paper read before the Mississippi Valley Medical Association—Dr. Sherwood-Dunn. He spoke of "The Conservation of the Ovary," and drew attention to the fact that it was related to the gland which had to do with tissue building. He argued that the ovary should be conserved to the fullest. I think our surgical friends—more particularly the younger men—should be warned against the needless emasculation of women. This point should be borne in mind in this connection.

SEPTIC CONDITIONS IN SOME OF THE ACUTE INFECTIOUS DISORDERS IN CHILDREN.*

BY A. C. COTTON, A.M., M.D.
CHICAGO.

It has been the custom of lecturers and writers to discuss disease by types, the nomenclature depending on certain groupings of symptoms and signs as indicating a particular disordered condition known as a disease. Within certain limits, variation in character, cause, duration, or sequence of symptoms was allowed without a change in name other than saying atypical. So also many well-known, and some rare, manifestations were observed and acknowledged under the terms, "complication," "sequelæ," etc., without, however, requiring a change in the established generic name of the disease. In the description of certain pathologic conditions the modifying terms, such as "acute," "subacute," "chronic," "retarded," "latent," etc., were employed to express at least the stage of the morbid process, though some of the conditions there described were so dissimilar that no relationship was discoverable save that of the name. In the acute infectious disorders, so loath have we been to surrender our nomenclature that great inconvenience and much confusion has obtained in clinical observation and discussions, the atypical prevailing much more frequently than the type, and the varying

complications presenting much graver conditions than the presumed original disease.

As a poor hypothesis is better than none, it is probable that our present nomenclature has served a useful end for the accumulation and classification of clinical data. As to persistency of type, probably no class of disorders presents so uniform grouping of symptoms as the exanthemata, yet the possible variety of complication and sequelæ renders the prognosis as uncertain as when dealing with some new and unknown disorder.

Thus far we have been obliged to accept such vague expressions as "climatologic influences," "epidemic characteristics," "individual idiosyncrasy," etc., in explanation of the widely differing results in these presumably familiar, acute infectious disorders. With the advent of bacteriology new light has dawned on infection, and etiology has become the guest of the home. That the advancement of bacteriology toward the claims of an exact science will soon compel sweeping revision, if not a complete overthrow, of our nomenclature, few will deny. Since clinical diphtheria is no longer a recognized entity, and Klebs-Loeffler diphtheria—pure and simple—a *rara avis*, the question may well be raised, why not discard a name which no longer carries any pathologic or etiologic significance? Since influenza without the bacilli of Pfeiffer is like the play of Hamlet without the melancholy Dane, why offend our sense with the persistent abuse of the term? For many years that revered term "pneumonia" has required so much propping up with adjectives that the careless tripper may bring down the entire pulmonary pathology about his ears. As went the ancient "dropsy," "jaundice," "biliousness," and "neuralgia," so must we bid adieu to the terms "influenza," "diphtheria," "pneumonia," and "rheumatism," or, if we retain these names at all, they must be so loaded with modification as to serve only as entertainment to the laity. The query, "what's in a name?" may well apply to our present classification when we consider our newer methods of clinical study, with their inexorable conclusions.

The effort to isolate the etiologic factor in morbid processes impels one to follow the chief mischief-maker, and whether we find him most active at start or finish, we keep him in view, regardless of the old clinical boundaries between inception, development, convalescence, recrudescence, complication or sequel. By persistence in ethical methods of study, we are at last beginning to recognize our real enemy among the factors of uncontrollable morbid processes. An antitoxin has been found that will do all that is claimed for it, viz., minimize the intoxication from pure Klebs-Loeffler bacilli, but that it will cure diphtheria as clinically recognized can not be maintained in the face of the still high rate of mortality. The apparent fact that clinical diphtheria was Klebs-Loeffler diphtheria and something else, had led to the most searching scrutiny as to what the something else was, and I believe no one will deny that the complicative factor which renders the intoxication uncontrollable is often due to the presence of the streptococcus. Whether we ascribe to this microbe additional toxic virulence of its own, or accept the hypothesis of symbiosis, the fact remains that in the graver forms of mischief he is present, and that intractable cases very rarely develop in his absence. So too in pneumonia, in pertussis, in measles, and above all in scarlatina and influenza, the intractable cases are rarely distinguished by the absence of the streptococcus. So evident has this become that the term "streptococcus" has frequently served in clinical description.

*Presented to the Section on Diseases of Children, at the Fifteenth Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.

In this connection hasty revision of my case records for the past year inclines me quite strongly to the older theory of the "unity" of poisons in the etiology of acute infectious disorders. During the past season clinical influenza was quite prevalent in our city, and as seen by me, shows, among the severe cases, over 85 per cent. otitis media with streptococcal infection. Pneumonia of this variety of infection has been unusually prevalent among children, with over 75 per cent. of middle-ear infection. Pure Klebs-Loeffler diphtheria has been rarely seen, and was of a mild type. Scarlet fever, with membranous angina, with pneumonia, diphtheria, and with otitis media, has occurred in several cases, varying greatly in the intensity of the different complications, but showing uniformity in the presence of the streptococcus. An unusually large percentage of the relatively rare scarlatinal arthritis has appeared. And in violation of the general rule, Klebs-Loeffler diphtheria has, in a number of instances, accompanied the scarlatina from the onset, while the streptococcus has appeared sooner or later in nearly all. Pertussis and measles have shown unusual tendency to grave and persistent pulmonary complication, and the general tendency to extensive adenitis with an unusual number of suppurations marked by tardy recovery has been the rule.

It is to secure an expression from my associates in this Section, believing there is profit in comparison, that I present these few not well-classified observations, and I would like to ask the question: "Is this a streptococcus year?"

Treatment.—Since it appears, from the deductions of numerous competent observers, that it is the mixed infections that are the most intractable and fatal, whether by symbiotic action intensifying the toxicity of their products, or by the induction of fatal anemia by the prolonged demand for the antitoxin substance from the overworked blood-regenerating organs, it stands to reason and is apparently borne out in practice that three distinct lines of therapy must be followed in every infectious disease: 1. Prophylactic, as against the additional development of any other septic organism: All points of entrance, especially catarrhally-affected mucous areas, which under these conditions furnish rich culture-media for pathogenic micro-organisms innocuous under ordinary conditions must be carefully guarded by frequent application of local antiseptics. 2. Specific antitoxin treatment should be thoroughly employed, even when the presence of the specific toxin-producing microbe is not demonstrable, especially in infections that are favorable to others through some law of affinity not well known, and particularly during known prevalence of other infectious diseases, as in epidemics. 3. The application of the best-known principles of hygiene, with all the medical and dietary agents that go to promote healthful metabolism and powerfully reinforce the antitoxin-producing processes of the body, the great *vis medicatrix naturæ*.

677 Jackson Boulevard.

DISCUSSION.

DR. C. G. SLAGLE, Minneapolis, Minn.—All radical reforms, so far as I know, have met with more or less opposition, and in many instances, even with ridicule. This was the case even with the great discovery of Jenner. He was caricatured and denounced as a visionary, and some of the medical journals of the day even printed cartoons showing horns growing out of the heads of children, the supposed results of Jenner's ideas and practice. Professor Cotton is among the pioneers in a new field, which we older men appreciate. Bacteriology is opening up a new field which will materially aid us in that very intricate subject of diagnosis. In the end there is bound to be a revolution in medicine, but if you push it, as Professor

Rotch has endeavored to do; if you attempt to thrust these new ideas upon us all at once, the effort may result in failure, or at least it will retard progress. When I received Professor Rotch's book I was intending to lecture the next day on struma. I could not even find the word "struma" nor "serofula" in the index, the appendix, in a foot-note or in a marginal reference. I did not find the word "dysentery." I looked further and did not find "croup," nor the word "colic." The familiar one, "diathesis," was not in the book. I addressed the author on this subject, and he replied very courteously that in dropping these old and unscientific terms he was only following out the suggestions of the American Pediatric Society. I remonstrated with him, and said that I did not believe that even such a master as he was could, by any one dash of his brush, obliterate all those old landmarks which had become as familiar as household words, not only with the laity but with physicians. You can not take any of the older books on medicine, and not find the words "serofula," "struma," "dysentery," "diathesis," etc. It is all right enough to admit that these words are unscientific, and we must prepare for a revolution in medicine in the direction suggested in the paper of Dr. Cotton, but it will come better and faster if we do not push it too much. In medicine, as in literature, custom to some extent becomes law. These old medical terms must go in time; they are obsolescent now, and in due time will be obsolete. The paper is tremendously suggestive, and will bear discussion for a long time. The cause of the complication, otitis media, is something which we have just discussed. Streptococcus infection is quite prevalent now; it was probably so before, but was not recognized.

DR. G. M. BLECH, Chicago.—There are few papers left for this session, and I think, therefore, it would be well for Professor Cotton to favor us with his clinical notes, not to substantiate his claims, but as a matter of record. Concerning the difficulty of changing terms, as suggested by our friend, Dr. Slagle, this is an age of progress, and when we come to consider that certain terms have lost their value or meaning etymologically, they must go. There is no such thing as "serofula"—there never was—and the only reason we used the term was because we did not know its pathology. We now know nothing but tuberculosis of the glands—"serofulosis." The demonstration of the tubercle bacillus in the glands, or in the structures attacked is the plain justification of the omission of the word "serofula." This term meant nothing; it gave only a very vague idea of a disease which was in reality nothing but tuberculosis. The same argument applies to the other terms referred to. They must all go since pathology has given us a definite idea of their nature.

DR. N. P. BARNES, Washington, D. C.—With all due respect to the statements of my friend, Dr. Blech, I have under my charge a large number of children in an out-door clinic, and I see many cases that may be tubercular, syphilitic, or rheumatic. These diseases seem to cross somewhere, or are so intimately associated that we can not say positively: "This is a case of tuberculosis." I do not like the word "serofula," but there are conditions for which we can not substitute the term "tubercular lymphangitis."

DR. EDWIN ROSENTHAL, Philadelphia.—The last speaker is right. Not every case of lymphatic enlargement is tubercular, nor can we say that each case must have a certain name to indicate a disease. As to the late books, Holt gives "lymphatism" as the name of a disease and this can exist in those entirely free from such specific causes. I have met several cases of lymphatic disease that I am certain—and as certain as the bacteriologist is, who pronounces a cause—were neither syphilitic, serofulous, strumous, nor tubercular, but simply depended on some condition as yet unknown. It is well to drop terms that give erroneous impressions, but we should do so at a slower pace, and when we do, we should have correct names to give.

I remember cases sent to the Municipal Hospital—the contagious disease hospital of Philadelphia—suffering from "glandular fever" (?). This was neither scarlet fever, nor diphtheria, nor tubercle, nor syphilis, and still it was thought best to send them to this hospital. The bubonic plague is another glandular disease that is not tubercular; and we can go on multiplying, in answer to Dr. Blech. This much we do know: when the term "serofula" was used we knew that con-

sumption was the danger; its origin might have been syphilitic or tubercle; the result was always the same and, hence this old name, which now appears useless, had its value in its time.

DR. G. M. BLECH.—Not every adenitis is tubercular any more than every vaginal discharge is gonorrhoeal in character. These things have been settled more than one year ago. The fact that certain glands are diseased does not prove that they are tuberculous. There are other forms of adenitis. I referred to that condition formerly commonly spoken of as "scrofulosis," and I assert that it is nothing more than tuberculous. The use of these vague terms enables us to avoid making a correct diagnosis. By microscopic examination we are able to make a correct one of tuberculosis or syphilis, and then we can determine the particular form of adenitis with which we are dealing.

DR. N. P. BARNES.—We see hundreds of children with swollen glands about the neck. We can not at all times open these and examine them microscopically, nor are we justified in the measure when, under syrup of iodid of iron, these glands assume their normal dimensions.

DR. G. M. BLECH.—How long have you watched these cases?

DR. BARNES.—Some of them for 4½ years and I have never noted any cough or pulmonary symptoms during this time, that would be indicative of incipient phthisis.

DR. BLECH.—In all of these tubercular forms of adenitis there is usually an infiltration of the apices of the lungs, and by physical examination of the apices of the lungs, evidences of pulmonary consolidation can be discovered. A little of the gland can be withdrawn with a hypodermic needle, and the presence of the bacilli of tuberculosis demonstrated by microscopic examination.

DR. A. C. COTTON.—I confess that my sympathies run in the line of the views presented by Dr. Slagle. I make confession to what I consider an error on my part in teaching, i. e., using the old and indefinite terms because they are so convenient. I now believe that I have done my pupils injustice in this respect. The use of indefinite language leads to errors in thinking, and this will eventually crop out in the treatment of our patients. No matter how handy it may be to talk about diathesis and things of that kind, it is not right. I agree with Dr. Slagle that too sudden and sweeping changes are not advisable. We must remember, when we write and speak as teachers or as compilers of statistics or data, or when we make deductions for the whole medical profession, that we must not go over the heads of the mass of the profession. We must go slowly, yet we should always urge ourselves to the point of definiteness and acuracy, keeping as close to the etiology as possible.

Now, how many of you have struggled with a case of so-called diphtheria with a mixed infection and have finally had to surrender to the unknown, although you have worked faithfully, and have learned, perhaps a year later, that some one else has been called in because he cured some patient with diphtheria in the same block, at the time you lost yours. How heart-breaking that is. There is something more than pecuniary reward in the practice of medicine. It may be all right for you to tell some man that he will be well after he has taken your blue mass and salts, because he has an attack of "biliousness"—this is a term which most of us use—but when you touch on the acute intoxication, should you give our whole cause away by using terms which the laity think they understand? For our own protection, is it not worth our while to avoid using terms which the laity think they know all about? The pessimistic views of Dr. Blech are as refreshing as was the cool breeze last night. I am not so pessimistic; I can not make a diagnosis of tuberculosis as early as Dr. Blech thinks he can. He probably can, and I shall look to him to teach us all.

DR. BLECH.—I wish to call Professor Cotton's attention to a little remark which in vogue in my native country. *Am Ende hat Jedermann ein bisschen Tuberculose* (after all, everybody has a little tuberculosis).

"We are modifying our opinions about tabes and far more cases of this are amenable to treatment than has hitherto been believed."—*James Scrips Hyde.*

CEREBRAL CYST: REPORT OF A CASE.

BY VAN BUREN KNOTT, M.D.

SIOUX CITY, IOWA.

The object of this paper is simply to add to the evidence which is gradually accumulating in favor of operative interference in these cases, and to urge that those unfortunates so afflicted shall be given a chance for relief by surgery whenever the symptoms seem to make the localization of the tumor possible.

It must be admitted that brain surgery has not yielded the brilliant results which were confidently expected to follow in the wake of the more exact means of localization and improved operative technique. This has been especially true concerning the surgical treatment of intracranial tumors, for it is in just these cases where so much was expected and predicted that the results are as yet disappointing as a rule. However, in considering the application of surgery for the relief of these cases, we should not forget the point made by Ferrier, that we are dealing with a condition which, if allowed to progress without operative interference, is invariably fatal. From this point of view it would appear that the patient has everything to gain and little or nothing to lose from surgery properly applied.

The diagnosis and localization of the tumor are the essential points which must be settled before successful treatment can be instituted, and the most painstaking observation should be exercised that no sign or symptom which will assist in their determination shall be overlooked.

The case which I desire to report possesses no unusual features, but as this subject is one of great interest and practical importance I believe that all cases belonging to it should be reported, that a more definite policy concerning their management may be adopted. I have had some hesitancy about classifying this cyst under brain tumor proper, but Roswell Park says they are to be so classified when they involve the motor centers, as they then produce many of the symptoms of a tumor.

Eddie B., aged 1½ years, entered the Samaritan Hospital in June, 1899. His father furnished the following history: About four years ago the boy fell out of a wagon, striking on his head. He was rendered unconscious by the fall and was carried into the house and placed in bed, regaining consciousness in about an hour. He remained in bed about three weeks, suffering considerably with dizziness, headache and inability to stand or walk. He gradually grew better until, at the end of four weeks, he was at play again as though nothing had happened. He continued in good health for about three years, when it was noticed that he was not walking properly: his right leg would drag, and he had a very noticeable limp. About this time it was noticed that his left eye was "crossed." Shortly after this he had a convulsion, which lasted only a few seconds and was not very severe. These attacks became more frequent and severe, until at the present time he has from six to eight in every twenty-four hours. From a bright, intelligent boy, he has become rather stupid and unoberving.

Present Condition.—He looks like a stout, healthy boy, well-nourished and of good color. There is complete paralysis of the external rectus of the left eye, with marked, left convergent strabismus. There is no impairment of visual power of either eye; no choked disc, nor optic neuritis. As he walks across the floor he drags his right foot, and examination reveals that he has practically no control of the extensors of the leg; knee-jerk is present, but very weak. The grasp of the right hand is about one-half as firm as that of the left,

and the finer movements of the hand are impossible. He answers questions slowly and forgets easily. He complains of almost constant headache. There is a small scar on the left temple, which he says is where he was injured. Soon after his admission to the hospital he had a convulsion, lasting about five minutes. The nurse stated that the right arm and leg were simultaneously first involved, the seizure rapidly becoming general. This order was observed in the subsequent seizures, of which he had from five to eight in every twenty-four hours. The preliminary twitchings of the right arm and leg were very brief and were followed almost immediately by a general involvement of the muscles. Some of the attacks were of the minor variety; the head and eyes alone being fixed for some seconds. Following these attacks he would sleep for several hours, if undisturbed. He stated that it was very difficult for him to remember facts of any kind, and that he could not read as he could not connect the different sentences intelligently.

The nature of the case, together with the fact that he had been treated for about six months before coming to the hospital, with no benefit, seemed to contraindicate any further effort to relieve his condition medicinally, but the steadily progressive nature of the disease rendered interference of some sort imperative. The exact character of the difficulty was in doubt, but the paralysis of the left external rectus and the extensors of the right leg, together with the fact that his convulsive seizures first involved the right leg and arm, and that he had almost constant headache, seemed to indicate a neoplasm situated in the motor area of the brain. On the other hand, the absence of vomiting, optic neuritis and visual defects seemed to count against this conclusion. After carefully weighing the facts it was decided that the source of the trouble was localized rather than general, and I concluded to expose that portion of the motor area of the brain lying in front of the fissure of Rolando on the left side, containing the centers for the complex movements of the leg and arm, and just in front of which is the center for movements of the eye-ball. After the usual preparation, the fissure of Rolando was located by measuring with a strip of tin, which was so cut as to form an angle of 67 degrees. A point was selected on the scalp as lying about one inch in front of the upper part of the fissure of Rolando and at the posterior portion of the first frontal convolution, and an osteoplastic flap, about $1\frac{1}{2}$ inches square, was raised. The bulging of the dura into the wound was very marked. It was incised and turned back, revealing a cyst with gray, glistening walls, presenting much the same appearance as an ovarian cyst. This was about the size of a quail's egg and imbedded in the brain tissue. It was incised, about one ounce of clear, straw-colored fluid escaping. The cyst wall was very thin and was dissected out with considerable difficulty, leaving quite a cavity, the latter being packed with iodoform gauze, the end of which was allowed to protrude from the most dependent portion of the wound, and the flap sutured into place. The gauze was removed at the end of forty-eight hours; the sutures were removed on the eighth day, the patient having made a perfectly uneventful recovery.

Subsequent History.—For the first twenty-four hours following the operation the patient had no convulsive attack; in the next twenty-four he had two, which were very light; and for the next seven days he averaged two slight attacks daily, which were marked more by a general stiffening of the muscles than by active movements. He has had none of these seizures from the tenth day

following the operation to the present time. At the time of his leaving the hospital, two weeks after the operation, no improvement could be noticed in his leg, but he could use his hand very much better.

In a letter received from the boy's father, a few days ago, he states that his gait has improved somewhat and he considers his leg better. The strabismus remains unchanged. The boy has had no pain in his head since the operation, and seems brighter and more cheerful. It is, as yet, too soon to consider the relief so far afforded as permanent. However, in these cases a respite of even a few months is appreciated.

The point which I consider this case to illustrate is simply this: Every operation on the brain must be considered as largely exploratory, and promises of a definite result can not be made. Nevertheless, such operations properly performed will do no harm, and whenever in any given case the symptoms point to pathology, the localization of which seems probable, the patient should be given the chance for relief which may follow a properly-conducted operation.

PRIMARY TUBERCULOSIS.

NEPHRECTOMY AND SUBSEQUENT TOTAL RESECTION OF THE URETER: COMPLETE RECOVERY.

BY DUDLEY TAIT.

SURGEON OF THE FRENCH HOSPITAL,
SAN FRANCISCO, CAL.

M. M., aged 42, a commercial traveler, gave the following history: Hereditary antecedents negative; personal antecedents uninteresting; venereal antecedents negative; no ethylism; no arthritis. In the winter of 1895, his trouble began with a dull pain in the back—loin tire—accompanied by polyuria. In March, 1896, he was seized with sharp, shooting pains in the right loin, extending toward the corresponding testicle. Micturition became very frequent and painful. The urine was turbid, and shortly afterward decidedly purulent. He had days of comparative ease, followed, without apparent cause, by a period of radiating lumbar pain, spasms of the bladder and painful micturition. The turbidity of the urine invariably increased after each such attack. No hematuria—at least macroscopic—was noted. His condition did not change perceptibly during the following year, with the exception of frequent chills and severe headache. He was able to work, but always felt miserable. His loss of weight was 15 lbs. Pollakiuria and polyuria continued day and night. The purulent urinary sediment increased in quantity, with no gravel nor calculus at any time.

The patient consulted Professor Jacobi, of New York, in May, 1897, who diagnosed renal lithiasis. During the early part of 1898, he was treated, in this city, for cystitis. I saw him in consultation with Dr. Albert Abrams, July 3, 1898. Palpation revealed rigidity and tenderness over the right kidney and on the course of the corresponding ureter. No tumor was discernible, nor bulging of the loin. The prostate was somewhat enlarged, uniformly, and slightly painful to rectal palpation; seminal vesicles, cords, testicles, epididymes and urethra normal. The urine, acid, sp. gr. 1018, contained an enormous amount of pus, a few red blood-corpuses, some hyaline casts, and numerous altered epithelial cells. No tubercle bacilli were found, although repeated tests were made by Dr. Abrams at various intervals. In view of the inefficacy of the previous plans of treatment—irrigation, cauterization, various internal remedies—and especially on account

of the failure to find tubercle bacilli in the urine, the vesical lesion was deemed of secondary importance. Harris' segregator was used with very little benefit; from the right side the urine proved remarkably purulent; from the left it was very much less so. Failure to wash the bladder thoroughly as a preliminary measure may account for this unsatisfactory result. Examination of other organs was negative.

A diagnosis of pyelonephritis, probably tubercular, was made.

July 8, 1898, lumbar nephrectomy was performed. Owing to marked infiltration of the perirenal tissues, and the friability of the kidney substance, the subcapsular method (Ollier) could not be used. Morcellement was, therefore, tried, two clamps were left on the pedicle for forty-eight hours and the wound was packed with iodoform gauze. The tissue removed was principally composed of nodular areas, and a series of caseous abscesses with characteristic tuberculous granulations on the walls.

No post-operative shock followed. The amount of urine during the twenty-four hours subsequent to the operation was 580 c.c. The amount of urinary sediment was remarkably diminished already. The urine of the second day—860 c.c.—and subsequently was perfectly clear, for the first time in over two years. Two hours after the removal of the clamps, the patient was seized with agonizing pain in the left side of the chest. Temperature was 39.2, pulse 140, respiration 58. Dyspnea was extreme, cyanosis marked, and there was a small amount of bloody expectoration. The usual cardiac and respiratory stimulants and hypodermoclysis proved useless, but intravenous injection of 1200 c.c. of salt solution caused an immediate favorable reaction. The diagnosis of septic pulmonary embolus was confirmed by radioscopy, and on the third day the purulent sputum contained the same variety of micro-organism—*staphylococcus albus*—as found in the lumbar wound. The subsequent course of the pulmonary complication was uneventful. On October 15, the wound was still refusing to heal, and the granulations soft, notwithstanding thorough curetting and use of chlorid of zinc, as advised by Roswell Park. The urine was normal, averaging 1100 c.c. daily; sp. gr. 1012.

On December 5, excision of 12 cm. of the ureter was made by the lumbar route. The ureter was hard, enormously thickened and strongly adherent to the adjacent parts, especially posteriorly—adiposclerous periureteritis. During the operation a small cut was made, by accident, in the peritoneum, but was closed immediately and caused no trouble.

On July 1, 1899, fistulae still persisted and discharged pus intermittently, the patient occasionally complaining of severe pain and tenderness on the course of the ureter. The urine was normal qualitatively and quantitatively.

On July 2, resection of the remaining portion of the ureter was done by the anterior retroperitoneal route, as for the ligation of the iliac. The ureter was easily found and followed close to its vesical end, after passing a probe through to the bladder, and was firmly adherent to the psoas fascia, and slightly so to the iliac vessels. A clamp was left at the junction of the bladder and ureter. Sections, made by Dr. Philip King Brown, showed characteristic tuberculous lesions.

The patient is at present in excellent health, generally and locally. His urine is normal and the average quantity daily is 1200 c.c. He passes the entire night without voiding urine. The prostate is hard, slightly irreg-

ular, but no longer painful to rectal palpation. He has gained 25 pounds in weight.

Since the interesting discussion—Israel, Kustner, D'Antona, etc.—that followed Tuffier's communication to the congress in Moscow, it has generally been conceded that certain forms of renal tuberculosis should figure no longer in medical or internal pathology, but be admitted to the domain of surgery, in a position therapeutically close to that occupied by neoplasms. The forms of tuberculosis referred to are: 1. The primary chronic form, nephrophthisis, or caseous form, comprising four varieties—nodular infiltration, tuberculous pyelonephritis, massive degeneration and tuberculous hydronephrosis. The first two varieties represent distinct stages of the same process. 2. Primary unilateral miliary tuberculosis, as described by Knowsley Thornton, Newman, and Stewart and Kelly of Philadelphia. This form may, however, be passed without comment, on account of its extreme rarity and difficulty of recognition. Furthermore, the necropsy findings in the case of Stewart and Kelly are too meager to warrant the assertion that the renal lesions were primary. A most searching histologic examination of the tonsils, cervical, bronchial and mediastinal lymph nodes is indispensable before drawing any conclusion in reference to miliary tuberculosis. The frequency of renal tuberculosis varies: 1.67 per cent. of all tuberculous cases (Morris); less than 1 per cent. (Furbringer); 5.6 per cent. at the pathologic institute of Prague. Rilliet and Barthez found 49 cases in 72 necropsies of children. Primary renal tuberculosis is much more prevalent than textbooks would have us believe: Israel found 10 per cent. of his kidney cases suffering from primary tuberculous lesions. Of 21 cases of tuberculosis of the kidney, the same author found 16 with primary renal lesions.

The urine in the most common form of renal tuberculosis—caseous pyelonephritic type—does not often contain tubercle bacilli (Israel, Newman). In tuberculosis of the bladder, on the contrary, they are almost invariably easily found. While a negative result in the bacteriologic analysis of urine is not evidence of freedom from tuberculosis, it must be remembered that the presence of tubercle bacilli in the urine does not necessarily indicate involvement of the urogenital tract. The bacilli may be carried by the blood from distant parts, and be eliminated through the urine without producing any morbid change in the kidney in evidence of their passage. I had proof of this fact in a case of bone and lung tuberculosis which presented, a few weeks prior to death, a marked retention of urine of scleroprostatic origin. Tubercle bacilli were found in the urine on two occasions. A most complete necropsy showed total absence—macroscopic and microscopic—of urogenital tuberculosis. Failure on the part of the kidney to arrest the bacilli may be logically ascribed to either the small number of bacilli or to the pronounced resistance of the renal tissue.

The coexistence of other tuberculous lesions in the urogenital tract, either through primary infection or secondary descending infection, has caused many surgeons to reject operative measures in renal tuberculosis. This opinion, however, is singularly weakened by the knowledge of the great prevalence of the descending form of infection, and also by the disappearance or marked amelioration of vesical symptoms after nephrectomy (Tuffier, Israel). Furthermore, the cystitis accompanying renal tuberculosis is very frequently due to other micro-organisms than Koch's bacillus. Israel found cystitis in 43 per cent. of his operative cases.

Bilaterality of renal lesions is a more serious consideration. Besides being rare—17 per cent. of advanced cases, Vigneron; 14.3 per cent. Israel—the tuberculous lesions in the second kidney, due to ascending secondary infection, are invariably very much less pronounced than the primary. The second kidney is more frequently the seat of ascending pyogenic uretero-pyelitis, amyloid degeneration, etc., which may or may not prove a contraindication to nephrectomy. Cornil proved the possibility of spontaneous cure of renal tuberculosis by fibrocalcereous transformation, or by granulation and cicatrization after evacuation of the tuberculous foci through the urine. But these facts concern the medical forms rather than the surgical, as Rosenstein has shown that marked symptoms seldom develop before the mucosa of the pelvis or ureter becomes involved, or until caseous cavities rupture into the pelvis.

The remote results of nephrectomy for tuberculosis are of great interest. In January, 1898, Bangs collated 135 cases, with only 10 prolonged survivals—over two years. Although complete in many respects and admirably classified, Bangs' communication is necessarily unsatisfactory, inasmuch as it simply mentions the patients' condition at the time the cases were reported by the various operators, many of whom showed undue haste in publishing their work. Israel is more encouraging: of 21 cases, 6 were living—July 14, 1898—one after nine years. Verhoogen (1899) reported 4 cases in good health after two, six, six, and 6½ years. Of 18 cases, Koenig reports 1 well after 12 years, 1 well after 6, and 3 in good health after 2½ years. Tuffier and Bazy have obtained equally favorably results. Two of my personal patients are in perfect health six and 1½ years after nephrectomy.

The points of interest in the case which prompted the present paper are: 1. The perirenal tuberculous infiltration (Guyon), a rare and troublesome condition, complicating both the operation and the subsequent treatment. 2. The absence of vesical lesions. The latter fact throws some light on the much-discussed cause of certain symptoms of renal tuberculosis: cystalgia, painful spasms of the body and neck of the bladder, pollakiuria, frequent uncontrollable and painful micturition. Guyon ascribes the foregoing condition to a coexisting infiltration of the vesical mucosa by Koch's bacillus. Le Dentu and most of the English authors—Newman, Roberts, Morris—explain all the symptoms by a renovascular reflex. The case here reported is certainly strong evidence in favor of the reflex theory.

1054 Post Street.

CASTOR-OIL IN THE TREATMENT OF NEURALGIA.*

BY HAROLD N. MOYER, M.D.
CHICAGO.

Three years ago, Dr. A. J. Ochsner, of this city, called my attention to the value of castor-oil in the treatment of neuralgia, particularly of the fifth nerve. He stated that he had seen this substance recommended in a German medical journal, but was not able to give the reference. Since that time I have diligently examined the literature, but have been unable to find the article in question. Dr. Ochsner said that his results in the treatment of facial neuralgia had been brilliant, he having had as many as thirteen consecutive cases that had come to the surgical clinic at Rush Medical College for operation, all relieved, or greatly improved, by the use of

castor-oil. While I can not report a series of cases as lengthy and successful as those treated by Dr. Ochsner, yet the results of this method in my hands have been superior to those of any other treatment.

During the last two years I have treated about fifteen cases of neuralgia by this method, but only seven of these were under observation sufficiently long to enable one to speak definitely of the results of the treatment. Five of these were neuralgias of the facial nerve, and two were typical cases of brachial neuralgia. Both the latter were comparatively recent in development at the time treatment was begun, and one of the cases of facial neuralgia had begun but two weeks before. Of the cases of brachial neuralgia, one had lasted one and the other two weeks. The one of the shorter duration was exceedingly severe and had been under the care of a competent neurologist for more than a week. Electricity, and other remedies had been employed, but without giving the slightest relief. This patient was given a large dose of castor-oil at 1 o'clock, and by 4 the pain in the arm had largely decreased; the following night he rested well and the next morning the pain had practically ceased. He took three or four doses of the oil afterward; there was no return of the pain.

An acute, and recent case of neuralgia of the inferior dental nerve was cured in two weeks. The pain began in the inferior dental and at the end of two weeks had extended to the middle division of the facial nerve. The pain was very severe, but the case was entirely cured after a two weeks' course of castor-oil.

The results in acute neuralgias have been, as might be expected, better than those observed in the chronic, but even in the latter, only one failure can be charged to the method. A patient with a neuralgia of the third division of the nerve on one side continued the treatment for between two and three weeks without the slightest improvement in the symptoms.

Another case was that of a man aged 34, who had typical tic douloureux which began in the left supraorbital branch at 17 years of age. The duration, therefore, at the time he came under observation, was seventeen years. The pains were distinctly paroxysmal, coming on at periods of from about five minutes to an hour. At the time he came under observation, all three branches of the left side were involved, and he came asking for operation, having heard that section of the nerves sometimes improved these cases. The pain had been so severe as to markedly impair his general health, and there had been a marked loss in weight. The administration of the oil was followed by a prompt improvement of the pain, and, while the patient can not be said to have been cured, as the spasm remains and there are occasional twinges of pain, yet he says he is much more comfortable than he has been in years, and if the pain is not more severe than it has been during the past winter, he will consider himself quite well.

Another case was that of a man 37 years of age, who had neuralgia which began on the right side of the face and had lasted for five or six years. Three years ago, the infraorbital nerve was divided. Six months before coming under observation, the disease appeared on the left side of the face and he came asking for surgical relief. Treatment was begun, and at the end of a week the pain had entirely disappeared, and there has been no return up to the present time. This case was one of the most brilliant in its results, although it was nearly duplicated by a case of supraorbital neuralgia of fifteen years' duration, which was cured by the administration of the first half dozen doses of the oil.

* Read before Chicago Academy of Medicine.

In the case which was described, where there was no improvement from the use of the oil, an examination of the eyes showed mixed astigmatism and a well-marked eye strain.

The oil is administered in the morning before breakfast, and the dose is from one to two ounces. As a rule, patients have little difficulty in taking the larger amount, though in some cases it was difficult to keep this amount on the stomach. At first patients were left largely to their own devices as to the methods of taking the oil, but later care was taken in directing the preparation, with a corresponding improvement with the ease with which it was taken and with the persistence with which they held to the treatment. Castor-oil, if kept for some time, and as it is ordinarily found, is quite offensive to most people, but it is very much improved by a thorough washing and the addition of a few drops of the essence of anise to each pint of oil. The most efficient means of administration is in ale—preferably Dogshhead, or Bass's ale, which contains a large quantity of gas, and which should be poured from the bottle in such a way that the glass contains a large quantity of foam. The oil is poured into the ale, stirred a few times with a spoon, and then may be drunk without tasting the oil. The mixture with the ale forms an emulsion, and there is much less liability of the oil disturbing the stomach. When first administered, the oil acts freely on the bowels, but if it is continued daily, its cathartic effect rapidly diminishes, and it is not infrequent for patients to state that they have but a single movement of the bowels after the third or fourth dose.

An interesting speculation might be entered on, as to how castor-oil acts in relieving neuralgia. That it is not due to the cathartic action of the drug is, I think, clearly shown by the fact that other cathartics and laxatives are of no value in relieving this condition. The physiologic action of castor-oil has not been definitely determined. Butler says that it is a combination of glycerin, fatty acids, and ricinoleic acid. This combination passes the stomach unchanged, and, in the presence of the bile and pancreatic juices, is broken up into its component parts; sodium ricinoleate is formed, which has marked irritating properties. A very significant observation of Butler's is that he is inclined to attribute anodyne properties to the drug, as he has frequently observed that it acted as a sedative in children, in those cases in which no movement of the bowels was produced. Buchheim was the first to claim that ricinoleic acid was the purgative principle, but this has been questioned, some writers taking the view that the purgative principle of castor-oil was due to something dissolved in the oil, and which existed in very small quantity. Late experimental work shows that the older opinion of Buchheim is probably correct, and that the cathartic action is to be attributed to the ricinoleic acid. It is probable that other substances are present in castor-oil which have not been fully identified, and it is possible that this may have some effect on the sensory nerves.

DISCUSSION.

DR. HUGH T. PATRICK—The administration of castor-oil has been my routine treatment for trifacial neuralgia since the fall of 1896, at which time I first learned of its efficacy from Dr. Ochsner. Since then I have employed it in at least a dozen cases, and, with two exceptions, always to the great benefit of the patient. Before determining on its use it is necessary to make an accurate diagnosis. In my experience migraine and other headaches are very frequently mis-called neuralgia, and I wish to emphasize the fact that the castor-oil is of no avail in such headaches. Not having followed the subsequent

history of my cases, I am unable to affirm a permanent cure, but I can substantiate the statement of Dr. Moyer that the effect is sometimes strikingly brilliant. I administer the remedy very much as he does.

DR. C. E. PADDOCK—In reference to the sedative action of the oil in children when there is no bowel movement, I have often noticed this action, but ascribed it to the fact that the trouble had probably been in the small intestine, from where it had been carried down into the lower bowel, and the cause of the trouble was in this way removed without any bowel movement. I thought it due to the mechanical rather than the physiologic action of the oil.

DR. JAMES G. KIERNAN—There are two factors attached to the therapeutic use of castor-oil; a purgative one and—as shown by the untoward effects—an undoubtedly neurotic factor which is certainly due to ricin or phytalbumose, as it is now called. This last has an action on certain nerves not unlike the action of belladonna. In considering the value of castor-oil this influence must be taken into consideration. Furthermore, such a factor would explain the condition which has been described by Dr. Patrick, in which the constitutional and the local treatment were both markedly affected. This condition should be reversed if due primarily and simply to the purgative factor of the oil. If, however, it is to be assumed that this phytalbumose has a neurotic action, the condition which Drs. Moyer and Patrick have described should be expected to occur.

DR. GUSTAV FÜTTERER—The effect of the oil may be due to either one of two possibilities: 1. Castor-oil is a powerful irritant and, by producing a hyperemia of the gastrointestinal tract, other parts are relieved. It is, in fact, such a powerful irritant that it should not be given in cases in which there is any irritation of the stomach. I have seen very serious results follow its administration under such conditions. There is another point to be taken into consideration, i. e., auto-intoxication. Many years ago I found that fats of a certain density enveloped bacteria, thus preventing their growth and multiplication. If auto-intoxication is the cause of conditions as were mentioned, then this action of the oil must be considered.

Leaving aside a direct antiseptic effect, the conclusion I have arrived at is that certain fats envelop bacteria and mechanically prevent their multiplication. It has always been my opinion that the effect of the castor-oil was not only a purgative but also a mechanical one. It envelops bacteria and prevents decomposition in the intestinal canal and a consequent auto-intoxication. The oil in this respect is better than any other laxative we have.

DR. C. E. PADDOCK—I would like to ask the Doctor how he administers the oil?

DR. FÜTTERER—A good way to disguise the taste is by first putting a tablespoonful of raspberry syrup into a glass, then adding a tablespoonful of cold pressed castor-oil, and then some rum.

DR. PADDOCK—Hirst, in his work on obstetrics, advises giving it in warm milk, but I fail to see how that can disguise the taste.

DR. H. N. MOYER, closing the discussion—I had purposely refrained from enlightening you as to how castor-oil acts in relieving neuralgia, because I do not know. I closed my paper with some hints, as you might say, which would lead me to think that the castor-oil is a very complex body. It may contain substances which have not been identified and which may be apart from the cathartic action of the oil. I have been much interested in what Dr. Fütterer said in regard to its mechanical effect by enveloping bacteria. It might act that way in an intestinal fermentation; nevertheless, the fact remains that there are other substances in the oil, the physiologic properties of which have not yet been studied.

I am gratified that the experience of Dr. Patrick so nearly parallels mine. I think I have had one or two more rather striking successes than he had, but he agrees with me in the main. I agree with Dr. Patrick that in the treatment of migraine the oil is useless. In tic douloureux its efficacy is most marked.

In regard to its administration, elegant pharmacy includes the washing of the oil. Most oils as found in the shops are

somewhat rancid. Castor-oil at the ordinary room temperature soon develops acidity and properties which give it a disagreeable taste. Oil when shaken with water a few times soon loses these properties and a little essential oil will materially improve its palatability. The "sandwich" which Dr. Fütterer describes is an admirable method. I believe the best way in adults is in ale, particularly the Dog's Head and Bass ale, as they contain considerable gas and foam readily. Pour out a couple of spoonfuls of ale so that it foams, drop the oil into the tumbler, stir it a few times with a spoon and then drink it. It is quite tasteless.

RESECTION IN CASE OF UNUNITED FRACTURE OF FEMUR.*

BY I. P. KLINGENSMITH, M.D., F.S.Sc.

Surgeon to Pennsylvania Railroad; Secretary of Indiana County (Pa.) Medical Society; Fourth Vice-President of the Medical Society of the State of Pennsylvania; Member of the AMERICAN MEDICAL ASSOCIATION; Member British Medical Association, etc.
BLAIRSVILLE, PA.

Non-union in a fracture may depend on a variety of causes, some of them inherent in the parts themselves and others connected with the system, but the fact should be borne in mind that a vast majority of these cases are the result of mismanagement growing out of the physician's want of attention and skill.

The history of the case in question, furnished by those conversant with the facts, is as follows: The patient, a man 40 years of age, married, of good family history, and personally physically sound, on Jan. 5, 1899, was, in conjunction with his partner, operating a steam chopping mill, when from some unknown cause an explosion of the boiler occurred, the patient being struck on the left femur, by a piece of steam pipe, producing a fracture at the junction of the middle and lower thirds. A practitioner was called in and had the case under observation for a period of nine weeks, at the end of which time he evidently discovered that his efforts to bring about a favorable result had not been attended with success. The family at the same time becoming dissatisfied, dispensed with his further services and on March 8, called in Dr. A. D. Miller, of Blacklick, Pa., who diagnosed a case of ununited fracture of the femur. On the day following the writer saw the case in consultation with the then attending physician, Dr. W. L. Reed, of Branch, Pa., also being present. The patient was emaciated, nervous and excitable, and presented the appearance of a man whose health had suffered much. After a careful examination the existence of an ununited fracture was corroborated. All efforts at reduction proving unsuccessful, notwithstanding the fact that the physical condition of the patient was not favorable for surgical interference, it was the consensus of opinion that resection was the only method of procedure that would offer a reasonable prospect of recovery; it was therefore decided to operate on the afternoon of March 10.

The operation was done by the writer, with the assistance of Drs. W. L. Reed, of Branch, A. D. Miller, of Blacklick, and Norman Lewis, of Blairsville. A longitudinal incision of sufficient length, and so as to thoroughly expose the parts, was made on the outer aspect of the limb, revealing a *transverse* fracture with the ends of the bones overlapping about two inches, the lower fragment lying to the outside and behind the upper fragment, some fibrous cartilage having been thrown out on the apposed surfaces, forming a false joint. I then sawed about one-fourth inch off each fragment, brought the ends together and fastened them by transfixing with

Wyeth's movable steel drills. The external wound was drained, sutured and a sterilized dressing applied, in fact the whole technique was conducted under the strictest aseptic precautions. The limb was immobilized in a firm fracture dressing. The entire operative procedure occupied a very short period of time, and every precaution was taken to avoid shock, yet the patient died sixty hours after the operation.

THE SMEGMA BACILLUS.

BY OSCAR A. DAHMS.

CHICAGO.

Soon after Lustgarten, of Vienna, published, in 1884 and 1885, his investigations in regard to the micro-organisms occurring in syphilitic foci, and expressed his conviction that these micro-organisms stand in a causal relation to syphilis, it was discovered by Alverez and Tavel, and Matterstock, and confirmed by Cornil, Klempner, Doutrelepp and others, that in the smegma of the prepuce and vulva of healthy individuals a bacillus could be demonstrated which, neither morphologically nor in staining properties differs from the supposed bacillus of syphilis. The doubt which already existed in many minds concerning the specific nature of Lustgarten's bacillus was increased by this discovery, and it became a much-discussed question whether or not the organism found by Lustgarten in syphilitic lesions should receive any serious consideration whatsoever.

Occurrence.—Although the smegma bacillus occurs with great constancy and in large numbers in the smegma of the prepuce of the male, in the grooves between the labia majora and minora of the female, and about the perineum and anus in both sexes, it has been obtained from cerumen of the ear by Gottstein and Bitter, from the cutaneous surface in various parts of the body by Laabs, and even from the coating of the tongue and teeth by Bunge and Trantenroth. The author has been able to demonstrate the presence of the bacillus in all these portions of the body by the use of the appropriate stains. As a rule, the cleanliness or uncleanness of the individual was the principal determinative factor in regard to the number of bacilli found on the skin; the longer the secretions of the sebaceous and sudoriferous glands had been allowed to accumulate, the greater was the multitude of micro-organisms revealed by the microscope.

Scrupulous care of the condition of the teeth and of the oral cavity in general eliminates the possibility of finding the organisms on the structures within the mouth.

On that portion of the clothing which is in immediate contact with the integuments of the axilla and perineum, it was possible to find without special difficulty, those bacilli which had been removed from the skin by friction. During the summer months the organisms were particularly abundant on the garments, which is, indeed, to be expected on account of the softening of the accumulated cutaneous secretions by the perspiration, and the favorable conditions thus occasioned for the removal of the sebum by mechanical means, and its absorption by the cloth. Washing of the fabric in water containing a small percentage of alcohol, the subsequent gentle but complete evaporation of a portion of this fluid on a cover-glass held high above the flame of a spirit lamp or Bunsen burner, and the staining of the thin film which remains, will suffice to disclose the bacilli.

For the reasons that the fold of the groin, the arm-pits and the grooves of the umbilicus are not only less easily accessible to cleansing influences than other parts, but

*Read before the Indiana County Medical Society, Indiana, Pa., May 9, 1899.

are also so formed anatomically as to most readily retain the secretions of the cutaneous glands, large numbers of smegma bacilli were frequently found to occur in these situations. Moreover, the micro-organisms were often found lodged in the mouths of sebaceous glands.

A careful examination of the sediment obtained from numerous specimens of urine by the method devised and recommended by Haines and Skinner,¹ in most instances revealed the presence of smegma bacilli, although frequently, on account of the paucity of the micro-organisms, the most diligent and long-continued search was required. As might have been expected, the urine of females contained, as a rule, larger numbers of the bacilli than that of males. Grünbaum was able to discover smegma bacilli in the sediment of centrifuged urine of females in 59 per cent. of the specimens examined, but in the urine of males he only rarely succeeded in finding the organisms. Czaplewski observed the presence of the bacilli in sputum.

Morphology.—Little is known in regard to the biologic position of the smegma bacillus. Ledoux-Lebard supposes that the organism is a species of sclerothrix. The bacilli bear a remarkable resemblance to Lustgarten's syphilis bacilli, and to the bacilli of tuberculosis and of lepra, and from a purely morphologic standpoint it is often impossible to distinguish, with any degree of certainty, between these various organisms. As obtained from preputial smegma, the bacilli appear as well-defined, slender, gently-curved rods, with extremities of rounded contour. In length they vary from 3 to 5 microns, in general width from .25 to .75 microns. Marked morphologic variations are frequently manifest—while the bacillus is at one time a long rod of slender appearance, one end of which occasionally possesses an easily distinguishable enlargement, at other times the organism is small, short and plump, and lacks the usual curvature. Sometimes the ends taper gradually to points. Bitter described eight forms of the bacilli as they occur in smegma. The enlargement at one extremity is particularly noticeable in those derived from potato-cultures. In fact, different media produce differently-appearing bacilli; and these variations are no doubt due to the different reactions of the media, and the difference in the rate of development of the organisms. The latter attain the greatest length in potato cultures and on nutrose serum. According to Czaplewski, bacilli from nutrose-serum cultures most closely resemble Lustgarten's syphilis bacilli. Very plump organisms develop on gelatin, and the same medium produces curved rods with enlarged extremities, as well as bacilli of uneven outline. Cultures on Löffler's blood-serum are frequently characterized by short and granular forms.

After staining with carbol-fuchsin methylene blue, the so-called "sporogenic bodies" are not infrequently visible; both ends of a bacillus having taken on the red color, while the middle portion remains unstained. In this case the microscopic appearance of a group of the bacilli will at first sight resemble that of an aggregation of cocci. Gram's method frequently has the same effect. An examination of the bacilli in the hanging drop demonstrates their incapability of independent motion.

Bacilli derived from colonies on glycerin-agar, or from any medium on which the organisms multiply rapidly, reveal, when stained with carbol-fuchsin, evidences of the manner of their development. In such specimens, bacilli consisting of several oval segments are plentiful.

Scattered about throughout the field there can be seen numerous egg-shaped bodies identical in size, shape and color with those composing the bacilli, but entirely separate and distinct from the latter. Besides these, the observer will notice the presence of small rods intermediate in length between the two forms mentioned. Developing colonies examined at intervals show an alternate preponderance of the long and of the short organisms.

The most rational conclusion to which a consideration of these facts leads is that each bacillus splits up into a number of oval bodies, which grow in length until they have developed into bacilli. When the organism has matured, it undergoes the same process of division, breaking up, in its turn, into small protoplasmic masses which subsequently increase in size.

Differences in the degree of curvature possessed by different bacilli are apparently dependent on the position of each organism in the colony. Those bacilli forming the innermost circles in the colony show the greatest curvature, those composing the straight filaments display none at all.

The writer's attempts to stain bacilli in syphilitic lesions and secretions by the methods of Lustgarten, De Giacomo, and Doutrelepont, made with the intention of comparing the bacilli of Lustgarten, if found, with those present in smegma, were invariably unsuccessful.

Staining.—The smegma bacillus, although peculiar in its behavior toward tinctorial solutions, is readily stained for microscopic examination. Ordinary carbol-fuchsin may be employed to good advantage when there is no necessity for resorting to the more complicated tinctorial methods designed to differentiate this organism from others. A fresh solution of this stain will impart its color to the bacillus after an application of a few minutes' duration. Gentle heat will hasten and favor the staining process.

To prepare a specimen of the organism a small quantity of smegma may be obtained from the prepuce of the penis of the male, or from the vulva of the female, and spread on a clean cover-glass. This film is then dried and fixed in the usual manner, in the flame of a Bunsen burner, care being observed that the specimen is not charred by the application of too high a temperature. The glass having been allowed to cool, the solution of carbol-fuchsin is applied, and left in contact with the organisms for some minutes, the staining-fluid being at the same time carefully heated. Hereupon the preparation is washed thoroughly in water, and, if a permanent slide be desired, dried and mounted in Canada balsam. The observer who is familiar with the appearance of the smegma bacillus will experience no difficulty in distinguishing this micro-organism among the numerous other forms of bacteria constantly present in smegma.

Another convenient process for the preparation of specimen slides, and one which possesses the advantage of being a double stain, is the following: Hot anilin-fuchsin is first used, and after having remained on the cover-glass for a short time, is washed off, and the specimen decolorized by means of 5 per cent. sulphuric acid. Methylene blue is employed as an after-stain. Smegma bacilli remain red, while other organisms assume a blue color.

Basic aniline dyes serve as tinctorial agents, and the methods of Gram-Weigert and of Gram also succeed in staining the bacillus. The latter's method is, however, not a useful process for purposes of differentiation.

Bacilli which Czaplewski obtained from cultures one or two days old showed a remarkable resistance to decolorizing solutions. The red color of anilin-fuchsin

1. An Improved Method of Detecting Casts in the Urine. Walter S. Haines, A.M., M.D., and J. E. Skinner, M.D. THE JOURNAL, Jan. 29, 1898.

could not be removed by 5 per cent. sulphuric acid, 30 per cent. nitric acid, alcohol, sulphuric acid-alcohol, hydrochloric acid-alcohol, nor even by the subsequent application of methylene blue. This resisting power of the bacillus has frequently been made the basis for differentiation, but it will be seen later that those differential stains which have from time to time been devised have not been universally applicable. By boiling in alkalies and alcohol the resistance to decolorization is lost.

Cultivation.—After the discovery of the smegma bacillus, attempts were immediately made to cultivate the organism, but in spite of the most scrupulous care such efforts constantly resulted in absolute failure and until quite recently, pure cultures of smegma bacilli had never been produced. Doutrelepon claimed to have obtained colonies which Bienstock and Gottstein considered to be growths of the bacilli, but the efforts to prepare pure cultures therefrom were not attended by success. To Hugo Laser of Königsberg is due the credit for having made, in 1897, the first successful cultivation experiments, and for having isolated the bacillus on suitable media for the first time.

Laser's success was attained accidentally, while he was in pursuit of an entirely different object. This observer began his experiments for the purpose of pursuing studies in regard to syphilis, and with this end in view, prepared numerous slides from the secretions of ulcera dura and condylomata lata situated at the anus and on the scrotum. After the preparations were stained with an aniline dye, large numbers of micro-organisms were visible under the microscope. Because of the resemblance existing between syphilis, tuberculosis and lepra, Laser then stained his specimens in the manner originally devised by Koch for the tubercle bacillus, viz., carbol-fuchsin, nitric acid, alcohol, and methylene blue. Bacilli were thus disclosed which resembled those of tuberculosis, and displayed the characteristic red color. Having satisfied himself by very careful examinations that his patients were not tuberculous, Laser excised a number of condylomata and ulcers, but failed to find the same bacillus within the syphilitic tissues. Consequently, he regarded the micro-organisms not as syphilitic bacilli, but as the bacilli of smegma.

Slants of agar-agar with their surfaces daubed with sterile human blood were prepared, and, after these had been kept in a brood-oven for twenty-four hours, to prove their perfect sterility, were inoculated. A similar medium was poured into Petri dishes, and inoculations made on the surface thereof.

Small colonies developed, which resembled colonies of diphtheria bacilli or of streptococci, and proved to be pure cultures of smegma bacilli. These micro-organisms were transferred to blood-serum and glycerin-agar, with the result that small drop-like colonies formed along the path of the needle. Cultivation was then attempted on the ordinary media, and the following observations made:

No development occurred on gelatin. On agar slants and dishes a sparse growth took place after several days, a temperature of 37 C. being maintained. In peptone-water and in bouillon a growth was hardly noticeable.

In glucose-bouillon a marked development was manifest. Stab-inoculations in agar and glycerin-gelatin developed but slightly, and only in the upper part of the path of the needle, with no extension over the surface of the medium. After three days no growth could be seen on potatoes, but on scraping the surface the presence of bacilli was demonstrable.

No great length of time had elapsed after the completion of Laser's observations, when Czaplowski, engaged in making cultures of gonococci on the nutrose-serum-agar recently recommended by Wassermann, accidentally observed the development of colonies which were shown by tinctorial and microscopic investigation to be composed of smegma bacilli. From these first small, irregularly rounded colonies on nutrose-serum-agar, Czaplowski then obtained, by means of direct transference and fractional cultivation, pure cultures on serum-plates. He demonstrated that a temperature of 37 C. is most favorable for the development of the bacilli, although at 23 C. a growth still occurs.

In his cultivation experiments the author resorted to the means used by Laser, in order to obtain the first colonies. Agar slants were smeared with human blood, under the strictest precautions of bacteriologic cleanliness; when no growth occurred after forty-eight hours in the brood-oven, at 37 C., the slants were regarded as sterile, and were then inoculated with smegma. As these experiments were carried out during warm weather, no brood-oven was required for the growth of the organisms for after several days a development of bacteria was noticeable. Numerous small round colonies had formed, which the microscope showed to be made up for the greater part of micrococci, while smegma bacilli were sparingly interspersed among these organisms. Attempts to separate these on glycerin-agar by means of smear-culture failed, as the micrococci developed so enormously in excess of the bacilli as to make any efforts at separation in this manner useless. The original slants were therefore observed for several days longer, and there then could be seen a few small, delicate, irregularly-rounded, grayish-white colonies, which microscopic and tinctorial examination proved to consist of smegma bacilli. As a limited number of cocci could still be detected among the bacilli, the growths were cleared of these in the following manner: A small portion of the colony was removed on a sterile platinum wire and transferred to 50 c.c. of distilled water. After thoroughly shaking the liquid, for the purpose of disseminating the organisms throughout its mass, 1 c.c. of the water was spread over the surface of glycerin-agar in a Petri dish. In this way pure colonies of smegma bacilli were obtained. Various other media were then inoculated with the organisms, the brood-oven was put into service, a temperature of 37 C. maintained, and the following results observed: *Agar: Smear-Culture.*—After several days a growth was visible. The color of the latter was grayish. The bacilli had not developed abundantly. *Agar: Stab-Culture.*—The development of the bacilli was limited to a slight growth in the upper portion of the track of the needle. The surface of the agar remained free from the organisms. *Glycerin-Agar.*—After twenty-four hours a growth could be distinctly seen, occurring as a grayish, well-defined layer. After forty-eight hours a thick, yellowish or grayish white growth had formed. The margins of the latter were sharply defined; indented, and lobulated in appearance. *Peptone-water.*—The growth in this medium was flocculent, and grayish in color, but exceedingly scanty. *Bouillon.*—After twenty-four hours a slight whitish sediment was noticeable. After forty-eight hours the bouillon was clouded, and a sediment had formed, which, upon shaking the tube, loosened itself in shreds. *Potato.*—A scanty growth was apparent after several days, in the form of a yellowish layer, of irregular shape and indefinite outline. *Loeffler's Serum: Smear-Culture.*—After twenty-four hours a growth was scarcely visible,

but after forty-eight hours colonies had developed. These were of a yellowish-gray color, and varied in size from minute specks to areas 1 mm. in diameter. By confluence these colonies later formed a distinct layer.

The following results were obtained with gelatin media, kept at room-temperature for five days: *Gelatin: Smear-Culture*.—The material which had been transferred to the surface of the slant increased in size and apparently became denser, finally forming a thin round layer resembling a drop of wax. Besides this, no colonies were visible. *Glucose-Gelatin: Stab-Culture*.—At the point of entrance of the needle into the medium, a sparse development was visible. The surface was not invaded by the developing organisms. The growth which developed was yellowish in color and sharply outlined.

The reliability of milk as a culture-medium for the smegma bacillus was first pointed out by Grünbaum.

In appearance, colonies of smegma bacilli, when examined under the microscope, simulate wax to an extraordinary degree. They are white, or nearly so, dense and finely granular with sharply-defined margins. Although the colonies are by no means always circular, yet their circumferences present no sharp, angular indentations nor fibrillar outgrowths, but when irregularities in outline exist, they are met with in the form of rounded lobules and extensions.

By gently pressing cover-glasses upon colonies of smegma bacilli, and staining the films thus obtained, the writer was able to occasionally discover a similarity in the manner of growth of the colonies of smegma bacilli and that of colonies of the bacilli of tuberculosis. Under magnification the bacilli were seen to lie behind each other with their long axes in the same line, sometimes forming portions of concentric circles, sometimes branching out at various angles and producing long, parallel, interrupted filaments. Wavy lines of bacilli were occasionally visible. The striking and characteristic features were the end-to-end approximation and the frequent parallel arrangements of the filaments thus formed. Large flat colonies on glycerin-agar gave the best results in this work. The inability to prepare specimens similar to each other in appearance, the author is inclined to attribute partly to the difficulties of growth in unfavorable media, partly to imperfect means for obtaining correct cover-glass impressions. Obviously the colonies would develop in the most characteristic manner on those media which favor a rapid and luxuriant proliferation of the organisms composing them. A study of the structure of the colonies in the hanging drop gave similar, but not equally good, results.

Inoculation Experiments.—It has frequently been asserted that a perfect identity exists between Lustgarten's bacilli and the bacilli of smegma, while observers no less eminent than those who hold this view, have maintained that these organisms are distinct species. The discussion of this question continued for many years, and only after Læser had succeeded in producing pure cultures of the smegma bacillus could it be asserted with any degree of positiveness that although Lustgarten's bacillus may or may not be the specific cause of syphilis, the smegma bacillus, at any rate, is free from pathogenic properties.

Subcutaneous and intraperitoneal injections of smegma bacilli into white mice and guinea-pigs failed to produce the slightest disturbances in the health of these animals. Similar injections were made into the systems of rats and rabbits with the same results. An injection into the anterior chamber of the eye of a rabbit was followed by transient inflammation which subsided without evil effects. Dogs and cats were then experimented on.

Neither local nor constitutional manifestations of an abnormal condition were produced. A number of these animals were killed after from four to six weeks, others after four months, and a careful examination of all organs made, but no traces of disease were found. Several animals were exposed for a time to the debilitating influences of close confinement and poor food after the injections were made, but the ultimate result of the introduction of the micro-organisms remained the same. Even when subcutaneous fractures, tissue-lacerations and injuries to abdominal viscera were artificially produced in an endeavor to cause a localization of the bacilli, there could not be found, post-mortem, any evidences of such centralization having been brought about. Experiments on pigeons and fowls served to add further proofs of the non-pathogenic character of the bacillus. While engaged in the above work, the writer had an opportunity to inject smegma bacilli into the peritoneal cavity of a monkey. No immediate disturbances followed, and after seven months the animal was not only still alive, but apparently in the best of health. Feeding experiments were unproductive of deleterious results.

Implantations of pure cultures of smegma bacilli into small incisions made by the writer in the skin of his own arm, interfered in no way with the rapid repair of these slight cutaneous wounds.

(To be continued.)

SPECIAL ARTICLE.

RELATIONS OF PHARMACY TO THE MEDICAL PROFESSION.*

I.

In discussing the relations of pharmacy to the medical profession as especially involved in the advertising and patronage of medicinal articles, a preliminary résumé of the object and purpose of the Pharmacopœia may not be out of place, since by its standard alone can the ideals of pharmacy be compared.

A brief retrospect of the history of medicine will disclose the slow growth by which uniformity in medicine has been fairly secured throughout the world, by the creation of pharmacopœias. During the Middle Ages medicine had largely lost the prestige gained by its early classic writers, such as Hippocrates, Æsclepiades, Dioscorides and Galen. The concoctions of Andromachus and Samocrates, the toxicology of Mithridates, the "Quid pro Quo" of Zanensis, the "Antidotarium" of Nicolaus, had been superseded by superstition and fetishism, the "abracadabra" and "tabula smaragdina" of Hermes Trismegistus, the incantations and the amulet, until the mysticism and fanaticism of the alchemists—the philosopher's stone and the elixir vite—held complete sway over Europe.

Not until the advent of Paracelsus, in the fifteenth century, did the medical world emerge from this condition, which had retarded civilization for centuries, and lay a foundation for scientific development and progress. The secrecy and lack of uniformity in medicines during these times prompted various medical authorities to collect and publish information concerning the remedies then in use, under the name of Dispensatories. During the sixteenth and seventeenth centuries these dispensatories became so numerous as to cause considerable confusion in the identity and uniformity of medicine, through the rivalry of their respective authors—every medical man of any considerable reputation feeling it incumbent on himself to issue a Dispensatory, with a finely-engraved likeness of the illustrious author for title-page. This redundancy of medical formulas led to the formulation of pharmacopœias, published by the authorities of the large cities to secure some degree of uniformity for their respective localities. At the close of the eighteenth century nearly every capital of Europe had a pharmacopœia, and

* The first of a series of articles to appear weekly in THE JOURNAL, designed to correct the abuses from advertising and patronizing pharmaceutical specialties.

these have since been superseded by national works for their respective countries, compiled under the direction of government authorities.

The pharmacopœia for the United States first appeared in 1820, and is revised decennially by a committee elected by a convention, to which the national and state medical and pharmaceutical associations and medical and pharmaceutical colleges are entitled to delegate representation. While the United States Pharmacopœia is not legalized by Federal statute, it is recognized by the medical branches of the Government—the Army, Navy and the Marine-Hospital Service—each branch being represented on the committee. It is, however, made the legal standard in each state of the Union, through the pharmacy acts, and also through the pure food and drug laws of many states.

THE PHARMACOPŒIA.

The importance and value of the Pharmacopœia to the medical profession is best illustrated by a definition of its functions, viz.: "An authoritative compilation establishing standards for the identity, purity, strength and quality, and giving directions for the preservation, purification, valuation, preparation and compounding of drugs, chemicals and medicinal substances. Its object, in brief, is to insure uniformity of drugs, chemicals and medicinal substances. That this is the highest therapeutic desideratum is indisputable. Yet to many prescribers the Pharmacopœia is a closed book. The present United States Pharmacopœia contains nearly one thousand articles, but statistics have shown that the average prescriber employs only one-fourth of these official articles, i. e., of 100 articles prescribed, only about twenty-five would be official ones. That the Pharmacopœia will never comprise all substances used in medicine is self-evident. Yet in the degree that medicinal substances and their preparations respond to the principles governing the introduction of articles into the Pharmacopœia—comply with the general requirements for official medicines—in the same degree will their identity be established, uniformity in prescribing be secured, and their true position in medical literature for the advancement of science be attained.

THE NOMENCLATURE.

The nomenclature of a science—its language—must be constructed on a scientific basis, and be kept pure and undefiled. It should be systematic, yet as euphonic as possible, in order that its terms be not too unwieldy, simple yet descriptive, and practicable of facile application. In all branches of medicine, save that of pharmacy, this rule is strictly adhered to; a few exceptions associating the names of some earlier medical authorities with some important discoveries in anatomy and physiology.

Formerly, in designating an especial make of a medicinal article, or pharmaceutical preparation, it was the custom to affix the name of the maker, and the great chemical and pharmaceutical manufacturing establishments of the United States were largely built up on this basis; soliciting preference for their products because of superior facilities and improved processes of manufactures, one well-known firm even distinctly repudiating any other claim for superiority of products than the exceptional facilities for securing crude material and the technical skill acquired by long experience in catering to the wants of the medical profession. The only protection thereby created was for the "brand" afforded by the firm name or symbolic trade-mark, and those products were therefore free from all secrecy and monopolistic features.

Some of the historic firms observed ethics, zealously guarded the interests of the medical profession and often contributed the results of their wide experience to the pharmaceutical literature. Many official articles and preparations have been perfected by the labors and researches of a venerable manufacturer, formerly a leading member of the AMERICAN MEDICAL ASSOCIATION, and also several of the leading houses to-day contribute, through their staff of experts, not only to pharmacy and chemistry, but also to biology and pharmacology, through their often unusual opportunities and superior laboratory equipment. While these houses are engaged in commercial pursuits, they are closely related to medicine and pharmacy and should be entitled to some consideration. As a rule their

products are supplied only to the "legitimate trade," and are not advertised to the laity, nor is their use for self-medication in any manner encouraged.

PROPRIETARY PHARMACEUTICALS.

The advent of the "proprietary pharmaceuticals," so-called in distinction from the domestic or "patent" proprietary medicines, is of more recent origin. These are mostly designated by fancy or arbitrarily-selected names, sometimes more or less descriptive of their derivation, therapeutic application or manufacture. They usually have a purported formula, or rather the ingredients are enumerated, but not a few are of secret composition. Eventually they are exploited to the laity, which is rendered comparatively easy owing to the simple euphonic name of the article, often also suggestive of its indicated use. The physician has often been used as a cat's paw for introducing them to the laity. One popular "emulsion," advertised in the newspapers and all available exposed places generally throughout the country, as a "cure for consumption," carries testimonials from two of the most noted medical teachers in the West during their lifetime.

The manufacture of these "proprietary pharmaceuticals"—each a purely commercial venture—is usually engaged in by somebody who has been connected with a wholesale drug house, some unsuccessful "doctor," and occasionally a druggist, but rarely a pharmacist or chemist. The history of one of the most "successful" earlier ones of these, whose "proprietor" is reputed to have left an estate, a few years ago, of \$800,000 as a result of his venture, will illustrate the *modus operandi*. Engaged in the sundry department of a wholesale drug house, the thought occurred to the prospective proprietor that an antiseptic solution, non-irritant and fairly inodorous, would be "a great hit," and a list of such antiseptic agents was secured from an accommodating medical man, who also suggested the name for the preparation, in honor of a then celebrated Sir, now Lord. The idea took like wild-fire. Medical men and surgeons everywhere used the preparation and recommended it. To-day it is found in dry goods stores, groceries, and, in fact, nearly everywhere. There is one thing in its favor, as might be said of most of these external antiseptic preparations, it does no harm even in the hands of the laity.

In many of these preparations there is no secrecy as to composition, in fact, claim for medical preference is usually based on the attractiveness of the preparation, as indicated more or less completely or intelligibly by the formula. But there is usually a "kink" in the formula or method of preparation, which prevents its successful imitation, and enables the proprietor to distinguish the genuine article "from spurious substitutes made by unscrupulous druggists." This feature of detecting "base imitations and counterfeits" has indeed become an important branch of this proprietary medicine business, some of these concerns maintaining a special department for the detection and punishment of offenders. One of the largest detective bureaus in the country makes a special feature of soliciting the patronage of these manufacturers, offering its services and naively suggesting that few methods are so effective in exploiting an article and stimulating a languishing demand as a vigorous campaign against real or imaginary "counterfeiters" of their goods.

POLYPHARMACY.

While the tendency in scientific therapeutics is to simple remedies, still combinations and mixtures are extensively used and will probably always be prescribed. Some of the most frequently employed, and by many considered the most valuable, remedies originated, as have the present day proprietary medicines, through prescriptions of more or less prominent medical men, but, unlike these, the complete formulas and methods of preparation were published for the benefit of medical and pharmaceutical science. Many of them were recognized in various pharmacopœias, under descriptive titles, the name of the originator surviving only as a synonym. It may be interesting to note some of the best known of these now official preparations in the United States Pharmacopœia: Fowler's solution—liquor potassii arsenitis; Donovan's solution—liquor arsenii et hydrargyri iodidi; Huxham's tincture—tr. cinchona comp.;

Turlington's balsam—*tr. benzoini comp.*; Basham's mixture—*liquor ferri et ammonii acetatis*; Griffith's mixture—*mistura ferri comp.*; Bland's pill—*pilula ferri carbonatis*; Tulley's powder—*pulvis morphinæ comp.*; Dover's powder—*pulvis ipeacac et opii*; etc. Had this class of preparations been kept secret and their names monopolized through copyright or trademark, they would have been excluded from medical literature and the profession would have been deprived of many valuable remedies.

The use of ready-made compound preparations or mixtures, aside from therapeutic considerations, has some advantages which account for their existence: 1. In their great convenience for the busy practitioner, saving time and labor involved in formulating a prescription. 2. They seem to have become an almost necessary recourse to many young and inexperienced prescribers, who are either incompetent or too timid to venture into formulating an original prescription for fear of incompatibilities, overdosage and for other reasons. On the other hand, the "habit" has many disadvantages, realized by every educated and experienced physician, not necessary to here enumerate.

THE REAL ADVANCE AGENT.

There is one phase, however, which has not been pointed out before, viz., that the armamentaria of too many hospitals, clinics and dispensaries consist largely of this class of preparations, charitably donated by the manufacturer. Here they are used to the exclusion of other remedies, with the result that the average medical student's ideas and experience concerning medicines are largely confined to the proprietary articles, which his "professors" used in their demonstrations. He acquires but little knowledge of pharmacy during the course and, when he begins to practice, he prescribes proprietary remedies and becomes the "advance agent" of the proprietor.

Aside from the objections to the use of proprietary pharmaceuticals, through lack of satisfactory knowledge of their composition and that from the habit of their prescription, the art of prescribing and the medical literature are endangered and self-prescription by the laity is encouraged, there is above all the serious objection that from their character their identity, strength and purity can rarely be determined by chemical or physical tests, and that their therapeutic value must consequently be estimated through their therapeutic or physiologic effects, which must necessarily, from such complicated mixtures, be largely empirical. When to this is added the ever-present danger of altering or changing the preparation by the manufacturer, through the best of motives, which may, however, unfavorably affect its therapeutic use or value, the status of these preparations becomes exceedingly questionable, from the fact that they are regarded as the exclusive property of the manufacturer "to own and control and to do with whatever he pleases." It is therefore not only desirable, but a medical necessity, that a systematic attempt should be made to evolve a plan whereby the legitimate remedies of this class may be made to respond to the ethics of medicine and the requirements of scientific pharmacy.

Therapeutics.

Habitual Constipation of Spasmodic Origin.

Most cases of habitual constipation proceed from atony of the bowels, but there is a variety due to spasmodic action, and the treatment of the former is directly injurious in the latter, which Romme describes in the *Presse Med.*, March 31, as characterized by hard, small-calibered feces, the subject a neuropath. The constipation is ordinarily of recent date, and is attributed to some particular cause, such as an indiscretion in diet. The abdomen is not distended, the intestines are not painful on pressure, but the abdominal wall is contracted. Hydrotherapy, copious lavages of the intestines, and modification of the diet usually cure the constipation in a few weeks. Purgatives are injurious; sedatives are indicated. One or two pills of belladonna, .01 gm. each, taken before breakfast, or tincture of opium, five drops a day.

Treatment of Malarial Fever.

The mere administration of quinin pills or capsules in malaria is not always sufficient to cure the disease. The following prescriptions have been recommended by eminent clinicians:

- R. Quinina sulphatisgr. x
Capsici pulvgr. iii
Opii pulv.....gr. i
M. Sig. One dose. —Alonso Clark.

AFTER PAROXYSMS HAVE BEEN ARRESTED.

- R. Tinct. iodini
Tinct. ferri chloridi
Tinct. sanguinaria—equal parts.
M. Sig. Twelve to fifteen drops after each meal. —Carpenter.

IN OBSTINATE FORMS.

- R. Ferri ferrocyanidi
Pulv. guaiaci resinæ aa.....3i
M. et. ft. Chart No. xii. Sig. One powder thrice daily. —Ellis.

FOR RECTAL INJECTION.

- R. Quinina bisulphatisgr. xv
Acidi sulphurici diluti q. s.
Aque q. s. ad.....3ii
M. Sig. Injct.
R. Quinina sulphatisgr. xlv
Ferri et potassii tartratis.....gr. cv
Aque destillata3iiv
Liq. potassii arsenitis.....m. xxv
M. Sig. 3i from one to three times daily.

IN GRAVER FORMS.

- R. Quinina hydrochloratisgr. xv
Sodii chloridigr. lss
Aque destillata3iiss
M. Sig. Use one-half the above quantity as an intravenous injection. —Barcelli.

- R. Quinina sulphatisgr. x
Acidi sulphurici diluti.....m. x
Syr. aurantii3ii
Aque ad.3i
M. This amount three times a day. —Fothergill.

- R. Hydrarg. chloridi mitis
Pulv. ipeacuanhæ et opii aa.....gr. iv
Quinina sulphatisgr. xvi
M. For four pills. Two to be given at bedtime and two the following morning. —Claiborne.

FOR MALARIAL AND ALSO URIC-ACID CONDITIONS.

- R. Quinina sulphatis
Hydrarg. cum cretæ aa.....gr. xvi
M. et. ft. capsulas viii. Sig. Two capsules each night at bedtime, followed by two drams of Epsom salts in a glass of hot water before breakfast. —H. P. Loomis.

IN CHILDREN.

- R. Tinct. eucalypti
Alcohol aa3ii
Quinina hydrochloratis5ss
Quinoidinaʒi
Acidi chlorici q. s. solution
M. Sig. From 20 to 40 drops five times a day. —Zuckermann.

- R. Quinina sulphatis3i
Tinct. ferri chloridi.....5v
Liq. acidi arseniosi.....3iss
Potassii chloratis3i
Syr. zingiberis q. s. ad.....3iv
M. Sig. Teaspoonful in water thrice daily, after meals. —Guice.

SIMPLE INTERMITTENT IN ADULTS.

- R. Massæ hydrargyrigr. x
Ext. hyoscyamigr. v
Quinina sulphatisgr. xx
M. ft. pil. No. x. Sig. One every hour during the afternoon, to be followed by salines in the morning. —E. J. Kempf.

IN MALARIAL CACHEXIA.

In addition to eight grains of quinin in capsule on an empty stomach morning and evening:

- R. Liq. arsenici chloridigtt. v
- Tinct. ferri chloridigtt. xx
- Elixir
- Aque aa q. s. ad.3i
- M. To be taken three times a day after meals.

—Da Costa.

TO CHECK RECURRENT PAROXYSMS.

- R. Pil. ferri carbonatis3i
- Acidi arseniosigr. i
- Quinina sulphatisgr. xl
- M. ft. cap. No. xx. Sig. One capsule three times a day.
- R. Quinina sulphatis3ss
- Liq. potassii arsenitis5iss
- Tinct. ferri chloridi3ss
- Syrupi zingiberis3iss
- Aque destil q. s. ad.3iv
- M. Sig. Dessertspoonful after meals.

Bedford Brown says: "In giving quinin, give enough. Sixty grains daily, or ten every four hours, will arrest an attack in seventy-two hours or less. Thirty grains daily in three-grain doses will prolong it to five or six days. Ten grains every eight hours will have more effect on the germs than two grains every hour, and will not make the patient so nervous. In swamp regions the dose for a child between the ages of one day and 8 years is five grains."

Ear buzzing may be controlled to a large extent by simultaneous use of small doses of atropin.

—Aubert.

In malarial hematuria, prevent by giving quinin in requisite amount at the proper time.

When the kidneys are not acting well it is very hazardous not to administer quinin.

—Sears.

When improvement has not occurred under quinin and arsenic, methylene blue, 0.25 cg., three times daily.

To reduce temperature, external applications of creosote and guaiacol (m. xv.).

When quinin can not be given by the mouth to children the following may be used:

- R. Quinina sulphatisgr. xv
- Acidi hydrochlorici sufficient to make soluble.
- Aque dest.3i

M. Sig. Inject twenty minims into the cellular tissue of back or forearm, followed by gentle rubbing to aid in diffusion.

—Benson.

Daland says: "In gastric catarrh or the gastrohepatic symptoms of lithemia, precede the specific treatment of malaria by a short course of broken doses of calomel, and it may be necessary to give quinin by suppository or subcutaneously.

TO CLEANSE THE CHYLOPOIETIC SYSTEM.

- R. Podophyllingr. i
- Leptandringr. ii
- Iridingr. i
- Ext. nucis vom.gr. i
- Capsicigr. i

M. ft. pil. xl. Sig. One or two three times a day for children.

—Kempf.

Facial Neuralgia.

The following mixture often gives relief:

- R. Butylchloral hydratis
- Alcoholi, aa3iiss
- Glycerini5v
- Aque5xxx

M. Sig. One to two teaspoonfuls daily.

—Progrès Médical.

Cacodylic Medication.

A. Frassi has been testing cacodylic medication, which has been recommended in high terms in France during the past year. He corroborates its efficacy as a peculiarly advantageous form of administering arsenic, especially in respect to the hemoglobinogenesis and cytogenesis induced, although it is less effective in promoting hemoglobinogenesis than preparations of iron. It seems to have a remarkable and more or less

specific action in surgical tubercular affections. There was always an increase of weight and of the amount of urica eliminated in every case treated. Seven observations are reported in detail in his communication to the *Gazzetta degli Ospedale*, March 14.

Diabetes Mellitus.

- R. Strychnina sulphatisgr. 1/200
- Sodii arseniatisgr. 1/50
- Codeinagr. 1/6
- Quinina valerianatisgr. i
- Ext. valeriana, q. s., ft. pil. No. i

M. Sig. From one to six of these pills may be given each day.

—Legendre.

TO LESSEN THE QUANTITY OF SUGAR.

- R. Antipyrin3iij
- Glycerini3i
- Aque5viii

M. Sig. Teaspoonful every three hours.

—Josias.

TO LESSEN THE THIRST.

- R. Infus. cascariillaOj

Sig. A wineglassful three or four times daily.

—Da Costa.

Functional Albuminuria.

- R. Acidi gallici3i to 3ii
- Acidi sulphurici diluti3ss
- Tinct. lupulini3i
- Infusi lupulini, q. s., ad.3vi

M. Sig. Tablespoonful three times a day.

—Aitken.

FOR SUBCUTANEOUS INJECTION.

The following is Mennella's formula for a subcutaneous injection:

- R. Iodinigr. iii | 2
- Potassii iodidi, q. s.
- Aque destil., q. s., ad.gr. iii | 2

M. Sig. From ¼ to ½ dram (1 to 2 c.c.) to be injected in the course of a day.

MOUSNIEK'S FORMULA.

- R. Iodini3i | 4
- Tanningr. xv | 1
- Eucalyptol3x | 40
- Olei sterilizat, q. s., ad.3xxv | 100

M. Sig. Inject from ¼ to ¼ dram (.5 to 1 c.c.).

Evaporation of Peroxid of Hydrogen in Whooping-cough.

The antiseptic and oxidating power of oxygenated water suggested its application to the treatment of whooping-cough, and Baroux, after thoroughly testing on himself the harmlessness of the method, now reports that it will "certainly jugulate every case of whooping-cough within a week." His method is to moisten a couple of old cotton cloths about a yard square, with 80 grams of the peroxid and suspend on a rope across the center of the room, repeating every four hours. This amount corresponds to a closed room of about sixty to seventy-five cubic meters. Two rooms should be used, one for the day and another for the night. The peroxid should be about 12 volumes, and about four liters are required. He gives the following harmless sedative at once:

- R. Tinct. drosera3ss | 2
- Tinct. belladonnagr. xlv | 3
- Tinct. aconiti3i | 4

M. Sig. Ninety drops during the day for an adult; dose diminishing with age.

Treatment of Thomson's Disease.

V. Bechtereff attributes this affection to disturbed organic interchanges and, the *Scm. Méd.* states, has been very successful in treating it with gymnastics, electric massage, tepid baths, potassium iodid and antipyrin, to combat the toxic substances produced in consequence of the muscular lesions.

Furunculosis.

To abort the furuncular process:

- R. Liq. ammoniæ3i+m. xx
- Aque3ii

M. Sig. Teaspoonful in water three times a day.

—Kandolph.

Medicolegal.

Regulation of City Scavenger Work.—The Court of Appeals of Colorado holds, in *City of Ouray vs. Corson*, that, by virtue of a statute conferring on municipal corporations the power to enact such ordinances as may be deemed necessary for the safety, health, comfort and convenience of the public, and the power to make all regulations which may be necessary or expedient for the promotion of health or the suppression of disease, a city has ample power to create the office of city scavenger, and prescribe the terms on which other persons may do scavenger work. Nor does it consider that it is a valid objection to an ordinance doing this that it does not embrace any specific regulations concerning the manner in which the work shall be done. Whatever may be needful in this regard, it holds, may be supplied by other and succeeding ordinances, as well as that there may be so made, any modifications needed to meet the requirements of changed conditions.

Where the Coroner is a Practicing Physician.—"Can the board of county commissioners legally enter into a contract with, or employ, the coroner of the county, who is a practicing physician, for a period of one year, at reasonable compensation, to furnish medicine and medical attendance for the poor and paupers of the county?" This question was reserved for the Supreme Court of Wyoming, by the judge of the district court, in *Baker vs. Board of Commissioners of Crook County*. Toward answering it, the supreme court first of all holds that the office of coroner, where the pay is \$5 per day and 10 cents a mile mileage for holding inquests, and the same fees as may be allowed the sheriff when he performs the duties of sheriff, is very clearly a "lucrative" one, within a statute prohibiting any person holding a lucrative office from being interested in contracts for the construction of any public building, or work of any kind, namely, of the character of what are usually designated "public works," or from bargaining for or receiving any percentage, or "rake off," as the court says it is sometimes called. But even so, it does not consider the contract in question within the inhibition of that statute. Nor does it see any reason for declaring such a contract to be against public policy. It intimates that if the coroner of a county, who happened to be a physician, should employ himself to make a post-mortem examination, such contract might be obnoxious as opening the door to fraud, and against public policy. At the same time, it points out that the objection that the coroner would probably call on himself to hold the post-mortem examinations for the fees allowed, if he were also county physician, is met by the statute of that state, which contains a proviso that the sections providing for the payment of such fees shall not apply in the case of any physician regularly employed by the county as such. For these reasons, and because the officer in the case presented represents only himself as an individual, and, with reference to the subject-matter of the contract, does not assume to represent, and has no power of authority to represent the county, the court answers the question reserved in the affirmative, holding that such a contract is not subject to any legal objection raised.

"Cancer Specialist" Not Competent Witness.—A regular, practicing physician brought an action to recover \$500 for professional services rendered in the treatment and cure of two cancers—one on the face and one on the hand of the party he sued. He obtained a judgment for \$350. The testimony which he introduced to prove the value of his services was that of regular, practicing physicians. There was also expert testimony introduced on behalf of the party sued. But the only error complained of by the latter, on appeal, was the striking out of a deposition of a so-called "cancer specialist," on objection to its admission in evidence to show the value of the services rendered. From the deposition it appeared that the witness had testified that he was a cancer specialist, treating nothing but cancers; that he had been so engaged for the preceding five years, but had also followed farming during about four years of that time; that he was not a physician nor surgeon, and had never attended any medical school or

college, nor read any course in medicine or surgery; that what he knew concerning the treatment of cancers he had learned from another cancer specialist, whose formulas and recipes he followed, not venturing any treatment of his own, independently of such formulas and recipes. Under such circumstances, the Court of Appeals of Kansas, southern department, holds, *appeal of Griffith vs. McCandless*, there was no error in excluding the deposition on the ground that it itself showed the witness to be incompetent to testify as an expert. Nor does it consider that the right to make this objection to the deposition at the trial of the case, when it was offered in evidence, was waived by the plaintiff appearing at the taking of the deposition, and not then objecting to the testimony of the witness on the ground of his incompetency. On the competency of the witness, it declares that little need be said. Indeed, it thinks it enough to say that the proper testimony concerning the value of the plaintiff's services was that of men of science—physicians of training, knowledge, and experience. The witness testified that he was not a physician, and it did not appear that his preceptor was himself a physician. His opinion was based on reading or study. Hence, the deposition was properly excluded; and the judgment for the plaintiff is affirmed.

State Quarantine vs. Interstate Commerce.—In the bill of complaint filed with the Supreme Court of the United States by the State of Louisiana vs. the State of Texas, it was charged that the health officer of the State of Texas, by rules and regulations framed and put in force by him under the laws of Texas in respect to quarantine, had placed an embargo in fact on all interstate commerce between the State of Louisiana and the State of Texas, and that the Governor of Texas had permitted these rules and regulations to stand and be enforced, although he had power to modify or change them. No complaint was made that the Texas quarantine laws were invalid. Nor was the bill rested merely on the ground of the imposition of an embargo without regard to motive. What it particularly charged was that the rules and regulations established by the authorities of Texas under its statutes were more stringent than called for by the particular exigency—went beyond what was necessary to protect the people of the state against the introduction of infectious diseases, yellow fever in particular, and were purposely framed with the view to benefit the State of Texas, and the City of Galveston in particular, at the expense of the State of Louisiana, and especially of the city of New Orleans. This bill the supreme court has dismissed, on the ground that it did not set up facts which showed that the State of Texas had so authorized or confirmed the alleged action of her health officer as to make it her own, or from which it necessarily followed that the two states were in controversy, within the meaning of the Constitution, so as to give the court jurisdiction. Moreover, it declares itself unable to hold that the bill could be maintained as presenting a case of controversy "between a state and citizens of another state." Nor can it, it says, accept the suggestion that the bill could be maintained as against the health officer alone on the theory that his conduct was in violation or in excess of a valid law of the state, as the remedy for that would clearly lie with the state authorities, and no refusal to fulfill their duty in that regard was set up. In truth, it adds, it is difficult to see how on this record there could be a controversy between the State of Louisiana and the individual defendants without involving a controversy between the states, and such a controversy, it maintains, as above stated, was not presented. In the course of its remarks, the court says that, while it is true that the power vested in Congress to regulate commerce among the states is a power complete in itself, acknowledging no limitations other than those prescribed in the Constitution, and that where the action of the states in the exercise of their reserved powers comes into collision with it, the latter must give way, yet it is also true that quarantine laws belong to that class of legislation which is valid until displaced by Congress, and that such legislation has been expressly recognized by the laws of the United States almost from the beginning of the government.

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

Medical News (N. Y.), April 7.

- 1.—*Cancer of Breast. Robert Abbe.
 - 2.—*Malignancy. Arthur L. Fuller.
 - 3.—Causes, Diagnosis and Treatment of Cystitis. Ramon Guitéras.
 - 4.—Hypnotism. F. X. Dercum.
 - 5.—Case of Spontaneous Rupture of Uterus. Bradford Woodbridge.
- Boston Medical and Surgical Journal, April 5.**
- 6.—*Distortion of the Spine; with Report of Two Cases of Diplegia Brachialis due to this Cause. J. W. Courtney.
 - 7.—*Conservative Operative Treatment of Fibroids; Report of Three Cases. W. L. Burrage.
 - 8.—*Two Cases Illustrating Conservative Operations for Uterine Fibroids. R. A. Kingman.
 - 9.—Peculiar Case of Adenocarcinoma of Body of Uterus. Agnes C. Viator.
 - 10.—Case of Extrauterine Pregnancy, with Operation. Frederick W. Johnson.
 - 11.—Empyema of Frontal Sinus. John D. Paige.

New York Medical Journal, April 7.

- 12.—*Puerperal Septicæmia: Especially its Bacteriology and Treatment by Serum. Louis A. Hering.
- 13.—*Chronic Carbon Monoxid Poisoning, with Report of an Illustrative Case. Thomas J. Yarrow, Jr.
- 14.—Gunshot Wounds. Report of Gunshot Cases in Spanish-American War, and Deductions Therefrom. (Continued.) W. C. Borden.
- 15.—*Some Critical and Desultory Remarks on Recent Laryngologic and Rhinologic Literature. (Continued.) Jonathan Wright.
- 16.—*Crescots. Some Clinical Observations on Its Use in Various Conditions. Frederick Cleveland Test.
- 17.—*Treatment of Gouty Deposits. E. L'H. McGinnis.
- 18.—*Critical Study of Justus Blood Test for Syphilis. David H. Jones.

Medical Record (N. Y.), April 7.

- 19.—*Traumatic Hemorrhages into Spinal Cord. Pearce Bailey.
- 20.—*Some Remarks on Treatment of Syphilis. Charles J. Proben.
- 21.—*Treatment of Rheumatism at New York Hospital. Hughes Dayton.
- 22.—*Summary of Cases of Carcinoma and Sarcoma Treated by Writer's Method of Cataphoric Sterilization, to Jan. 15, 1900. G. Betton Massey.

Cincinnati Lancet-Clinic, April 7.

- 23.—*Surgical Uses of Suprarenal Extract. J. W. Murphy.
- 24.—*Palvic Tumors as Cause of Sciatica. Elliott B. Palmer.

Medical Review (St. Louis, Mo.), April 7.

- 25.—*Personal Cleanliness and a Good Complexion. Fred J. Levisier.
- 26.—Report of Case of Hodgkin's Disease. A. Derivaux.

Philadelphia Medical Journal, April 7.

- 27.—*Histology and Microchemic Reactions of Some Cells to Anilin Dyes: Identity of the Plasma-cell and Osteoblast; Fibrous Tissue a Secretion of the Plasma-cells; Mast-cell Elaborates Mucin of Connective Tissues. H. F. Harris.
- 28.—*Parasites of Estivoautumnal (remittent) Malarial Fever. Charles F. Craig.
- 29.—*Soldier in the Tropics. His Food, Alcohol and Acclimatization. Charles E. Woodruff.
- 30.—*Hospitals of Porto Principe, Cuba. S. T. Armstrong.
- 31.—Bubonic Plague. H. F. Harris and W. F. Arnold.
- 32.—*Share of "The White Man's Burden" that has fallen to the Medical Departments of the Public Services in Puerto Rico. John Van Rensselaer Hoff.
- 33.—*Methods of Control of Leprosy in Hawaiian Islands, with Description of Leper Settlement on Molokai. R. S. Woodson.
- 34.—*Sanitary Conditions of the Far East as it Affects the United States. Stuart Eldridge.
- 35.—*Notes on Philippines. Samuel O. L. Potter.
- 36.—Cuban Malaria in North Atlantic Squadron of United States Navy in 1898. W. F. Arnold.
- 37.—*History and Etiology of Bubonic Plague. George M. Sternberg.
- 38.—*Intestinal Fever: Cause and Prevention. G. W. Richardson.
- 39.—*Amebic Dysentery. I. B. Diamond.

American Practitioner and News (Louisville, Ky.), February 1.

- 40.—International Congress for Tuberculosis. T. B. Greenley.
- 41.—Treat Patient, not Disease. R. R. Sullivan.
- 42.—Report of Case of Extrauterine Pregnancy which Became Intra-peritoneal. J. Whitney Hall.

Columbus Medical Journal, March.

- 43.—*Early Diagnosis of Idiocy, with Case. J. Park West.
- 44.—*Inversion of Ulnar Appendix. J. F. Baldwin.
- 45.—*Appendicitis. J. A. McClure.
- 46.—*Placenta Previa. Hugh Hendrixson.

Journal of Boston Society of Medical Sciences, February 20.

- 47.—*Relation between Physique and Mental Work. Henry G. Beyer.
 - 48.—*On a Hitherto Unrecognized Form of Blood Circulation without Capillaries in Organs of Vertebrates. Charles S. Minot.
 - 49.—*Relation of Cephalic Index to Height, Weight, Strength and Mental Ability. D. A. Saizeni.
 - 50.—*Branching Forms of Tubercle Bacillus in Sputum. W. H. Smith.
 - 51.—Development of Microscope. Harold C. Ernst.
- University Medical Magazine (Philadelphia), March.**
- 52.—*Use of Antitoxin in Diphtheria, with Special Reference to Small and Frequently Repeated Doses. Julius H. Musser.
 - 53.—*Absorption and Metabolism in Exclusive Rectal Alimentation. D. L. Edsall.

Annals of Ophthalmology (St. Louis, Mo.), January.

- 54.—Destructive Ulcers of Eyelids: Cure. Kenneth Scott.
- 55.—*Hemianopsia (Half-Blindness). Its Forms, Anatomy, Etiology, Diagnosis, Prognosis and Therapy. (Continued.) Herman Schmidt-Rimpler.
- 56.—*Clinical Notes on Sympathetic Ophthalmia. H. Gifford.
- 57.—*Value of Cycloplegia in Optometric Examination. C. M. Culver.
- 58.—Retrolabial Abscess Due to Empyema of Maxillary Antrum and Ethmoidal Sinus Resulting from Dental Caries: Operation; Recovery. J. Guttmann.
- 59.—Some Wounds to Eye and Its Adjacent Parts in Cuban War of Independence. J. Santos Fernandez.
- 60.—Diabetic Cataract, with Report of Case. Edward B. Heckel.
- 61.—New Ophthalmoscope. Charles H. May.

Brooklyn Medical Journal, April.

- 62.—Practical Reform of One Hospital Evil. Arthur C. Jacobson.
- 63.—*Head Injuries. Silas C. Blaisdell.
- 64.—Treatment of Acute Anterior Urethritis. William E. Butler.

Annals of Gynecology and Pædiatry (Boston), March.

- 65.—*Gall-Stones: Some Pathologic and Clinical Phases. A. H. Cordier.
- 66.—*Correlation of Sexual Function with Insanity and Crime. H. Macaughy Jones.
- 67.—Case of Porro's Operation. Milo B. Ward.
- 68.—*Some Remarks on Operative Treatment of Uterine Fibroids. W. J. Gow.

Chicago Medical Recorder, March.

- 69.—*Peculiar Mixed Tumors of Kidney. Maximilian Herzog.
- 70.—Pathology of Renal Neoplasms. Daniel N. Eisenbrandt.
- 71.—Symptomatology, Diagnosis and Treatment of Neoplasms of Kidney. L. L. McArthur.
- 72.—*Effect of Dist in Nephritis. N. S. Davis, Jr.
- 73.—Motor Insufficiency of Stomach. Penton B. Turck.
- 74.—*Demonstration of Three Cases of Radical Mastoid Operation. J. Holinger.
- 75.—Clinical Cases. D. N. Eisenbrandt.
- 76.—*Surgical Cases. A. E. Halstead.
- 77.—*Case of Nerve Suture a Year after Injury. E. J. Senn.
- 78.—*Inflating Rectal Specula with Detachable Tubes. J. Rawson Pennington.

Colorado Medical Journal (Denver), March.

- 79.—*Problems in Rural Sanitation. J. Tracy Melvin.
- 80.—Practical Methods of Detecting the More Common Pathogenic Bacteria. Wm. G. Mitchell.
- 81.—Preliminary Remarks to Discussion of Tuberculosis. C. Denison.
- 82.—Etiology of Acute Diffuse Pneumonia. Wm. N. Beggs.
- 83.—*Angiotribe in Operations for Varicocele. Leonard Freeman.
- 84.—Operation for Carcinoma of Penis and of Anus. Edmund J. A. Rogers.

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- 85.—*Management of Incomplete Abortion. J. H. Belt.
- 86.—*Foreign Bodies in Maxillary Sinuses, with Report of Case. R. J. Wanner.
- 87.—*Adherent Pericardium, with Report of Case. H. W. Rogers.
- 88.—Puerperal Pyæmia: Report of Case. I. W. Bard.
- 89.—Effect of Public School Life on Eyes of Children. Edward P. Morrow.
- 90.—*Amputation of Leg for Diabetic Gangrene, without General Anæsthesia, by Cocainizing Spinal Cord. Wm. E. Lower.

Pennsylvania Medical Journal (Pittsburg), March.

- 91.—*Therapeutics of Opium. E. V. Swing.
- 92.—New Proctology. Wm. M. Beach.

St. Louis Courier of Medicine, March.

- 93.—*Ectopic Gestation. Egbert H. Grandin.
 - 94.—Case of Secondary Post-Partum Hemorrhage. L. E. Newman.
 - 95.—Rare and Interesting Surgical Cases. C. P. Thomas.
 - 96.—Report of Case of Placenta Previa. Frank Hinchey.
 - 97.—Relative Value of Antisepsis and Improvement in Technique, as Regards Actual Results in Operative Gynecology. (Continued.) L. Gustave Richelot.
 - 98.—*Philosophy of Living. Isadore Dyer.
- Canadian Journal of Medicine and Surgery (Toronto), April.**
- 99.—On the Role of Primary and Secondary Osteoplastic Surgery in Treatment of Complicated or Compound Fractures of Extremities. (Continued.) Thomas H. Manley.
 - 100.—Complications of Suppuration of Middle Ear. J. H. MacCallum.
 - 101.—Case of Jacksonian Epilepsy in Which the Paroxysms were Controlled by Chloretone. W. T. Parry.

American X-Ray Journal (St. Louis, Mo.), March.

- 102.—Excitation of Crooke's Tube by Static Machine. Magnetic Discharges. John T. Pitkin.
- 103.—Exhibition of Skiagraphs: Report of Cases. J. T. Dunn.

Alabama Medical and Surgical Age (Birmingham), March.

- 104.—*Wounds of Liver and Biliary Tract. W. E. B. Davis.
- 105.—Treatment of More Common Diseases of Rectum. Geo. S. Brown.
- 106.—Etiology of Nervous Disorders. B. L. Wyman.
- 107.—Eourousis and Its Treatment. Thos. Bassett Keyes.

Medical Sentinel (Portland, Ore.), March.

- 108.—Conservatism in Pelvo-Abdominal Surgery. L. P. McCalla.
- 109.—Placenta Previa. Report of Case. Owens O'Dair.

Richmond (Va.) Journal of Practice, March.

- 110.—What Most Contributes to Success of Young Physician. I. S. Stone.
- 111.—*Four Cases of Penetrating Wounds of Abdomen with Visceral Lesions and Wounds of Entrance above the Umbilicus. Hugh M. Taylor.
- 112.—Tubercular Arthritis of Knee, With Remarks. J. W. Hanson.

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- 113.—*Four Cases of Penetrating Wounds of Abdomen with Visceral Lesions, Wounds of Entrance Above the Umbilicus. Hugh M. Taylor.
- 114.—Delayed Menstruation in Girl, due to Chlorotic Conditions. J. W. P. Smithwick.
- 115.—Facts in Regard to Alcohol. W. P. Howle.
- 116.—Chronic Ulcers; Their Treatment, with Report of Cases. J. W. P. Smithwick.

AMERICAN.

1. **Cancer of Breast.**—The fact that cancer is more generally recognized as an originally localized disease is first alluded to, and as evidence, Abbe mentions the complete immunity furnished by the excision of the diseased regions where lymphatic circulation is not active enough, as in the lips and skin. In other localities, however, such as the breast, where the absorbent channels are free, the spread of infection is rapid, and he points out the causes as shown by the anatomy of lymphatics in the pectoral region. It is this progress along anatomic lines that has given the recent great impetus to surgery. To-day the axilla is regarded as primarily contaminated, almost as soon as any tumor can be recognized in the breast. Excision of the axillary lymphatics is, therefore, good surgery, and most operators now avoid leaving any possible contamination, make wide incisions, extensive extirpation of the skin without regard to apposition of the skin-edges, trusting to grafts and healing by granulation to fill the wound. Too much emphasis can not be laid on possible operative infection, and the author suggests that there is a certain risk in too much scrubbing in preparing the patient for the operation. He would advise the least possible friction and handling in preliminaries. In estimating the value of recent work we must rely on statistics and what he calls the personal impression of surgeons. He refers to the statistics of Halsted and Stiles, and he gives his own, in which about 25 per cent. have reached the three-year limit of freedom from the disease, and nearly as many more have approached it. As regards the "personal impression," he says that the stage of pessimism of ten or fifteen years ago is past and the operators are now hopeful in this class of cases. Even where perfect cure is not obtained much relief is secured for the time at least. Recurrence after operation need not discourage the physician; if speedily and thoroughly attended to there is still a strong probability of ultimate good results.

2. **Malignancy.**—Malignancy apparently consists in a group of features, such as rapidity of growth, tendency to recurrence after removal, glandular infection and general dissemination, and a condition of progressive ill-health ending in death. Fuller defines it as an inherent tendency to impairment of health and destruction of life by some special pathologic activity. The author of the paper here works out his suggestion largely by the resemblance to certain other conditions, myxedema and Addison's disease, each of which depends on the absence or destruction of certain glands, whose functions are intimately connected with the health of the organism. The cachexia of malignant disease is, he thinks, similarly produced, and he suggests the possibility of the connection of the absence of the thymus gland with this condition. This gland, as we know, is active in fetal life and infancy, and he thinks its function is to extract from the blood some products of embryonic cell metabolism which are injurious to the system. It is therefore suggested that it is possible to administer some preparation of thymus, preferably an extract by intravenous injection, which may be of use in treatment of these malignant tumors whose cells are embryonic in character. He sums up as follows: Malignancy is a term which implies some special form of pathologic activity, not present in other conditions. Since the cachexia alone seems to depend on forms of cell energy which are absent in other conditions, it alone must be considered the essential feature of malignancy. The relation of cachexia to the embryonic character of the tumor cells is such as to suggest that it is due to the retention of products of embryonic cell metabolism in the system, constituting a form of toxemia; therefore, the special form of activity which constitutes malignancy is probably the formation and excretion into the system of such products. This suggestion is borne out by the fact that the presence of embryonic cells pouring their met-

abolic products into the system, in the absence of the thymus gland, constitutes a pathologic condition similar to those present in myxedema and Addison's disease, diseases in which the loss of health closely resembles the cachexia of malignant disease. Therefore, the administration of thymus in malignant disease might prove of service in sustaining the patient's strength, just as the administration of thyroid has done in myxedema and suprarenals in some cases of Addison's disease.

6. **Distortion of Spine.**—The nervous symptoms accompanying distortion of the spine from trauma are noticed at length, by Courtney, and the treatment suggested. Incompleteness of cord lesion accompanying this distortion is the most distinguishing feature, and is shown by their usual one-sidedness, varying degrees of sensory and motor implication, their local distribution and chronologic order, etc. All these are discussed at length and two cases reported.

7. **Operative Treatment of Fibroids.**—After reporting three cases of removal of fibroids, 2 subperitoneal and 1 submucous, Burrage says that conservatism should be the rule and hysterectomy is preferable to myomectomy only in cases near the menopause. As regards the mode of approaching this tumor his rule is as follows: 1. If the tumor is of small size, of submucous evolution, and projects into the uterine cavity, dilate the uterine canal by sterile laminaria or tupelo tents, beginning twenty-four hours before the time set for operation. Splitting the cervix is often an unnecessary mutilation, and, in the case of sloughing fibroids, it offers a fresh cut surface for septic absorption. It time does not serve for gradual dilatation, dilate when the patient is under ether, with the stout steel dilators until the canal will take the operator's finger. Remove the tumor by twisting, snaring or by morcellation, according to its situation and character. 2. If the tumor is of subperitoneal or subvaginal evolution, and is in the cervical region, and the vagina is of good size, perform either anterior or posterior colpotomy and enucleate the tumor without opening the peritoneum, if possible, closing the incision with buried sutures of catgut. 3. If the tumor is of subperitoneal evolution in the region of the fundus, and in all other cases, open the abdomen, incise the capsule of the tumor along one side and enucleate it; then close the bleeding surface left with buried continuous sutures of catgut. At the present time he seldom has occasion to enucleate, and he does not think steaming of the uterine cavity has the sanction of successful experience. Electricity has no lasting effect on the tumor. Removal of tubes and ovaries has been abandoned as an operation as ineffective, and not much is to be expected from ligation of the uterine arteries.

8. **Conservative Operation for Fibroids.**—Kingman reports two cases illustrating the value of conservative methods where a more radical one would at first sight appear to be indicated. He believes that the percentage of cases of submucous sessile fibroids that can be removed by the vaginal route would be increased if digital explorations were more commonly employed, and he thinks that the tent has still some use in such cases. We ought to be able to remove pedunculated fibroids and fibrocystic tumors by the abdomen, whatever their size, and there can be no question that the presence of such a mass of tumors as to obliterate all evidence of a uterus, when the tumors are complicated by presence of suppurative disease, and where the patient has passed the menopause, also in certain other complications, such as Graves' disease, would make hysterectomy advisable.

12. **Puerperal Septicemia.**—The dangers and fatal tendency of puerperal septicemia compel one to employ whatever agent holds out any hope, and Hering reports that he has used two which are still *sub judice* to some extent. One of these is guaiacol, which he thinks is advisable only for lessening temperature. Given a case with a record of 100 to 105 F. and general depression attendant on septicemia, he has employed sponge baths, given at regular intervals, and guaiacol rubbed into the abdominal wall every hour until its antiseptic effect became manifest. The other agent was antistreptococcus serum, and the good results attendant on its use have led him to believe in continuing its employment. This fails sometimes from mixed infection, as well as from other reasons. In many

cases the staphylococcus and bacillus coli are very active, as well as streptococci. The streptococcus itself is a very variable organism, and the serum effective in one form may not be so against others. The author attributes the failure to the use of old serum, delay in inaugurating treatment, insufficient use of the remedy and overstimulation of the patient. All his patients were curetted gently and thoroughly, the uterine cavity irrigated with weak bichlorid solution; the objections to curetting are invalid if it is properly done. He introduces a narrow strip of sterile iodoform gauze, and always evacuates pus where it can be reached by vaginal incision. In addition he has given a daily douche of a hot weak solution, and noticed reduction of temperature each time. The use of morphin is condemned. The administration of antistreptococcus serum is begun as soon as it can be procured, injected into a sterile area of tissue, with sterile hands and a sterile syringe. He doubts the value of giving quinin, as it impairs the oxygen-carrying function of the red blood-cells; when given it should be combined with ergot. He also protests against the trust in sterile gauze, as given out by manufacturers. He always adds more iodoform and throws the gauze in a bichlorid solution, keeping it there until needed. For stimulation he gives strychnin, beginning with 1/30 to 1/40 gr. and gradually tapering off, giving in conjunction caffein and sodium salicylate in 3 to 5 gr. doses every three or four hours, and continuing it after stopping the strychnin. For restlessness and insomnia he uses trional, 20 gr. and codein, 1/4 gr. at bed time. With these measures he carefully keeps up the nutrition of the patient, by a liquid diet.

13. **Chronic Carbon Monoxid Poisoning.**—Yarrow reports and illustrates a case, and calls attention to the value of the use of the spectroscopie in diagnosis of obscure cases of poisoning. He thinks carbon monoxid poisoning may be much more common than generally supposed.

15. **Tuberculosis.**—In this article Wright notices some recent literature in regard to tuberculosis: Viquerat's paper attributing the cause to succinic acid; the demonstration of Cornet as to the importance of dried sputum infection, and the overthrow of Flugge's idea of transmission by coughing; the theory of contagion or infection by way of the tonsils, and the question of latent tuberculosis. He thinks that the statistics published can not be extensively relied on to establish the proportion of cases where adenoids and tonsils are the seat of the so-called latent tuberculosis. He does not believe that he will be able to bring his average, by microscopic examination, up to 5 per cent., which is Levin's figure.

17. **Gouty Deposits.**—McGinnis' paper calls attention to the use of cataphoresis for introducing lithium locally into the gouty region, and its effects. Two patients thus treated have been much benefited, and a third one now under treatment is much improved.

18. **Justus Test for Syphilis.**—After a histologic introduction, Jones gives his personal experience with fifty-three cases in which this test was employed. He thinks that it is of value in the recognition of doubtful cases of syphilis, though not infallible. It often fails in two classes where diagnosis is especially desired, viz.: in latent cases and in early chancre, and sometimes in the beginning of the secondary stage. Its limitations have not yet been entirely worked out, but in certain cases where the question is as to syphilitic or tuberculous origin the Justus is of decided value.

19. **Traumatic Spinal Hemorrhages.**—The main subject of Bailey's paper is primary traumatic hematomyelia, but he notices primarily two other conditions, namely, pressure from displaced or broken-down protecting sutures and hematomyelitis. He thinks that the first of these is common enough, the second has been much overestimated by clinicians as to its frequency, while the third is relatively frequent, but its importance results from its favorable prognosis. Hemorrhage into the substance of the cord occurs without demonstrable lesions of the bones in a number of cases, and more would probably be known if we had autopsies. The situation is generally in the gray matter, but the white is not uninvolved if it is at all extensive. The focal hemorrhages are usually surrounded by some minute extravasations. When the hemorrhage is small, there need not

be any visible inflammatory nor degenerative reaction. In contrast to the localized form limited to one special region, we have the disseminated type where the hemorrhage occurs throughout the whole spinal axis. This has been speculated on as causing traumatic neuroses. His earlier case, which is here reproduced, is the only one of which he has any pathologic records in the adult. Another case is also reported of his observation. The symptoms of both large and small focal hemorrhages are studied, and several cases which he interprets as due to these conditions are detailed. The place of election is in the cervical region in primary focal disorders. He believes that the condition known as traumatic diplegia brachialis is due to this rather than to extradural hemorrhage. Small focal hemorrhages do not directly menace life. The treatment of both kinds is the same: rest in bed; attention to bowels and bladder; the pain may be relieved by analgesics; iodid of potassium may hasten absorption. Electricity to the muscles is recommended, and after the immediate effects have passed away passive motion and massage.

20. **Treatment of Syphilis.**—Some of the points noticed by Proben are the destructive ravages of the disease on the nervous system, the multiform eruptions being less important than the visceral complications, the necessity of having the patient in as good physical condition as possible during the treatment, and the importance of mercury as the leading therapeutic agent. He notices the frequent occurrence of cases where there is no history, but amelioration of symptoms by specific treatment. Iodid toleration is usually well marked, but the medicine should be watched and should be given well diluted in water after meals. Mercury, however, is the sheet-anchor in the treatment of the disease.

21.—See abstract in THE JOURNAL of April 14, p. 934.

22. **Carcinoma.**—The method of Dr. Massey consists in cataphoric diffusion of the nascent mercuric salts, produced by electrolysis of metallic mercury inserted by the gold anode into the growth, the patient usually being under general anesthesia, and the chemical and cataphoric force being a direct current of 200 to 1200 milliamperes continuously employed for a time varying from fifteen minutes to 2½ hours. The immediate effect is the production of an area of necrosis involving the growth, beyond which extends a zone of sterilization in which the malignant germs are killed without destruction to the normal tissue elements. He claims that he has employed this in 37 cases, with good results in 13.

23. **Suprarenal Extract.**—The value of suprarenal extract in surgical operations on the eye, ear, nose and throat has been demonstrated by Murphy in over one hundred cases. In nasal operations, he thinks the action has been especially gratifying. He uses it as a routine practice in all operations within this region, as his experience has shown its value. He has also found it useful in hay-fever.

24. **Pelvic Tumors and Sciatica.**—Palmer reviews the anatomical conditions of sciatica, and calls particular attention to the fact that it may be due to pelvic tumor, with other symptoms referable to the pelvis, and the patient be utterly unaware of the real disorder. He thinks this may be unusual, but the case he reports is of this character.

25. **Good Complexion.**—Levisour calls attention to the necessity of personal cleanliness, especially of the hands, in preserving a good complexion, as infection from these is most common. Avoidance of irritation, use of a soft towel, care of the teeth, digestion, etc., the disuse of irritating washes, cosmetics, soaps, hot water, etc., are also mentioned.

27. **Cell Reaction to Anilin Dyes.**—Harris, after stating the general principles of staining with anilin, and the different reactions of nuclei and protoplasm, gives the method which he has found most useful. The remainder of his article is taken up with a description of the different forms of cells, their origin, morphologic and tinctorial characters, their occurrence and function.

28. **Parasites of Estivo-autumnal Malarial Fever.**—Craig gives the results of his study in Cuba and the Philippines. He believes there are two definite types of estivo-autumnal fevers—the quotidian and tertian—and he describes their

parasites in the different stages of their development. The quotidian form is less known, though it is mostly found in pernicious forms of the disease. He concludes that logical facts force him to agree with Marchiafava and Bignami as to the existence of these two varieties, one having a life cycle of development of twenty-four hours, and giving rise in uncomplicated cases to a fever with quotidian paroxysms; the other having a life cycle of forty-eight hours and tertian paroxysms in which the temperature-curve is peculiar and characteristic. One of the most striking differences between the two parasites is their size, the quotidian being minute and usually contained within the blood-corpucle in its segmenting stage, while the other is more than twice as large and is outside of the corpucle during this stage.

29. The Soldier in the Tropics.—Woodruff's article covers a large compass of factors in regard to tropical army life. The food ration is discussed. He finds a necessity of meat diet as evident as in a more temperate climate; there is one change which he has advocated, and that is adding something to the soldier's allowance, to enable him to modify his diet as he may require. He seems to think that alcoholic stimulants are to a certain extent a necessity in the tropics, while he is not quite ready to recommend the daily ration of wine and whisky, he thinks it seems reasonable. In any case a liberal diet for the soldier in the warm climates is the legitimate conclusion to be drawn from the facts observed. Overeating is less responsible for sickness than has been supposed; most tropical diseases are germ disorders. The usefulness of the abdominal bandage is also another fiction and he does not believe that the white race can be acclimatized in the tropics, while one of the ways in which we will have to carry the "White Man's Burden" successfully is to furnish liberal diet and all necessary comforts to our soldiers in those parts.

30. Cuban Hospitals.—Armstrong describes the hospitals of Puerto Principe, Cuba, which are far from being model institutions, according to his account.

32. Porto Rico.—The conditions in Porto Rico, from a medical point of view, are described by Hoff, who has been chief of the board of health and board of charities since their organization. What the board of health has done is summed up by him as follows: It has prescribed a state examination, and licensed all physicians, dentists, pharmacists, practicanes, midwives, and nurses now practicing here. By this plan it has obtained control of the medical personnel of the island, through whose effort its sanitary salvation must come. It has appointed sanitary inspectors in every district, from whom regular reports of sanitary conditions are received. It has founded a laboratory for the examination of food-adulterations, etc. It has organized a vaccin station for the production of vaccin virus to complete the work of general vaccination of the people, inaugurated by the medical department of the army, and to continue the current work. It is collecting and collating the vital and morbid statistics. It has published several bulletins on prevalent diseases, and finally it is meeting the numberless cases that are presented from all sources for its consideration and recommendation. In addition the boards have had the whole population vaccinated, as previously noted in THE JOURNAL, and have still to do with famine, having not less than over 200,000 people needing attention.

33. Leprosy in the Sandwich Islands.—Woodson describes the leper colony on Molokai, and commends the methods of the Hawaiian authorities in regard to leprosy.

34. The Orient and Sanitation.—The countries of Eastern Asia and the outlying islands are the home and focus of some of the most dangerous and infectious epidemic diseases, including plague, dysentery, etc., all of which are noticed by Eldridge. He thinks that with the increase of travel, greater precautions will be required than have heretofore been the case, first the seacoast quarantine, which needs a uniform and single control. There should be more frequent examinations of ships from foreign ports, before bills of health are guaranteed by American consular officials. It is necessary for the steamship lines to have apparatus and means for disinfection and this deficiency of equipment is one of the more serious matters at the present time. The steamship companies however, are be-

coming more willing to make such installations, recognizing that it is for their interest to do so.

35. Notes on the Philippines.—Potter describes the people, sanitary conditions, etc., in the Philippines. As regards the former, he especially mentions the Tagalos, with whom we are having our present trouble. They are very negligent of sanitary matters, though cleanly in their persons, and stringent methods are required to render their habitations healthful. The water-supply of Manila is excellent, but the death-rate, even allowing the highest estimated population, is a very large one. The bubonic plague has had a high mortality-rate among those affected since its introduction. Venereal disease in the army is of but comparatively moderate importance, being hardly over 1 per cent., and that not of the serious form. Malaria is widespread, as might be supposed. Dysentery and dysentery are obstinate, rheumatism common and not very amenable to treatment, and otitis media is one of the most frequent affections and very difficult to handle. Heat exhaustion is common and recovers slow. The general climate is not bad for those able to avoid exposure, but serious for those who are broken down.

37. Bubonic Plague.—Sternberg's paper is largely historical, but he gives the general facts as to the spread of the disease and the conditions which favor it.

38. Intestinal Fever.—The disorder described by Richardson is characterized by the following symptoms: anorexia, weakness of the limbs, headache and backache, cramps in the stomach, henteric diarrhea and fever. It affected some 75 per cent. of the troops under his observation. The great difficulty in diagnosis is between it and typhoid fever, and its exciting causes are excessive heat, indigestible and improperly cooked foods, unsuitable clothing and drinking of native liquors. He believes in the utility of the abdominal bandage, which has been largely disused by the soldiers even when furnished, and his opinion in regard to liquor in the tropics is not that of Woodruff, mentioned above. (¶ 29.)

39. Amebic Dysentery.—Diamond describes several cases of this condition discovered in Chicago, but contracted in the South. He thinks that this illustrates the frequency with which his affection is overlooked in that region. Early diagnosis is of great importance and microscopic examination of stools is usually necessary. These should be stained in the fresh state as recommended by Harris, viz., by a .5 per cent. aqueous solution of toluidin-blue by passing the staining solution under a cover-glass through a pipet. By this the ameba stand out prominently. The stools should be collected in a clean vessel and not mixed with urine, which kills the organism. In his opinion the best treatment is rectal injection of a solution of hydrogen dioxide and potassium permanganate. Of the former, a 25 per cent. solution may be used and of the latter 15 grains to a quart of warm water, two or three times a day, and gradually reduced according to results. Guarded prognosis must be given, however, as relapses are frequent, and the patient should not be considered out of danger for at least two months after apparent recovery, and during that period should remain on a liquid diet.

43. Idiocy.—West describes a case of Mongolian idiocy, the characteristics of which he gives. Its recognition is not a difficult matter. He mentions a case of a child under observation, with these characteristics, but apparently very bright, and will watch it rather expecting to see it become imbecile. Cretinism and hydrocephalous idiocy are also noticed, with other types of defective development.

44.—This paper has appeared elsewhere. See abstract in THE JOURNAL of February 3, ¶ 20, p. 285.

47. Relation Between Physique and Mental Work.—To test the observation of Porter, that precocious children weigh more and dull children less than the average at their age, which has been questioned by some, Beyer has made examinations of a large number of boys enlisting as navy yard apprentices, and confirms Porter's results. He suggests the adoption of this method of examination in public schools.

48. "Sinusoids."—This name is given by Minot to a special form of blood-vessels usually much wider than the capillaries,

having an endothelial wall only and no media nor adventitia. They differ from the capillaries in their origin from the modification of a pre-existing relatively large vessel which expands so that its endothelium interescresces with the growing parenchyma of the organ, and this parenchyma develops in the form of tubules—nephric or hepatic—or trabeculae—cardiac. They are also differentiated from the capillaries by the fact that the latter are always more or less completely surrounded by connective tissue—mesenchyma. Sinusoids can be demonstrated in the pronephros, mesonephros, liver, heart, parathyroid, suprarenal capsules, and coecocolic gland. The vessels of the corpora cavernosa and allied structures are probably not sinusoids, but expanded capillaries.

49.—This paper was editorially considered in *THE JOURNAL* of March 31, p. 820.

50. **Branching Forms of Tubercle Bacillus.**—Smith shows, by microscopic examination in patients with tuberculosis that there may be unusual forms of tubercle bacilli present in sputum, either filamentous, branching, budding, or beaded in their appearance.

52. **Diphtheria Antitoxin.**—The question as to the advantages of antitoxin are discussed by Musser, who calls attention to his methods; he uses much smaller doses than are generally recommended. He commenced to give the serum before there were any data in regard to its use, and was naturally cautious, but the results have been so satisfactory that he has not changed. In children from 6 to 8 years old, his beginning dose is 500 units, repeated at intervals of six hours if improvement does not take place. To children of over 8 years, 1000 units are given as an initial dose, and at intervals of eight to twelve hours as needed. He reports thirteen cases, several of them with temperature-curves.

53. **Rectal Alimentation.**—Edsall points out the insufficiency of rectal alimentation in keeping up the nutrition of the body, and illustrates it with a carefully observed case. He does not wish to say that it is of little value, for it is sometimes our only resource, but it is only an unsatisfactory makeshift at best by which we can temporarily reduce tissue loss and tide a patient over a period during which the stomach is becoming equal to reception of food, or who is being prepared for operation for removal of mechanical difficulties interfering in taking food by the mouth.

55. **Hemianopsia.**—Schmidt-Rimpler's paper includes a complete discussion of the facts and literature on hemianopsia, but is not finished in this number.

56. **Sympathetic Ophthalmia.**—Three cases are reported by Gifford in which the absence of premonitory symptoms was notable. He also insists on the importance of daily tests of vision, and calls attention to the value of large doses of salicylate of sodium after the disease has appeared. He strongly favors the microbic theory of the disease.

57. **Cycloplegia.**—This article is the result of examinations on a thousand eyes in private practice. He concludes that a 2.5 per cent. solution of homatropin hydrobromate, distilled six times, at intervals of five minutes in the healthy eye, provides trustworthy cycloplegia in from one to three hours, and is as effective as a protracted use of 1 per cent. solution of atropin. It is desirable to produce an artificial cycloplegia in 10 per cent. of cases coming to an ophthalmic surgeon, hence the value of this agent.

63. **Head Injuries.**—Blaisdell reports and illustrates a number of cases of head injury, and insists on the value of the rongeur in preference to the mallet and chisel, which he thinks are dangerous in inexperienced hands. He gives a description of his own modification of the DeVilbiss rongeur, which he thinks is a nearly perfect instrument.

65. **Gall-Stones.**—Cordier's experience has not been in accord with that of others, as the majority of his cases have been in males. He deduces the following conclusions: 1. Cholelithiasis is of frequent occurrence and usually gives rise to manifest symptoms, either severe or obscure. 2. Cholesterin, as a gall-stone-producing agent, must be present in an abnormal quantity. 3. This is in a great measure a product resulting from the destruction and disintegration of the epithelium of

biliary ducts and gall-bladder. 4. Bilirubin calcium, an insoluble compound, the outgrowth of the union of bilirubin and the lime salts, forms the nucleus of most of the stones formed in the ducts and the majority of those formed in gall-bladders. 5. Jaundice, ptomain poisoning and suppuration are late symptoms of cholelithiasis. 6. Dyspeptic symptoms, swarthy skin, uneasiness in the region of the gall-bladder—congestion of the liver—and loss of weight are some of the remote and local outgrowths of the presence of gall-stones. 7. Inflammatory diseases of the duodenum and bile-passages are the most direct causative factors in the production of gall-stones. 8. Some patients get well without any assistance from the physician or surgeon, yet the progress of those that terminate favorably without surgery can be greatly assisted by the physician. 9. The surgery is especially difficult and the inexperienced should not undertake it. 10. A ball-valve stone usually continues giving rise to symptoms until removed by surgery. 11. Stones in the gall-bladder, producing septic symptoms, should be removed.

66. **Sexual Function in Insanity and Crime.**—Macnaughton-Jones reviews the questions of the reflexes of the genital organs and the brain. The importance of the internal secretion of the ovaries on the normal metabolism of the patient would seem to him to also have a bearing as to the part of these organs in producing mental and nervous disease. He quotes extensively from various authorities, Clay Shaw, Clouston, and others, and from the entire evidence comes to the following conclusions: 1. The correlation of insanity and disordered sexual functions arising out of affections of the generative organs is a factor to be taken into serious consideration in the treatment of women mentally afflicted. 2. Where there is a ground for the suspicion that some abnormal condition of the uterus or adnexa exists, which may produce or aggravate the mental affection, a careful examination, under an anesthetic, if necessary, should be made. 3. In the investigation of criminal acts committed by women, either during the menopause or while the menstrual function is either active or suppressed, due weight should be given to the influence exerted by its irregularity or abeyance on the mind of the woman. In doing this, her previous history and temperament must be considered. 4. The special dangers of the climacteric period, and the symptoms indicative of threatening mania must be collected. The principal of these are moroseness and depression of spirits, attacks of hysteria, occasional hallucinations of sight and hearing, and especially of smell, suspicions with regard to relations, unjust dislikes, unfounded apprehensions of some great crime committed or injury inflicted on them, suicidal tendencies. Here, again, examination of the pelvic viscera is indicated. 5. In operation on the female generative organs there is a greater predisposition to mental disturbance than after other operative procedures—further, post-operative insanity is usually of a temporary nature. 6. Women who have been previously insane are predisposed to a relapse, by the development of disease in their sexual organs, and especially to temporary recurrence of insanity after operation on these. Under all such conditions and in the face of these warnings, the greatest supervision and care are required to anticipate the insane impulse, and to prevent suicide or crime in the case of women who manifest symptoms that may have their origin in disorders of the sexual organs.

68. **Uterine Fibroids.**—Gow discusses the indications for operation for these fibroids, and sums up that the lessened mortality of abdominal hysterectomy enables one to save the patient not merely from death but from invalidism. A patient who is seriously inconvenienced by fibroid, rebellions to treatment, and not suitable for enucleation through the vagina, may fairly be advised to submit to abdominal hysterectomy with superitoneal treatment of the stump, provided the would-be operator has reduced his mortality to below 5 per cent. In his own operation, which he finds applicable to all patients, the first step is to ligate each round ligament on a level with the internal os. Then the anterior flap of the peritoneum is marked out with a knife, and the round ligament divided on the anterior side of the ligature. The anterior layer of the broad ligament may now be divided, carrying the

incision upward, toward the middle of the Fallopian tubes. The incision across the front of the tumor has thus been made high enough to permit a large anterior flap, which is stripped down with the fingers or knife-handle. The ovarian arteries and veins are next tied on each side, including the Fallopian tube. The ligature should be tied so that at least one ovary is left, but if the fibroid occupies one broad ligament, it may be more convenient to tie it on that side outside the corresponding ovary. The vessels having been tied, the broad ligament is divided on the uterine side of the ligature, the oozing being stopped with clamped forceps. This is done on both sides and the posterior flap is marked out with the knife and dissected downward for a short distance. The uterine arteries can now generally be felt without difficulty, and seized with pressure forceps at this level of the os interum. The tumor is now cut away with a knife, at the appropriate level, and the stump caught up and drawn to the surface with vulsellum forceps. The uterine arteries are then carefully tied, and he introduces what he calls a precautionary ligature—a curved, handled needle, armed with silk is thrust through the stump from before backward, avoiding the peritoneum, so as to allow the ligature to include the outer growth of the stump; this is tied on the outer side and includes the uterine artery which, however, has already been tied separately. A similar ligature is now tied on the other side, the object being to control oozing. After the latter has been stopped, he generally puts in two fore-and-aft sutures through the muscular substance of the stump, again avoiding the peritoneum, and in this way the raw surface is rolled together. He has never seen his ligatures discharged through the abdomen or vagina. After this the peritoneum is cleansed and the abdomen closed. He favors simplicity of operation, seldom uses more than six pairs of pressure forceps, and never more than six sponges. He never has but one assistant, and never allows anybody but himself to touch his instruments or ligatures. The most serious complication at the time of operation is the presence of old adhesions, such as may result from former perimetritis. Four cases are reported.

69. Mixed Tumors of Kidney.—Malignant tumors of the kidney of early life are discussed by Herzog, who notices the views of Birch-Hirschfeld and Wilms and gives his own as to their origin, after describing the development of the parts, as follows: The nephrotome—*mittelplatte*—is not cut off at the normal site, but in such a manner that a part of the myotome is severed from the main mass and remains in connection with the nephrotome. The separation may take place so that only a part of the myotome proper is cut off, or a part of the sclerotome may likewise be taken along. If the former is the case, we have the matrix for striated muscle-fibers only; if the latter occurs we have also the matrix for cartilage. If, now, we assume that a part of the nephrotome—Wolffian body—to which tissues of the myotome have become adherent by an abnormal process of abnormal separation becomes included in the permanent kidney, we have a matrix containing those elements which occur in the mixed renal tumors, namely, striated muscle-fibers, cartilage, other connective-tissue elements, and epithelial glandular structures. The latter are derived from the excretory tubules of the nephrotome. This explanation will account for the character of these peculiar renal neoplasms, without compelling us to take refuge, as Wilms does, in metastatic processes unheard of in tumor formation.

72. Diet in Nephritis.—According to David, when cases of acute nephrectomy first come under treatment, it is best to enjoin rest in bed, withhold all food for twenty-four to thirty-six hours, give water freely and cleanse the alimentary canal by purgation. Milk should then be given, first in small quantities at intervals of two hours, the amount gradually increased until two quarts are taken daily. It is best given in small amount, one or two ounces at a time, especially if there is any distress on taking it. Where the patient can not take it, either plain or flavored, water-gruel may be given, but there is really no substitute. When the urine becomes copious, farinaceous foods may also be prescribed, and when albumin disappears, egg can be tried. Close watch must be kept on the

addition of albuminous foods in the diet. Red meats should not be eaten until recovery is complete. When the stomach is intolerant at the beginning, water should be given hypodermically by the rectum, to insure renal elimination, but as a rule, when the bowels are well emptied, the kidneys begin to act and vomiting ceases. In chronic diffuse nephritis the indication for milk diet is similar, but the disease is so prolonged that it can not be maintained continuously and may be given intermittently, or sometimes modified by the addition of bread, starches, fruits, etc. Vegetables can generally be given, but rhubarb, sorrel and tomatoes should be excluded, perhaps also cabbage, asparagus, spinach and artichokes, on account of the oxalates they contain. Eggs are the least harmful of albuminous foods. The effect of fish is questionable, but if fresh it is probably as little harmful as any. Salt and smoked meats, excepting ham, should be avoided, and fried articles generally. In chronic interstitial nephritis an abstemious diet is advisable; even simple animal food should be used in small quantities, excepting milk. Tea, coffee and chocolate can be used in moderation. Water is the beverage; alcohol is forbidden.

74.—See abstract in THE JOURNAL of February 17, p. 425.

76.—*Ibid.*, p. 422. 77.—*Ibid.*, p. 425. 78.—*Ibid.*

79.—See abstract in THE JOURNAL of July 29, p. 288.

81. Tuberculosis.—Denison calls attention to certain points in the diagnosis and management of tuberculosis, especially the fact that the matured bacillus does not appear until late in the disease. There is necessity, therefore, of rendering every possible means of early diagnosis apart from the germ evidence. He gives a new definition of consumption: "It is a degeneration or slow death, due to the vitiation of the blood, generally produced by defective ventilation of the lungs, a prominent and advanced symptom of which is the bacillary germ of tuberculosis."

83. Varicocele.—Freeman recommends the use of the angiotribe in operation for varicocele, as it renders its removal simple and expeditious. He has operated this way a number of times with uniformly satisfactory results.

85. Abortion.—The need of thorough removal of placental debris after abortion is emphasized by Belt, who prefers the finger to the curette for this purpose, as less dangerous.

86.—See abstract in THE JOURNAL of February 17, p. 431.

87. Adherent Pericardium.—Rogers reviews the diagnostic characteristics of this condition, the most important of which are the range of cardiac motion, diastolic shock, pulsus paradoxus, right enlargement, and systolic retraction of lateral and posterior chest walls (Broadbent). Very few cases of cardiac disease in the young will not improve under proper treatment, unless pericardial adhesions exist. The prognosis is uncertain, but usually unfavorable when signs are clear.

90.—See abstract in THE JOURNAL of March 24, p. 749.

91. Opium.—The therapeutics of opium are summed up by Swing as follows: Morphine is necessary to relieve severe pain, and is still the safest agent for that purpose; it is indispensable in the majority of diarrheal conditions. It, or some one of its derivatives, is necessary to combat and relieve coughs, no matter what their pathologic cause, and in so doing their relief becomes a potent curative factor.

93. Ectopic Gestation.—The discussion of this condition is reviewed by Grandin, who notices the indefiniteness of the symptoms in certain cases and reports several showing this fact. He also gives an account of a patient in whom all the symptoms were present, and yet the condition found was pyosalpinx. He insists on promptness of operation in this condition. A clean cut is safer than expectancy. This has been his rule for years and he has not regretted it.

104.—See abstract in THE JOURNAL of Oct. 14, 1899, p. 982.

111.—This is the same paper as that under title 113.

113.—This is the same paper as that under title 111.

FOREIGN.

British Medical Journal, March 31.

Will-making in Aphasic Paralysis. JAMES EDMUNDS.—The case reported is that of a woman, 60 years of age, of unusual intelligence and ability, who became aphasic with

right hemiplegia. It was noticed that she could name the cards of a pack correctly and this suggested to her physician that by a somewhat similar means he would be able to get at her wishes in regard to the disposal of her property. He therefore provided a system of cards, each denoting one single item, either property, office or person. By taking one showing the item of property to be disposed of, the patient holding in her other hand cards with names of individuals who were likely to be her legatees, she picked them out and in this way was able to make her own will. The method received the commendation of the probate court. The idea is a good one, and it is suggested for future cases of the same kind. In this case there was no alexia, and in any case there must be the complete available lists of property or persons obtained. While it thus has its limitations as regards the knowledge of properties and legatees, it would seem, however, to be a safe and useful method for such cases.

The Lancet, March 31.

The Typhoid Bacillus and Typhoid Fever. P. HORTON-SMITH.—This author discusses the subject of relapses, which he thinks are due to imperfect immunity in prior infection and reinfection by germ. Typhoid fever without interstitial lesions is noticed, and the evidence that the typhoid bacillus may occasionally pass into the blood and become generalized in the organs, just as occurs in ordinary typhoid fever, without causing any interstitial disease even though the bacilli enter through the intestinal tract is reviewed. A very similar form of disease is not uncommon in the fetus; primary fetal septicemic typhoid is frequently the cause of the abortion that so often occurs in this disorder. That typhoid infection may also occur locally is shown by cases of cholecystitis reported by Cushing and others. A table is given of the various complications of typhoid fevers as they have occurred in examinations at St. Bartholomew's Hospital during thirty years. They appear to be most frequent in the lungs, heart and intestines, though not absent from the liver, kidneys, etc. Those of the nervous system appear to be rare, but he quotes from Keen as having collected fifteen cases, by bacteriologic examination, with the typhoid bacillus in the meninges, and while some of these may be open to criticism, he especially mentions the report of Ohlmacher in THE JOURNAL as being conclusive. The respiratory system is represented largely in ulceration of the larynx and lobular pneumonia, both of which seem to be thoroughly demonstrated. Vascular and cardiac disease are well known, and nephritis occasionally occurs; this may be attributed to the intoxication. The subject of typhoid bacteriuria is treated at considerable length, and the author concludes that there can be little doubt that the typhoid bacilluria is due to infection of the urine by stray typhoid bacilli excreted by the kidneys from the blood, and their immediate multiplication in the urine. If, in addition, the bladder walls have been in any way damaged, true typhoid cystitis follows. The bacillus is found in the urine in probably 25 per cent. of the cases, hence the importance of this symptom. Other subjects mentioned are cholecystitis and bone suppuration. The presence of bacilli in other suppurations is very rare. The long-continued presence of typhoid bacilli in the body is amply demonstrated, both experimentally and clinically. A most remarkable case is that reported by Von Dungern, in which the typhoid bacilli were present 14½ years after the typhoid attack. The patient, therefore, may be a social danger for months and years.

Treatment of Rheumatism, Its Prophylaxis and Cardiac Complications. RICHARD DOUGLAS POWELL.—The writer alludes to certain organisms discovered, and cautiously favors the germ idea for rheumatism. He says we can have no quarrel with any hypothesis which leads to so practical a therapeutic suggestion as that of the salicyl compounds in the treatment of rheumatic fever. He refers also, among other things, to the possible nervous elements in its origin. He can not, moreover, regard rheumatism exclusively from the cardiac side, and thinks the definition of the disease is "a systemic disease with arthritic and cardiac manifestations," which is within the limits of our knowledge of the actual causes at work in acute rheumatism. In the treatment, he suggests a

liquid diet, absolute rest in bed with woolen wrappings, free relief of bowels and the administration of salicylate of soda in efficient doses, combined with such alkaline remedies as the condition of the urine suggests. It is important not to allow the patient to get up too soon, the after-effects being often due to disregard of this. We are not required to give opium to any great extent, though it is useful for relief of pain, but in grave forms of endocarditis and especially pericarditis, it is of marked value, as it causes organic rest. As to blisters, he does not believe much in them therapeutically, but practically they seem to be of some value.

Revue de Chirurgie (Paris), March 10.

Tumors of Biliary Passages. F. TERRIER AND AUVEY.—Sixty observations are tabulated, with details, some personal and the rest collected from the literature. They show that the ultimate results of radical operations for neoplasms of the gall-bladder are deplorable: an immediate mortality in 35 per cent., and recurrence within a few months in the rest. Hochegg's patient alone survived two years in good health, and died a year later from recurrence. The average of survival was six to eight months. Palliative operations for cancer of the gall-bladder are even less encouraging. Death from cachexia was frequent within a few days after operation. The immediate mortality was 26.66 per cent., and only one patient out of fifteen survived a year. The icterus persisted and even increased in a few cases. Eight operations for neoplasms of the excretory biliary passages were all palliative. Two cholecystostomies for cancer of the common bile-duct were followed by death from the debility of the patients at the time of intervention. In one the feces had resumed their normal color, showing that the operation had been successful. The cholecystenterostomies for cancer of the common bile duct resulted in one survival and two deaths soon after operation. The icterus disappeared in one of the latter, and in the patient who had survived six months at the time of the report the operation had cured the icterus and pains. The single case of choledochenterostomy succumbed in fourteen days to progress of the lesion; the icterus had persisted. Two cholecystenterostomies for cancer of the ampulla of Vater resulted in one death and one survival for fourteen months, in good health until the last two. (Terrier.) In the fatal case cholecystostomy had been done six days previously, and a pancreatic fistula was also implanted in the intestine at the same time the cholecystenterostomy was done, with collapse from these prolonged maneuvers. Terrier concludes, from his study of these experiences, that while the results of these palliative operations have been far from brilliant, yet this is the route to follow. These new operations are the only ones which remedy the accidents caused by the retention of bile, and they may enable the patients to survive a long time, under the condition that they are done before the stage of advanced cachexia has been reached.

Burns Caused by Industrial Electricity. MALLY.—Among the peculiarities of these burns is the absolute painlessness, the dry, parchment-like aspect of the burned surface, and the aseptic, rapid healing, unless the deeper tissues are involved, when the loss of tissue is irreparable. The treatment is very simple, merely immobilization of the member and protection of the wound with sterilized gauze. If grafts of epidermis are necessary, they heal exceptionally well, on account of the aseptic conditions. If complicated by burns, from the clothing, etc., catching fire, the usual treatment of the latter is required. When the electric burn affects the bone, it is apt to compromise the vitality of the peripheral segment and gangrene may result, requiring amputation. The burn is always accompanied by a more or less intense nervous shock. The patient may never recover from the syncope and there does not seem to be any connection between the gravity of this and the voltage of the current. As he recovers, psychic troubles are noted, more intense in those predisposed by disease or alcoholism. Another complication constantly noted by the writer was an atrophy of the muscles of the arm in case of burns of the hand. Sensibility and electric reaction seem normal but the atrophy may persist a long time even in persons free from all hysterical stigmata. The prophylaxis of burns from electricity consists

in perfected apparatus and education of the employees, and, for the public, removal of overhead wires.

Treatment of Renal Retention. A. GOSSET.—The intermittency is the constant, pathognomonic characteristic of renal retention, Gosset observes, and unless promptly operated on, the retention increases progressively to a fatal termination. The renal tissue deteriorates more and more, the retention becomes infected and the other kidney involved. He advises nephrostomy in every case of renal retention, septic or not, at once and without regard to the condition of the other kidney. This lumbar fistulization of the kidney and evacuation of the septic products rests the ureter and the ureteritis heals. The tension of the organ relieved, the products can be analyzed several days later and not until then can the actual value of the organ be determined, and whether it is worth while to save or remove it. The ureter must be implanted in the lowest portion of the pocket, either by dividing the ureter and suturing the end, or by a lateral anastomosis between them. The ureter must be also implanted at the thinnest portion of the pocket, and if this is not at the same time the lowest point, the pocket must be shortened to bring the base on a level with the mouth of the ureter. Nine patients have been operated on by Albaran, with one death: one with a permanent sound in the ureter and recovery; one with section of a spur and recovery; five others with preliminary nephrostomy and lateral anastomosis of the ureter with a pocket a few weeks or months later. One has been cured for two years, one for eighteen months, and one for a year.

Branchial Epithelioma of Neck. V. VEAU.—Six personal observations, added to the forty-eight on record, show that "malignant branchioma" is not so rare as generally assumed. The treatment should be preventive in case of branchial fistule, cysts and mixed tumors, by removal before malignant transformation. If ablation of the branchioma is possible it should be extensive. The vein will have to be ligated, but this is free from danger. The artery should be respected; its ablation may entail cerebral accidents, and ligating it to prevent or arrest hemorrhage caused the death of one of Veau's patients. The vagus may have to be resected; this is less dangerous than ligating the primary carotid. It is best not to attempt autoplasties. The branchioma may develop from the various elements of the branchial arches and be located in the parotid and sub-maxillary glands or in the thyroid gland, possibly also in the mediastinum, but it is most frequent and most typical in the neck.

Bulletin de l'Académie de Médecine (Paris), March 13 and 20.

Influence of Meat Extracts on Growth and Health of Animals. A. GAUTIER.—The research reported extended over many months, and large numbers of guinea-pigs were the subjects. The results showed that soup, good bouillon, is an actual food, a stomachic stimulating gastro-intestinal secretions, and a general tonic, by its proportion of albuminoid matters, its appetizing odors which stimulate the secretions, its creatin and xanthin bases which in small quantities act as a tonic on the heart and muscles (like caffeine, which also belongs to the xanthin family), by its organic phosphorized derivatives from the lecithins, and lastly by its soluble assimilable phosphates. The young, growing, omnivorous animal thrives best on its natural food, and the utilization of the food ingested is enormous in these conditions. With preparations derived from meat there is a deficit of one-seventh compared with the utilization of natural food, in health. But the case is reversed in conditions of debility, with imperfect digestion, or lack of appetite, from nervous or other causes. In these circumstances meat extracts restored the weight to normal more rapidly than the natural food, and they are therefore probably very valuable in similar conditions in man. The substances found most effective were Kemmerich's peptonum carnis (prepared by chemical hydrolysis), Liebig's extract and somatose, in the order named.

Treatment of La Grippe.—In the discussion that followed Huchard's communication (summarized, page 810), Mignot called attention to the peculiarity of the recent epidemic of la grippe, and that calomel seemed to have a specific power in aborting the disease. Fernet proclaimed that the kidneys are the important organs in la grippe, and everything should tend

to keep them at their best. For this purpose he restricts patients to a milk diet, with abundance of drinks, and in serious cases a subcutaneous injection of salt solution. Rectal injections of diluted milk may be found useful; also baths to reduce the fever. He recommends applying a napkin wrung out of cold water to the thorax for half a minute, repeating from every hour to three times a day, not only in la grippe but in other passive congestions of infectious diseases. He explains its action as a stimulating effect on the sensory nerves of the thorax, thus stimulating the vagi by reflex action with consequent contraction of the capillaries in the lung and slowing of the heart's action. The effect seems to be most pronounced on the pulmonary or cardiac branches of the pneumogastric, according as the initial stimulation is applied to the side walls of the thorax or the precordial region. He disapproves of quinin in la grippe, as it has a depressing action and is therefore counterindicated, but he approves of strychnin as the best remedy for the nervous asthenia. He concluded: "It is not the mission of the physician to prescribe drugs; frequently our task is to keep people from taking the more or less dangerous remedies so extensively advertised or that happen to be the fashion."

Individual Tongue Depressor. FOURNIER.—"We never know the nature of the lesions we find in the mouths of our clients until we examine them. Frequently they are a great surprise, and the possibility of contagion by the wholesale use of a few tongue-depressors is by no means slight." For this reason Fournier considers the individual wooden depressor a great improvement. It is made as usual, only with a groove across the center, and costs about one-half a cent. Each one is broken across at the groove, as soon as the examination is finished, so that it can never be used again.

Systematic Percussion of Skull in Cranio-Encephalic Diagnosis. GILLES DE LA TOURETTE and CHIPAULT.—The tone given on percussion of a region of the skull, the hair parted or shaved away, varies with the thickness of the bone; it is clearer as the bone is thinner. The sound is more distinct on the side of a trephining. In two cases of old fracture of the skull percussion produced an actual cracked-pot sound. The middle finger of the right hand is better than a hammer. The patient must keep his mouth closed. Premature synostosis of the bones of the skull can be detected by this means in heredo-syphilitics, idiots, etc., and indicate liberating craniectomy.

Hyperostosis of Orbit. DIANOUX.—The progressive exorbitis imposed operation, and fragments of bone amounting to the size of a large nut were removed with gouge and mallet, through an incision parallel with the orbito-nasal margin. Electric treatment with continuous current completed the cure.

Vacher's Brain. J. V. LABORDE.—The experts who decided the responsibility of the famous "shepherd killer," Vacher, asserted that he had recovered from the temporary alienation for which he had been incarcerated, and was therefore responsible for the eleven murders for which he was executed. Laborde and three others have been making a study of the brain (left hemisphere), and state that the morphologic development is superior to the average, resembling that of Gambetta. Vacher's facility of speech and remarkable memory were frequently mentioned in the reports at the time. "A simple functional deviation is therefore capable of engendering a great assassin, who might have been under other circumstances a great orator and a great citizen." The remarkable development of the ascending frontal and parietal Rolandic convolutions and of the quadrilateral lobule, the motor regions par excellence, Laborde considers another proof of the close relations between function and organ, as Vacher walked and doubled on his steps, covering the most extraordinary distances to avoid detection. He concludes from his study that Vacher, a hereditary epileptic degenerate, was affected with maniacal delirium, with ideas of persecution, impulse to suicide and homicide, and sadism and inverse sexual depravity, and committed his ferocious, lustful crimes under the morbid and irresistible domination of this influence, with a system which does not deprive them of their impulsive and fundamentally delirious characteristics. This mental state does not necessarily imply an organic alteration perceptible by our present methods of research, but it may re-

side in and be explained by purely functional modifications of the organic substratum.

Rhythmic Traction of the Tongue in Asphyxia During Typhoid Fever. J. V. LABORDE.—A soldier with hyperpyretic, septicemic typhoid fever suddenly developed alarming bulbar symptoms, with unconsciousness, trismus and asphyxia. The teeth were kept apart with corks, and rhythmic traction of the tongue restored the patient, who at once seized the forceps and continued the tractions himself. The asphyxia recurred a number of times during the following two hours, and each time the patient himself renewed the tractions and kept them up until he could breathe freely, not allowing anybody else to touch the forceps. Autotraction has been found effectual before—continuous for hiccough and repeated for asthma—but this typhoid case shows the ease with which it can be employed.

Presse Medicale (Paris), March 17, 21, 24 and 28.

Generalized Extravascular Sarcomatosis. LEPEYRE AND LABBE.—Recklinghausen's neurofibromatosis is characterized by the development of fibromata along the nerve routes and on the skin, and by various nervous disturbances. In the observation described the syndrome differed from this in the sarcomatous nature of the tumors; the absolute integrity of the nervous system and lymphatic ganglia. The patient, a young man, died of cachexia in three months after the first appearance of the tumors. They were extremely numerous over the trunk, head and face; the connective tissue was crowded with them, also the mesentery, pericardium and peritoneum. In all the cases on record the patients were degenerates, with stunted physical and mental development, motor and sensory disturbances, paralyses and extensive nevi along the nerve routes.

Polyuria and Renal Impermeability in Arteriosclerotic Heart Disease. P. MERKLEN AND A. MARTIN.—The research reported in this communication establishes that the polyuria observed in "asystolic cardiaes," which differs from the classic formula of the urology of asystolia, is in reality due to the milk diet imposed by their condition, and is a necessary and beneficial polyuria. The degree depends on individual predisposition and prolonged use of alcohol or rich food. Under the influence of the milk, the volume of urine increases and also the amount of urea contained in it. On suspension of the milk the amount of urine diminishes and dyspneic attacks occur. The kidneys in twenty-three cases examined differed but little from the cyanotic kidney common in heart disease. There was no atrophy, nor granulations, but the arterial contraction of the lumen of the arteries from the renal arteriosclerosis produced a kind of epithelial dystrophy manifested in impermeability, cellular dystrophy, mortification and desquamation of the epithelium. Milk compensates this renal impermeability of ischemic and dystrophic origin, and seems to have a specific action on the renal function, at the same time stimulating the secretion of water and the elimination of urea and of other excremential elements. The polyuria is the measure of its efficacy.

Cellular Retrogression of Striped Muscle Fibers. G. DURANTE.—In the course of the development of the striped muscles, a certain number of cells combine to form a muscle fiber. Durante has established that there is a lesion of the adult muscle, a mode of reaction to pathologic causes, absolutely distinct from degeneration, which consists in the retrogression of the muscle fiber, a return to the embryonal condition by retracing the development of cells into fiber, the primary cells becoming again more and more individualized. This cellular retrogression may be partial or complete, and usually leads to the lengthwise splitting of the fiber. This retrogressive process must not be confounded with degenerations which entail the destruction of the fiber. In the retrogression the fiber is retained *in toto*, but may undergo various transformations later. The process may result in accumulation of separate cells or of protoplasmic masses. In pathologic conditions the fiber may disappear from successive divisions and various metamorphoses, which may explain the etiology of simple atrophy, and also of interstitial adiposis and the apparent increase in the connective tissue in amyotrophy. In healthy muscles the elements thus isolated continue to flourish, instead of disappearing, and the result is numerical hypertrophy instead of atrophy.

Streptococcus Peritonitis. G. MILIAN.—A girl of 17 died

from an acute peritonitis in which not a single lesion could be discovered in the alimentary canal or any abdominal organ. It seemed to have been an infection propagated from a preceding tonsillitis. The pus in the peritoneum contained the pure streptococcus.

Absorbing Capacity of Pleura. J. CASTAIGNE.—A soluble substance injected into the pleura of a dog is eliminated more rapidly and in larger amounts in the urine than when the same quantity is injected into the subcutaneous cellular tissue. Assuming that normal pleural absorption in man obeys the same laws, Castaigne has been studying the comparative absorption in 32 cases of pleurisy, and announces that the absorbing capacity can be utilized in the diagnosis. Pleural absorption in purulent streptococcus pleurisy is about the same as normal, while it is very much reduced in the pneumococcal and tuberculous varieties. In hemorrhagic pleurisy, only those with cancer showed a high absorbing power; in serofibrinous the pleural absorption in three cases revealed the nontuberculous character of the lesion. In regard to the prognosis, the purulent and hemorrhagic pleurisies in which the absorbing capacity was high always proved the most severe, but on the other hand, all the serofibrinous ones with high absorbing capacity during the first fifteen days terminated in the most rapid recovery and without adhesions. Of all the numerous means to increase the absorbing capacity tested, the most effectual were cauterization with a conical cautery, salicylates by the mouth or, better still, in the form of frictions of methyl salicylate on the thorax, afterward wrapped in cotton. These increased pleural absorption to a remarkable extent.

Dermatologisches Zeitschrift (Berlin), February.

Treatment of Syphilis in General and of Tabes Post-syphilitica in Particular. H. TSCHIRIEFF.—Seventeen years' experience in the neurologic service of the military hospitals at St. Petersburg and at Kieff has convinced Tschirieff that syphilis is a constitutional disease and is never completely cured, and that iodid given with the mercury prevents the absorption of the latter. He describes tests which confirm this prevention of absorption of mercury by the iodid, and explain the more frequent recurrences of syphilis, and especially of syphilitic affections of the central nervous system, when iodid was combined with the mercury. The method he recommends is a daily bath at 35 C., twenty to thirty minutes in length. Half an hour to an hour after the bath the inunction is made, for which he prefers mercurial soap, as it requires less time than the ointment. The back and sides he considers best adapted for the inunctions, which are made for six days, then omitted the seventh, repeated for five to six weeks; the mouth rinsed with saturated solution of potassium chlorate seven to eight times a day. After five or six weeks of inunction and an interval of one or two weeks a daily bath at 35 C. is taken three times a week and .5 to 1 gm. of a preparation of iodine three times a day, after meals, in a glass of milk or milk and Selters water. Sleep is regulated with bromids and the heart supervised. This method of treatment requires three months and usually gives remarkably fine results, not injuring the organism in any way, but actually raising the general tone and increasing the weight. One of his patients is a man of 60, who for forty years has taken a hot bath every day and makes several inunctions every week, and his health is as perfect as is possible for a man of his years. The causes of the frequent affections of the central nervous system are inadequate treatment of the syphilis, abusus spirituosorum, excesses of all kinds, including intellectual work, and frequent chilling of the body, especially the lower extremities, from climatic conditions. He treats postsyphilitic tabes with specific treatment. Charcot douches to the back, electrization of the spine and medulla oblongata, cauterization of the spine with the Paquelin every tenth to fourteenth day, strychnin pills to restore the function to the centers of erection and defecation, and subcutaneous injections of atropin and morphin for the lancinating pains. This treatment arrests and may possibly cure the sclerosis of the posterior columns of the spinal cord, which he considers the specific lesion of postsyphilitic tabes. Every case thus treated showed marked improvement.

Nordiskt Medicinskt Arkiv (Stockholm), March 10.

Fat Embolism. Death from Embolism of Olive-Oil. J. FIBIGER.—The patient was fed by alimentary injections per rectum, and subcutaneous injections of olive-oil (Leube) on account of stricture of the esophagus and stomach consecutive to cauterization with hydrochloric acid. About 2325 c.c. of oil had been injected in the course of nineteen days, and the weight had increased by 4600 gm., when cerebral and respiratory symptoms appeared, such as are observed in cases of fat embolism, with almost total left hemiplegia. The autopsy showed that deposits of the olive-oil had formed in the subcutaneous tissue and mesentery, and embolism of the oil was noted in all the chief organs, especially the brain and lungs. The largest number of emboli were found in the right motor centers of the brain, corresponding to the hemiplegia. Small fresh hemorrhages were also noted around the emboli. In the heart muscle some of the numerous emboli were surrounded by delicate globules of fat presenting the same appearance as in fatty degeneration, with pronounced segmentation and vacuolar degeneration. The fibers showing fatty degeneration did not seem particularly affected by segmentation, but vacuolar and fatty degeneration were sometimes combined in a single fiber. No bacilli were found in the heart. In the kidneys the emboli were accumulated in the glomeruli. The fat noticed in the urine was probably derived from these accumulations, and this fatty degeneration was probably due also to embolism. Experiments on rabbits, injecting olive-oil into the renal artery of one kidney, produced similar results, from which Fibiger concludes that in fat embolism of the kidney in man, with obstruction of the glomerular vessels, it is probable that at a certain, not far advanced stage of the disease, the lipuria is due to an accumulation of fat in the epithelium of the intermediate parts. The cells gorged with fat, become detached, and the free globules of fat are evacuated into the lumen of the tubes. The process in every respect resembles that of fatty degeneration, with which it is probably identical. It is possible, he adds, that disturbances in the circulation, caused by obstruction of the glomerular vessels with fat, may be the starting-point of the process.

Congenital Dilatation and Hypertrophy of Sigmoid Flexure in a Boy. K. G. LENNANDER.—Hirschsprung called attention to this deformity in 1886, but very few cases have been reported. In the observation described, the enormous size of the abdomen, diarrhea alternating with obstinate constipation, the flatulence and gurgling sounds in the abdomen suggested peritoneal tuberculosis, but study of the case convinced Lennander that there must be some congenital deformity, so he opened the abdomen, expecting to make an anastomosis. He found the sigmoid flexure colossal, so dilated and thickened that the success of an anastomosis seemed dubious and he refrained, instituting faradization instead. Each day a liter of salt solution was injected into the rectum, and one of the electrodes inserted, while the other was applied to the exterior of the abdomen—the current as strong as the 4-year-old could bear—for ten minutes. This treatment was continued daily for three years. At the end of this time the appearance of the child had become normal, and the functions have remained regular to date, a year since dismissal.

Pathologic Importance of Version and Retroflexion of Uterus. G. HEINRICIUS.—Contrary to the generally accepted opinion, Heinrichius does not ascribe any pathologic importance to backward displacements of the uterus, considering that the symptoms usually attributed to them are in reality due to complications on the part of the uterus or adjacent regions, or even of parts remote from the genital sphere. He thinks that orthopedic or operative treatment is useless unless indicated by an infection of the adnexa or something of the kind. Backward displacement of the uterus can not induce symptoms unless the organ presses on others in the neighborhood, and, in the majority of cases, hysteria and neurasthenia are the chief factors in the symptoms erroneously ascribed to the retrodeviation. He tabulates details of 200 cases.

Progres Medical (Paris), March 17.

Necessity of Lavage of Stomach Before Gastroenterostomy. R. BERLIN.—In an observation reported of cancer of the

pylorus, there had been constant vomiting for a month. The debility was extreme and the stomach was not rinsed preparatory to operation, as authorities still disagree as to its necessity. But on puncturing the stomach a large amount of a blackish, fetid fluid was released, and a flood of indigested matters, including prunes and cheese, etc., forced its way out of the stomach, inundating the field. The patient died the next day, of septicaemia. The food found must have remained in the stomach for seventeen days, the last date at which solid food had been taken, and in spite of the incessant vomiting. Even if the large fragments could not have been removed through the sound, the inundation would have been prevented and the patient probably saved by a preliminary lavage.

Muenchener Medicinische Wochenschrift, March 27.

Agglutinin. M. HAHN AND R. TROMMSDORFF.—Typhus and cholera bacteria, after being agglutinated with specific sera, were shaken up in a 1/100 normal solution of soda or of sulphuric acid, and left to soak for an hour. At the end of this time the agglutinating substance had been extracted from the bacteria and was in suspension in the fluid, producing agglutination even at one-tenth dilution. The same effect was obtained after neutralization of the alkali.

Pseudomucin in Ovarian Cysts. ZAENGERLE.—Crystals obtained from this pseudomucin are soluble in water, are dextrorotatory, react to Trommer's test and develop ammonia when boiled with alkali. They therefore resemble the glucosamin obtained from the mucin of the sputa and submaxillary glands and from ovomucoid and egg albumin. Pfannenstiel has established that the pseudomucin is a product of the goblet cells which line the walls of cystoma, and as the mucin of the salivary glands and air-passages, and also egg-albumin and ovomucoid are products of glandular activity, these gluco-proteids evidently form a group of bodies distinguished by the fact that they are the products of secretion of cells and of gland-like cells in particular, although not a regular gland secretion.

Early Diagnosis of Tuberculosis. Puncture of the Lung. M. HENKEL.—According to experience at Hamburg, the first signs of tuberculosis are not at the apices, but noted by auscultation in the fossa supraspinata and infraspinata, the region between the shoulder-blades, and first of all in the fossa infraclavicularis. The sound is compared by Turban to the whining of puppies. The clinical symptoms sometimes suggest tuberculosis, but no bacilli can be found, and in these cases Henkel punctures the lung at the point where the signs are most pronounced. In certain observations the sputa came from the non-tuberculous catarrh, while the tuberculous lesions were ensconced in remote capillaries, making no external manifestations. In such cases puncture might afford valuable information. A minimal amount of fluid is sufficient for bacteriologic investigation. The sensation as the needle enters the tissues is also instructive. No bleeding ever followed, and only very rarely was the sputum bloodstained for a few moments. The temperature rose slightly in a few cases, for a very brief period.

Surgical Intervention on the Heart. C. STERN.—THE JOURNAL has described—page 491 of the current volume—Rotter's method of opening up the heart to suture wounds. Stern relates an observation of a young man, shot through the heart, in which the organ was exposed according to Rotter's directions, with amazing ease and success. The front wound was sutured, but it was impossible to reach the wound caused by the exit of the ball, and tamponing proved ineffectual to prevent a fatal termination. He thinks that surgical intervention on the heart in case of stab-wounds can now take its place as a current operation with tracheotomy, etc., but with wounds from firearms the matter is more complicated, on account of the greater probability of a second wound at the rear of the heart. Suture of a wound at the rear lower pole of the left auricle—the location in his case—proved absolutely impossible.

Bulletin de la Soc. Med. des Hop. de Paris, March 15 and 22.

Leucocythemia with Mononuclear White Corpuscles. G. HAYEM AND G. LION.—In the three observations reported, the leucocytosis was considerable (527,000), and this increase was exclusively at the expense of the mononuclears, and of the colorless, translucent variety. The affection was chronic in all.

Epidemic of Pneumococcus Septicemia in Nurslings. LESAGE.—Sixteen nurslings at the Trousseau Hospital, last August, were affected with a sudden acute septicemia, fever 41 C., with violent dyspnea and evidences of general infection. All died except one, and the epidemic died out in five days, from lack of further subjects. No lesions of any importance were found, but the bronchi were filled with an intense culture of pneumococci. Similar epidemics have been observed with streptococci, but Lesage has never found the pneumococcus pure before. There was slight diarrhea in a few.

Bacteriology of Measles. LESAGE.—Two hundred cases of measles were studied and rabbits inoculated with nasal mucus or blood, from a large number. The results were positive in nearly every case, and Lesage considers himself justified in announcing that the delicate micrococcus he found so constantly probably has something to do with the etiology. As far as it is possible to recognize measles on a hairy animal, he thinks his inoculations induced the disease. The micrococcus cultivates best on gelose; decolors with Gram; takes stains slowly. The cultures resemble those of the pneumococcus. It was not found in 25 cases of scarlet fever, but constantly in six cases complicated with measles, also in two cases of measles complicating diphtheria; it was never found in 45 normal children, and only twice in 53 children who had had the disease previously.

Bacteriology of Acute Articular Rheumatism. TRIBOULET.—Comparing clinical findings with those of bacteriology, Triboulet establishes that simple, uncomplicated rheumatisms are amicrobian, while the grave complications are evidently secondary infections. Bacteriology will in time determine, among the clinical varieties, those of lesser importance, which leave no pathologic defect, and those which may prove fatal and leave permanent lesions. Research should now be directed to establish the connection between this or that clinical complication and the various microbial infections. It seems probable, according to our present knowledge, that the staphylococcus and streptococcus induce moderate infections, that the presence in the blood of the diplococcus described by the writer may confer a character of subacute permanence on the rheumatism, while Achalmé's bacillus is rarely met during life, but is found at the autopsies of the prolonged or fulminating cases in which polyinfection is frequent.

Societies.

COMING MEETINGS.

- AMERICAN MEDICAL ASSOCIATION, Atlantic City, N. J., June 5-8.
 Medical and Chirurgical Faculty of Maryland, Baltimore, April 24.
 Texas Medical Association, Waco, April 24.
 American Proctologic Society, Washington, D. C., May 2 and 3.
 Illinois State Medical Society, Springfield, May 15-17.
 American Medico-Psychological Association, Richmond, Va., May 1.
 American Association of Anatomists, Washington, D. C., May 1-3.
 American Association of Genito-Urinary Surgeons, Washington, D. C., May 1-3.
 American Laryngological Association, Washington, D. C., May 1-3.
 American Surgical Association, Washington, D. C., May 1-3.
 American Association of Physicians, Washington, D. C., May 1-3.
 American Climatological Association, Washington, D. C., May 1-3.
 American Dermatological Association, Washington, D. C., May 1-3.
 American Orthopedic Association, Washington, D. C., May 1-3.
 Arizona Medical Association, Prescott, May 2-3.
 American Gynecological Association, Washington, D. C., May 4-6.
 Medical Society of State of North Carolina, Torboro, May 5.
 American Pediatric Association, Washington, D. C., May 7-9.
 Ohio State Pediatric Society, Columbus, May 8.

- Nebraska State Medical Society, Omaha, May 8-10.
 Washington State Medical Society, Spokane, May 8-9.
 Oklahoma Territory Medical Society, Oklahoma City, May 9.
 Ohio State Medical Society, Columbus, May 9-11.
 Kentucky State Medical Society, Georgetown, May 9-11.
 Medical Association of State of Missouri, Mexico, May 15-17.
 Medical Association of Montana, Butte, May 16.
 Iowa State Medical Society, Des Moines, May 16-18.
 Arkansas Medical Society, Jonesboro, May 14-16.
 Connecticut State Medical Society, New Haven, May 23-24.
 Association of Military Surgeons of the United States, New York City, May 31 to June 2.
 North Dakota State Medical Society, Grand Forks, May 23-24.
 Indiana State Medical Society, Anderson, May 24-25.
 New Hampshire Medical Society, Concord, May 31 and June 1.

Association of Military Surgeons of the United States.—The ninth annual meeting of this Association will be held in New York City, May 31, June 1 and 2, at the New York Academy of Medicine, instead of on the dates formerly announced.

Hornellsville Medical and Surgical Association.—At a recent meeting of this Association, Hornellsville, N. Y., the following officers were elected: president, W. E. Palmer; vice-president, C. O. Green; secretary and treasurer, E. E. Webster.

Cuyahoga County Medical Society.—This Society held its annual meeting in Cleveland, Ohio, April 5. The election of officers for the ensuing year resulted as follows: president, C. F. Aldrich; first vice-president, W. E. Lower; second vice-president, J. P. Sawyer; secretary, C. C. Stuart; treasurer, L. S. Chadwick.

Fairfield County Medical Association.—The 109th annual session was held by this Association in Bridgeport, Conn., April 10. The following officers were elected: president, L. T. Day, Westport; vice-president, F. P. Clark, Danbury; clerk, George S. Ford. Delegates were also appointed for the coming meeting of the AMERICAN MEDICAL ASSOCIATION. The next annual meeting will be held in Bridgeport.

Pennsylvania Society for Prevention of Tuberculosis.—This Society, organized eight years ago, held its annual meeting in Philadelphia April 11. The election of officers resulted as follows: president, Guy Hinsdale; vice-presidents, H. S. Anders, J. Solis Cohen, William Moss, Moses Veale, Benjamin Lee, Talcott Williams, S. A. Knopf of New York. Dr. Lawrence F. Flick called attention to the fact that similar societies have been organized in other cities, and boards of health have also taken up the work, especially the state boards.

Marshall County Medical Society.—This Society held a meeting in Plymouth, Ind., April 12. The newly-elected officers are: president, A. C. Holtzendorff; vice-president, Jacob Kasner; secretary, N. B. Aspinall. Dr. T. A. Borton, of Plymouth, presented the Society with an antique mortar which he has had in his possession for about thirty-two years. It is the mortar brought to this country from France, by Dr. De Bruns, who was surgeon of Lafayette's first expedition. It is chiseled from a solid block of marble and shows marked signs of its great age. The Society voted to present the mortar to the Indiana State Medical Society's historical department, and it will be exhibited by the latter at the coming meeting of the AMERICAN MEDICAL ASSOCIATION.

Medical Association of District of Columbia.—At the meeting of this Association, held on the 3d, in Washington, D. C., the following officers were elected: president, S. S. Adams; vice-presidents, H. E. Deal and J. W. Chappelle; secretary, M. G. Motter; treasurer, Frank Leech; counsellors, R. T. Holden, G. N. Acker, W. P. Carr, H. L. E. Johnson, D. O. Leech, Clifton Mayfield, J. H. McLean, G. C. Ober and T. R. Storm; censors, W. C. Woodard, G. W. Cook and L. C. Glazebrook. Forty delegates were elected to the next meeting of the AMERICAN MEDICAL ASSOCIATION. A special committee, consisting of Drs. Adams, Deal and Chappelle reported resolutions of regret on the death of Dr. D. Webster Prentiss, the president of the Association, who died a few months ago, and also

resolutions on the recent death of Drs. May, McWilliam and Miller, ex-presidents of the Association.

American Laryngological, Rhinological and Otolological Society.

Southern Section, Louisville, Ky., March 30, 1900.

The address of welcome was delivered by Dr. S. G. Dabney, of Louisville, and responded to by Dr. L. B. Graddy, of Nashville, Tenn.

CHAIRMAN'S ADDRESS.

Dr. J. A. STUCKY, Lexington, Ky., in his address, directed attention to the rapid progress made in recent years in the explorations of the cavities of the nose and throat, reviewing step by step the introduction of cocaine anesthesia, illumination of cavities and the possibility of doing bloodless operations by means of suprarenal extract. The use of ointments, powders and douches is now of questionable utility, and the atomizer fiend is falling in line with the hypodermic fiend. He called attention to the fact that the laryngologist now removes the larynx and the patient not only lives but talks; the otologist chisels away portions of the skull and the patient not only lives but hears; and the rhinologist makes the nasal passages as smooth as a gun barrel. All this progress has been freely given to the public and the physician has made himself the servant of the profession; there is no longer any clash between the specialist and the general practitioner.

REMOVAL OF 107 POLYPI.

Dr. H. W. LOEB, St. Louis, Mo., presented the first paper, its title being "One Hundred and Seven Polypi Removed at One Sitting, with Remarks as to the Value of the Electrocautery Snare in Removal of Polypi." The case was that of a negro man, in the City Hospital, who had been operated on for sarcoma of the orbit, with removal of the left eye. He was very weak at the time of operation, which was completed at one sitting; 68 pieces were removed from one side and 59 from the other; eliminating 20 of these, there remained 107 well-formed polypi, which Dr. Loeb exhibited. Their weight was 77 grains, and they would about fill a two-ounce bottle. Dr. Loeb used the snare for the reason that it enabled him to do the work at one sitting, because of the freedom from hemorrhage and the rapidity with which it could be done. The snare differed from the ordinary electrocautery snare in that the wire did not pass entirely through the canula, but was more easily threaded. The patient had some recurrence but had left the hospital and had not been located.

Dr. NORVAL H. PIERCE, of Chicago, thought the operation would have been impossible with any other form of snare because of the profuseness of hemorrhage with the cold snare in removal of tumors. He thought an improvement could be made in the shaft of the one used.

Dr. WM. CHEATHAM, Louisville, had the same objection. He also expressed himself as being fearful of secondary hemorrhage after removal of tonsils and polypi with the electrocautery snare.

Dr. THOMPSON, Cincinnati, Ohio, mentioned a patient with two very large polypi, one being 2½ inches long and three-fourths of an inch in diameter; the other 1¼ in length and three-fourths of an inch in diameter. One feature was a constant headache for fifteen years, which never left during her waking hours, due to supraorbital neuralgia.

Dr. S. G. DABNEY, Louisville, reported a case of fibroid-mucous polypus which caused constant vomiting. It was removed with the electrocautery snare, with no subsequent trouble.

Dr. J. A. STUCKY mentioned a case operated on eight years before. The nose was 2½ inches at the base, turbinates absorbed, cartilaginous septum gone. The polypi were removed at three or four sittings with the cold snare and curette. The antrum was full of them and the ethmoid had to be curetted. He has operated twice since then, but during the last two years has had no reported recurrence. A 25 per cent. chromic acid solution was used the last time, with alarming gastric and nervous symptoms, with septic symptoms continuing for several days.

Dr. T. V. FITZPATRICK, Cincinnati, Ohio, was gratified to know of the ease with which so many polypi had been removed at one time with the electrocautery snare, and also commented on the extent to which inflammatory tissue will develop in the nose. Recurrence will result whenever this inflammatory tissue is left behind.

Dr. H. W. LOEB, in closing the discussion, said that the objection to the bulkiness of the shaft was not valid because of the fact that it was used only in cases where there were a large number of polypi, where the nose was naturally more capacious. It was not to be used when they were small and few in number. He thought that Dr. Cheatham was unduly afraid of secondary hemorrhage, for in eight years of almost exclusive use of the electrocautery snare he had had practically no secondary hemorrhage. He attributed much of this success to the cleanliness of his instrument, and said that with the cotton cloth-covered instrument it was impossible to prevent infection. As to the recurrence of the polypi after the use of the electrocautery snare he was not so enthusiastic as in earlier years, but still believed that its possibility was greatly lessened by the use of the electrocautery. There was a recurrence in the case under discussion, but the man had not been found and no definite report could be given.

Dr. WM. CHEATHAM then exhibited his modification of the instrument referred to.

PERITONSILLAR ABSCESS.

Dr. NORVAL H. PIERCE, Chicago, then presented a paper on "The Treatment of Peritonsillar Abscess, with Exhibition of New Instruments." The chief objects of the paper were to accentuate the proper place for incision and to present instruments to meet the indication. He said that nothing was more annoying than an unsuccessful attempt to reach the pus, and nothing more gratifying than its removal, which was nearly always curative. Early incision is not only justifiable but indicated, for the abscesses do not always rupture spontaneously. He referred to the fact that most authorities recommended incision at the point of bulging, generally at the upper anterior surface of the anterior pillar, 5 cm. from its edge. This bulging is not always due to pus, but may be from edema or from the tonsil itself. He said that spontaneous rupture takes place through the anterior pillar, and that by far the most frequent place is the fossa supratonsillar, and this he recommends as the proper place for incision. This fossa may be best seen by pulling out the tongue, depressing its dorsum with a spatula, pushing outward the opposite corner of the mouth and inclining the head to the opposite shoulder. He described this fossa as situated between the anterior and posterior palatal arches and above the tonsils; its opening is triangular, the base formed by the tonsil and the anterior and posterior borders by the pillars of the fauces. It extends inward, upward and outward into the soft palate downward and anteriorly between the tonsil and plica triangularis and sends prolongations downward for a variable distance behind the tonsil. The abscess may begin in the upper or palatal portion or even behind the tonsil; wherever it may be, it can be best reached by incision at a point between the anterior and posterior pillars; this was the emphatic point of the paper.

Dr. H. A. LOEB opened the discussion by confessing that he had been trusting to luck in these operations, and that he had frequently been disappointed by failure to find the pus at the point of bulging. He intends to work on the fossa supratonsillar hereafter.

Dr. THOMPSON suggested that the forceps might be improved so as to prevent the blade from slipping.

Dr. WM. CHEATHAM also confessed to frequent disappointments and failure to find pus. He had never opened at the supratonsillar fossa. The abscesses pointing posteriorly had given him the most trouble.

Dr. COCHRAN said that his patients had been unable to open the mouth to any great extent, and that he usually employs a syringe with very hot water until the parts relax. He then opens at the point of bulging, with a straight or partially curved knife.

Dr. S. G. DABNEY thought these instruments much superior

to those of Dr. Leland of Boston, exhibited some years ago for a similar purpose.

DR. CHEATHAM mentioned a case of slow venous hemorrhage to an alarming extent.

DR. BALTZER reported a case which bled for about a month after incision.

DR. J. A. STUCKY referred to the instrument suggested by him in a paper read before the Mississippi Valley Medical Association at Nashville. It was shaped somewhat like a corkscrew, and was for puncturing the tense sheath behind the anterior pillar and the tonsil. He agreed, however, that the supratonsillar fossa is the best place for puncture, but thought Dr. Pierce's knife should have a shorter blade. As to palpation of abscess, he was sure that there was nothing in it.

DR. N. H. PIERCE, in closing the discussion, said that he had never been troubled with hemorrhage from a peritonsillar abscess, though he had in removing tonsils. He regards the apex of the tonsil as its most important part, the part which rests in the fossa supratonsillar, and said there would always be a recurrence unless this was removed. As to the instruments, he intends having them improved, but does not think the knife blade too long. With regard to prophylaxis, he designated oil of wintergreen as his particular hobby, two No. 1 capsules every two hours until perspiration breaks out and ringing of the ears ensues. He thought possibly some cases had been cut short. He regards palpation as a cruel and unnecessary procedure.

INSTRUMENTS.

DR. L. B. GRADY, Nashville, Tenn., exhibited several instruments for which he claimed no special originality, but which he found very useful. One was a small canula something after that introduced by Hartman, which can be introduced through a small opening in the drum membrane in cases of long suppuration and, with the syringe attached, one can wash out retained secretions, quantities of which can be removed in this manner. He claimed there are no cases of incurable middle-ear trouble; histologically and pathologically there is no reason why, if properly cleansed, they should not heal. So long as an odor remains the remedy has not been successful. It is often difficult to tell whether retained secretions or diseased bone is the cause of the odor. With an instrument filled with powder, with an attached tube's free end in the mouth, the medicament can be applied to the roof of the middle ear or mastoid cavity.

The other instrument exhibited was a trephine for performing a radical tympano-mastoid operation, doing away with the chisel and hammer.

(To be continued.)

Cleveland Medical Society.

March, 9, 1900.

Presiding Officer—J. B. McGee, vice-president.

TUMOR OF MAXILLA.

DR. C. A. HAMANN presented a child, 11 years of age, who had come to him 2½ years previously suffering with a tumor of the right maxillary. He had removed the entire superior maxillary bone, part of the malar, and also the floor of the orbit, through an incision along the median line of the lip, the nasal fold and the lower margin of the orbit. No recurrence of the growth, which proved to be a spindle-celled sarcoma, took place. This child, however, recently presented herself again with an enlargement of the left side of the inferior maxilla, which raised some suspicion of recurrence. After waiting a few days an abscess was found in the submaxillary region and was opened and drained. The swelling of the lower jaw was due to the enlargement of the lymphatic glands of the submaxillary region, some of which are peculiar in that they lie right on the periosteum both on the inner and outer surface of the bone. He has seen several cases where enlargements of these glands, due to epithelioma of the lip, closely simulated a neoplasm of the bone, and in such cases it is always necessary to remember the situation of these glands.

DR. J. M. INGERSOLL said he had seen a similar case involving the entire superior maxilla, but the father refused to have an operation, and he has not seen the patient since.

DR. W. T. HOWARD noted the fact that two cases of submaxil-

lary abscess have been reported in which amebæ were found. As they occurred prior to the time that it was possible to cultivate them, it can not be told whether or not they belonged to the ameba coli group.

DR. C. A. HAMANN added that no plate had been inserted in the oral cavity, because the child had not yet developed permanent teeth. As soon as this can be done the asymmetry of the face will be less conspicuous.

SURGERY OF INGUINAL HERNIA.

DR. C. B. PARKER read a paper on "The Cure of Inguinal Hernia by Surgical Means." He said that not every case of hernia should be operated on. In cases of reducible hernia where a truss holds the hernia and it can be worn without discomfort, operation is unnecessary. In all other forms he advises operation. He makes a flap incision through the skin, exposing the external ring to a point one inch beyond the position of the internal abdominal ring, and, having reflected it, divides the aponeurosis of the external oblique muscle. He frees the oblique internal and transversalis muscles and Poupart's ligament for the full length of the first incision. Then he opens, empties, and draws down the sac, cuts it off and closes it with a continuous chromicised catgut suture.

If any omentum is to be removed, he ligates the individual vessels. He closes the transversalis fascia with catgut, depresses the cord against the pubes and sews the conjoined tendon to Poupart's ligament; also the pillars of the external ring. The internal oblique and transversalis muscles are to be united to Poupart's ligament with kangaroo tendon. A cuticular catgut suture completes the closure of the wound. A plaster-of-Paris splint is placed over the aseptic dressing to ensure complete rest. Conclusions: 1. The operation is nearly free from danger. 2. The closure of the internal abdominal ring is essential to success. This is accomplished by: *a*, closing the sac with a continuous suture; *b*, uniting the transversalis fascia and, *c*, closing the internal oblique and transversalis fascia the entire length of the canal; *d*, depressing the cord on the pubes, thus preventing possible pressure on or pulling on the cord with constant swelling or atrophy of the testicle.

DR. T. C. MARTIN asked why a child, when the subject of acquired hernia, recovers without operation. A child's mesentery is relatively much longer than that of the adult, while the pelvis is contracted and the abdomen pendulous. This places the abdominal ring in a much more dependent position, while the long mesentery permits of such mobility as to expose the abdominal ring to increased pressure at this period of life. He thinks that the wearing of a truss by such a child does not effect a cure, although it is helpful.

DR. R. J. WENNER asked what percentage of cases of hernia in children are cured by the wearing of a truss. He thinks that the continued pressure of one, especially if worn at night as advised by some authorities, tends to weaken the part over which it is placed rather than to strengthen it. As the internal ring is patent he does not see how pressure could ever close it. Recently surgeons have been operating on infants as young as seven months. In his experience kangaroo tendon, no matter how sterilized, has not proved to be an aseptic suture material. Several weeks after its insertion he has seen infection occurring about the sutures.

DR. F. E. BUNTS commended the author's advice to lay the cord around in its normal position in the inguinal canal. His experience with kangaroo tendon has also been unfortunate, and he has, in a number of cases, met with late suppuration occurring wherever this material has been used. He has used the kangaroo tendons of the various manufacturers, and has also tried his own methods of sterilization, but has not succeeded in obviating the unfortunate result. Considering the excellent results the author has obtained from operation even in cases of strangulated hernia, he could hardly understand his position against operating in cases in which the hernia can be retained by a truss. As the operation is practically devoid of danger, he thinks it the best thing to do in all cases.

DR. R. J. WENNER asked what had been the essayist's experience in the treatment of indirect hernia when there was considerable separation of the fascia.

DR. C. B. PARKER, in closing, said that Dr. Martin had

pointed out one well-recognized cause of hernia in children, and that another is the fact that at this age the internal and external rings are nearly opposite, while as the pelvis broadens they become separated. He said that before operating he places his kangaroo tendon in pure ether, and just before using it washes it first in alcohol and then in sterile water. Stitch abscesses do occur, but he thought they were due rather to the effect of prolonged operation, or to some slip in the aseptic technique, than to the tendon. The reason he does not favor operation in all cases of hernia is that there are certain dangers inseparable from operation. Not all accidents can always be prevented. The after-effects of general anesthesia are sometimes quite serious.

TREATMENT OF LACERATED WOUNDS.

DR. W. E. LOWER read a paper embodying observations based on 2500 cases. As all lacerated wounds are more or less infected they should be treated antiseptically, as it is practically impossible to render them aseptic. The best antiseptic is corrosive sublimate. It is effective and economical. Carbolic acid, formalin, and others of the new antiseptics have not stood the test as well as the bichlorid. Iodoform and dusting-powders are not used on first dressings, as they are not antiseptic. About 50 per cent. of patients in whom iodoform is used develop a dermatitis, and this, with its disagreeable odor, should condemn it. Ointments and poultices like powders are condemned. Just as little of the lacerated tissue as possible should be cut away. It is better to dress a wound with doubtful tissue remaining than to sacrifice what might be saved. Let Nature decide what is to be lost and it may be readily removed later. The skill of a surgeon is shown in what he can save and make useful, and not in what he can destroy. If tendons or nerve-trunks are severed they should be sutured at once. Rarely is it necessary to suture a lacerated wound, especially of the fingers or scalp. The edges may be approximated by a gauze bandage, and over this a profuse dressing of gauze and cotton saturated with bichlorid is applied. Much destruction of tissue and impairment of function results from the pernicious practice of making a close approximation and suture of lacerated wounds. Approximation by adhesive strips is even worse. The first dressing is wet and the subsequent ones are moist. A wet dressing is completely saturated by this solution; a moist one is wrung dry. When laceration is near a joint, the injured part should be put to rest by splint or fixation to the body. If no trouble arises, the first dressing remains on two days. A moist one is then applied every second day. When granulations appear, boric acid may be used as a dusting powder. This has proved to be the best and most economic. Under treatment as outlined, infections seldom if ever occur. At the first sign of redness, pain or swelling, the part should be sacrificed and a wet bichlorid dressing applied every three or four hours.

DR. W. T. HOWARD asked the essayist if he had, in this large series of cases, met with one of emphysematous gangrene. In the last five years he had met with 14 cases in which the gas bacillus had invaded the human body just before or after death, but he had not been able to find a single case of emphysematous gangrene in this city, although he had seen some cases in Baltimore.

DR. J. F. HOBSON emphasized the importance of primary cleansing of the injured part. As in these cases, particularly of injuries to the hand, the part is often exceedingly dirty, and he at times finds it necessary to give an anesthetic in order to completely cleanse the part. He indorsed the practice of using no suture material in bringing together the edges of a lacerated wound. In injuries to the hands conservatism is often carried too far, and parts are saved that are either of no use or are actually in the way.

DR. F. E. BUNTS said that one would scarcely think that there would be any material difference of opinion as to how to treat lacerated wounds, and yet very often he has seen well-trained physicians dressing a lacerated wound with adhesive plaster. The intelligent treatment of these minor injuries is very important. He is of the opinion that iodoform has no place whatever in a surgeon's office. He said that in the hospital, where it can be sterilized and used in this condition, it may possibly be of some service, but otherwise it is never antiseptic.

DR. C. B. PARKER emphasized the advisability of not using sutures in closing lacerated wounds, and also the importance of complete rest to the injured part. In case of a crushed hand, it is well to place the member in a splint during the period of possible infection. It also is well to fix the elbow.

DR. A. R. BAKER pointed out that there is one class of lacerated wounds in which moist antiseptic dressings should not be employed, that is, those occurring in or close to the eye. In wounds of the face or cheek, the eye, if possible, should not be covered by a bandage, but if it must be, it is well to dust boric acid powder over it, and cover it with a little gauze and cotton and a piece of oiled silk.

DR. W. E. LOWER, in closing, said that he had not met with a case of emphysematous gangrene. It is his practice in case of lacerated wounds of the hand to immerse the member in bichlorid solution and not to scrub it any more than necessary.

EPITHELIOMA OF TONSIL.

DR. J. M. INGERSOLL reported a case of primary epithelioma of the tonsil, a rare condition, about 120 authentic cases having been reported. The patient was a well-developed man, 42 years of age, whose right tonsil had been increasing in size and paining him for thirteen weeks. It was covered by a fairly firm, irregular, fungoid mass covered by mucopurulent secretion. The lymphatic glands at the angle of the jaw on the right were involved. A piece of the tumor was removed and microscopic examination showed a typical epithelioma. A radical operation was advised. The patient consulted several reputable men and then placed himself under the care of a so-called "cancer specialist," and died in his office about two months later.

Johns Hopkins Hospital Medical Society.

Baltimore, Md. April 2, 1900.

President—Dr. Henry M. Thomas.

SIMULTANEOUS PARALYSIS OF MOTHER AND CHILD DURING LABOR.

DR. HENRY M. THOMAS exhibited a white woman and her 8-weeks-old infant, both suffering from paralysis due to injury received in the same labor, which was an exceedingly difficult one, lasting 1½ hours and requiring forceps. On delivery the nurse noticed that the left arm of the infant was paralyzed, and that there was a lesion of the left side of the neck. The limb remains close to the side and the hand is rotated far in. There is no deltoid movement, but the child can move fingers and grasp. The electric reactions are unchanged.

Duchenne first described this form of paralysis, which he called "obstetrical paralysis." He had had four cases from labor and had seen other similar ones in adults from injury of the neck involving the fourth and fifth cervical roots. There has been much study of the subject but nothing new added since Duchenne wrote. Three similar cases have been exhibited in the Johns Hopkins Hospital during the past winter, all in infants. The prognosis is not so bad as Duchenne believed it.

The mother is 25 years old, and of good family history, with nothing of importance to note. The forceps is said to have slipped six times before the delivery of the head. On recovery from the anesthesia there was great pain in the legs and paralysis of both. She got up in ten days and has improved, but most in the right leg. There has been no disturbance of sensation at any time. Knee reflexes are good, but there is no tendo Achilles' reflex. The woman has a peculiar wabbling gait, with dropping of the toes. There is partial reaction to degeneration. The woman is small, but the child, when born, weighed 12½ or 13 pounds. The case is believed to be unique, in its involvement of both mother and child, and in the bilateral character of the paralysis in the former. Injuries of the sacral plexus in labor are rarely referred to in the text-books, but have been noticed in France a long time. Huncermann speaks of it in the *Archiv. f. Gyn.*, 1892, and Lloyd, in *Twentieth Century Practice*, gives the best description extant of it. It is known that multiple neuritis may develop after labor, but this seems to be a traumatic injury to the sacral plexus.

STONE CRUSHING.

DR. A. T. CABOT, Boston, read a paper giving the results of stone crushing in his practice, which embraced litholapaxy, 122

cases; suprapubic lithotomy. 12; perineal lithotomy. 1 case. The average age was over 60 years, and the bladder was diseased in nearly all. He remarked that stone is rare in New England, and extremely so in children there. Of the 122 litholapaxies, 6 patients died shortly after operation. Thus there is a death-rate in those over 60, of 4 per cent., which is practically no risk. The results are about those of ovariectomy. In only 2 instances did litholapaxy have to be abandoned, and there was but one serious accident—rupture of the bladder—already fully reported. Laparotomy was done and the patient recovered. There is no danger of ripping the bladder unless the end of the instrument is turned over so that its point becomes imbedded in the wall. No serious nor lasting injury has ever been noted. There were two cases of recurrence in uric acid calculi; in one of these two operations and in the other three were done.

In one case the nucleus of the stone was a piece of catheter, and in another a piece of shoestring; neither offered any impediment to the operation. He also spoke of the ease and certainty with which the stone can be examined and measured with the instrument. The low death-rate, the short convalescence and the absence of wound and injury to the bladder give his operation advantages over lithotomy and the English surgeons in India are enthusiastic advocates of it, and they have an experience vastly greater than here. In conclusion, Dr. Cabot exhibited the instruments employed in the operation. The necessity of absolute patience and gentleness in operating was insisted on.

DR. W. S. HALSTED spoke of the skill needed in the performance of litholapaxy and of the risk of catfishing the bladder, and the bad results. He had contented himself, therefore, with the operation which he understood and whose results had been satisfactory—suprapubic lithotomy.

DR. J. M. T. FINNEY spoke in the same strain. All his cases with one exception had been suprapubic lithotomies; the exception being a perineal lithotomy.

DR. H. H. YOUNG quoted from the statistics of a Russian operator, showing the satisfactory results of the suprapubic operation.

DR. A. T. CABOT, in concluding the discussion, said the operation did not demand any unusual skill. It was not more difficult than introducing a catheter. Any surgeon who could not do it, he thought, had better seek some other employment.

ADVANTAGES OF CYSTOSCOPIC STUDY OF HYPERTROPHIED PROSTATES. REPORT OF CASES.

DR. HUGH H. YOUNG spoke on this subject, and especially on the results of the modified Bottini operation. His views have already been referred to in these columns. (See THE JOURNAL, Nov. 25, 1899, p. 1360.)

Los Angeles County Medical Association.

Los Angeles, Cal., March 16, 1900.

CO-OPERATION OF PHYSICIANS.

DR. WALTER LINDLEY spoke on the co-operation of physicians in semiprofessional business matters. He said that the general idea is abroad that physicians can not get on amicably with each other, and he believes that where there is dissension between members of the profession, the cause is usually lack of intimate association and knowledge of each other. Every physician means to gain a competence for his family. To do this requires more than simply saving a man's earnings. He must also invest his savings so that they will grow. As a rule physicians are not good business men, because they have not turned their attention to business. Dr. Lindley cited the California Hospital, Los Angeles, as a good example of the successful co-operation of members of the profession in some professional business. The California Hospital Association was incorporated by twenty physicians, and now has a capital stock of \$100,000. They own the hospital, a building of one hundred rooms, and the extensive grounds surrounding it. The advantages of this co-operation are that the profession of Los Angeles have a hospital that is run to suit them on the most modern progressive lines, while at the same time they have an excellent place for investing their surplus funds, and this investment has steadily paid a good substantial interest. It has also furthered the association of the profession

in this hospital work, and has brought about a far better feeling that ever existed before in the profession of this city, and there has never been a particle of friction or dissatisfaction. An average of twenty-five physicians daily see patients there and, as said before, everything has moved on with perfect amity.

Another corporation of physicians is just being organized to establish a health resort in the pine forests of the mountains 100 miles from Los Angeles. This company is organizing with \$250,000 capital. It has bought a tract of land 1½ miles long and one-half mile wide, with running streams, and springs and forests of pine and oak. Within a year will be established on this tract, one mile apart, two institutions, one a central pavilion for dining room, kitchen and places of entertainment, surrounded by cottages, each containing three rooms and a bath—this will be for tubercular patients. One mile away there will be a building erected more in the style of a general sanatorium, which will be a general resort for persons who desire to go to the mountains for rest and pleasure. The altitude of this California mountain resort is 5120 feet. Thirty physicians are furnishing the capital for this institution and they propose to have a place here in the pine forests of California to which members of the profession, both East and West, can send their patients with confidence.

EXTRAUTERINE PREGNANCY.

DR. E. R. SMITH reported a case of extrauterine pregnancy, exhibiting a specimen, the special point of interest being that he had operated on the patient about nine months previously for the same condition on the other side.

Philadelphia County Medical Society.

March 14, 1900.

President—Dr. John H. Musser.

HANGING.

DR. E. W. HOLMES read a paper on the anatomy of hanging, comparing hanging and strangulation, with a description of the anatomic lesions produced by hanging, a consideration of the methods of judicial hangings and an analysis of the sensations of those hanged and resuscitated. In the majority of legal executions of this nature death does not occur from a fractured vertebra, but from strangulation. Of 368 suicides, 189 were by hanging, and in England, within five years, 2500 persons found death in this way. Regarding the sensations produced, first there is a flash of light before the eyes, a hissing sound in the ears, bulging of the eyes, a sense of weight on the feet, and then a sense of suffocation followed by unconsciousness. The changes produced by hanging seem to be: 1, asphyxiation; 2, cerebral congestion; 3, coma; 4, nerve paralysis; 5, shock and cerebral concussion. In the majority of hangings death usually occurs in from six to seven minutes, but the body is generally left suspended by the neck for half an hour. In four-fifths the noose was located above the larynx, and one-fifth below this.

The post-mortem changes produced are: presence of a brush-burn, ecchymosis, tearing through of thyroid or cricoids, and sometimes fracture of the intervertebral discs and odontoid process. The vessels of the brain are usually congested, and frequently there is an extravasation of blood. It has been found in some cases, in which a person has been hanged and resuscitated, that he suffers from aphonia, and also aphasia. The lungs are usually congested or edematous, and there is an increase of pleural and pericardial effusion. Involuntary action of the bladder and rectum usually occurs. The majority of legal hangings caused a painless death.

DR. SOLOMON SOLIS COHEN, the retiring president, delivered an address on "Progress in Therapeutics."

Experimental Treatment of Tuberculosis.—Richtel has announced (Paris Soc. de Biol.) that his experiences show that all medicinal substances arrest development of tuberculosis. Experiments with sodium chlorid, sodium urate, turpentin, iodine, etc., showed that animals thus treated always survived longer than the untreated, suggesting that the development of the tuberculous toxins is checked by the presence of any medicinal substance in the body.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

61 MARKET STREET, - CHICAGO.

SATURDAY, APRIL 21, 1900.

RELATION OF CHRONIC MYOCARDITIS TO SCLEROSIS OF CORONARY ARTERIES AND AORTA.

The causes and the genesis of interstitial, non-suppurative myocarditis have been the subject of much discussion and investigation during recent years. The relations of myocardial scars to coronary sclerosis; of more acute, necrotic myocardial foci to occlusion of the coronary arteries; the rôle of syphilis, of rheumatism, and of the acute infectious diseases in the development of myocarditis; and the influence of passive congestion in interstitial changes in the heart muscle have all been considered from various points of view. In order to throw new light on the relations of these so important changes in the heart wall to chronic changes in the coronary arteries, Fujinami¹ undertook a study of a series of hearts. His investigations were carried out under v. Recklinhausen, in the pathologic institute at Strassburg, and it is the purpose of the following lines to give a comprehensive summary of the results obtained and the conclusions reached.

Fujinami studied carefully the gross appearances of the coronary arteries, of the beginning of the aorta whence these vessels take their origin, and of the coronary veins. The anatomic relationship of myocarditis foci to diseased coronary branches was carefully investigated microscopically. In all 52 cases were examined, the majority being plain instances of chronic, fibrous myocarditis, cases of syphilis and other infectious diseases being excluded as far as possible. Many cases were met with in which the changes were first recognized under the microscope. As a rule the changes were observed to be especially well marked either in the lower half of the anterior wall of the left ventricle or in the upper half of the posterior wall of the same part of the heart. Changes were also frequently found in the interventricular septum and in the papillary muscles. The cases are divided into three categories: 1. Advanced fibrous myocarditis; 2. microscopically demonstrable fibrous myocarditis; 3. acute, local, parenchymatous changes.

In the larger percentage of those of advanced fibrous changes there was a marked coronary arteriosclerosis; in a few there were marked sclerotic changes in the beginning of the aorta and but slight ones in the coronaries. It is noteworthy that in no case were there found marked sclerotic changes in both these places at the same time. In the majority the resulting narrowing of the coronary arteries did not correspond accurately to the fibrous areas. And yet the sclerosis of the coronary arteries was usually so diffusely developed that the nutrition of the

heart's muscle surely suffered on that account. In the cases in which the beginning of the aorta was markedly affected there were such slight changes in the coronaries that the aortic disease is regarded as largely responsible for the myocardial changes. In no case in this group were there found abnormal contents—thrombi or emboli—in the coronary arteries. Naturally, negative findings have no absolute value in such processes as those now considered, because the changes were advanced to the extent that fibrous tissue had developed, but the fact remains that nothing was discovered directly favoring the claim that the myocarditis was the result of infection.

Sclerosis of the beginning of the aorta and of the coronary arteries appeared to play the same rôle in the group in which the changes were microscopic as in the group of coarser lesions. In general, the arteriosclerosis was less marked in the hearts with microscopic changes. In many cases the muscle fibers appeared to be quite intact, though often thinned between, and in the older and younger foci of connective-tissue proliferation. Instances were observed also of distinctly primary muscular degeneration followed by secondary fibrosis. In the smallest of such foci but one or two muscle fibers were involved for a short distance. The degenerated muscle eventually either disappears wholly or becomes calcified. Fujinami believes that in such cases some kind of poison produces the muscle degeneration, either directly or indirectly. Constant and direct relationship between the fibrous foci and the foci of coronary sclerosis could not be demonstrated in this group.

But in the third group, that of local parenchymatous changes, the influence of the vascular disease was found to be more directly demonstrable than in either of the preceding. In all cases the focus of degeneration or necrosis corresponded accurately to the narrowed vessel, no matter whether the narrowing or occlusion was caused by thickening of the wall, by thrombosis or by embolism. This observation tallies closely with the current teachings in regard to myomalacia cordis and with the results obtained by Baumgarten.²

Several cases of partial aneurysm of the heart occurred in Fujinami's series and in all these there was advanced sclerosis of the coronary vessels, the areas of greatest involvement corresponding to the location of the aneurysm. From the observations on these cases it seems correct to conclude that the heart wall suffered in nutrition and consequently lost its resistance to the blood-pressure on account of sclerotic narrowing of the arteries. This relationship is brought out very clearly by a thorough study of a heart the seat of no less than three aneurysmal dilatations of varying ages and stages in development.

Fujinami's material includes also three cases of rupture of the heart. In two there was hardly any doubt as to the relationship between the coronary disease and the ruptures.

Myocardial segmentation was frequently observed in

¹ Virchow's Archiv, 1909, 359, 447.

² THE JOURNAL, Oct. 7, 1899, p. 919.

this series. It was absent in only a small number of cases. The dissociated muscle fibers were always situated a distance from the fibrous areas. The fibers within the scars were not fragmented, but more or less pressed apart and atrophic. Fujinami has seen, however, some microscopic appearances in the fibers similar to the sarcolytic degeneration described recently by McCallum,³ an interesting process that probably plays a greater rôle in fibrous myocarditis than now generally recognized.

The frequency of myocardial segmentation in fibrous myocarditis has already been established by Hektoen⁴ and by Streickeisen.⁵ The first-named author found that in 59 cases with hypertrophy of the heart and more or less chronic fibrous changes, dissociation of the myocardium was present in about 75 per cent.

The following facts stand out pre-eminently as the result of and in connection with Fujinami's work: 1. Circumscribed areas of parenchymatous myocardial changes correspond closely with arterial narrowing and occlusion. 2. Fibrous myocarditis and arteriosclerosis of the coronary arteries and the root of the aorta constitute a very common combination. 3. In the majority of the cases the myocardial scars do not correspond exactly in location to the arterial narrowing. 4. Narrowing of a coronary branch may cause fibrous changes indirectly by so interfering with the nourishment of myocardial areas that muscular disintegration and secondary fibrous changes take place. The vascular changes may be situated in the larger coronary branches, at the origin of the coronary arteries, or in the beginning of the aorta. 5. Primary, interstitial, non-suppurative myocarditis undoubtedly occurs. Fibrous myocarditis consequently represents the final stage of various processes. It follows that in many cases arterial thickening may be secondary to myocardial fibrosis, just as is often the case in indurative processes in other organs. 6. The frequency of segmentation of the myocardium in coronary sclerosis and fibrous myocarditis suggests that this combination is not merely accidental, but space does not permit further discussion of this highly interesting question at this time.

AUTOINTOXICATION.

The humoral pathology of an earlier day has been replaced by the current doctrine of intoxication. Instead of humors arising within, or introduced into, the body in various mysterious ways we have become cognizant, in more or less intimate degree of toxic processes due to poisons derived from without, such as alcohol, lead, mercury, decomposed food, or generated within, as a result of infectious diseases, or in consequence of deranged metabolism, as uremia, gout, diabetes. The evidence in this connection, however, is, it must be admitted, circumstantial rather than direct, and some of its deficiencies are pointed out in a thoughtful critique by

Ewald.¹ He defines autointoxication as the poisoning of the body by normal or abnormal digestive or metabolic products. It is conceivable that these may be generated within the digestive tract, or within the tissues themselves.

Gastrointestinal autointoxication may result from the absorption of products normal to the digestive process, but generated in excess, or from that of wholly abnormal substances. Interstitial autointoxication may result from the retention of excrementitious products of cellular and metabolic activity. The liver stands as a guard to intercept or to neutralize toxic substances brought to it especially by the portal blood, but if it be deficient in activity or if the poisons brought to it be excessive in amount autointoxication may result.

When the toxic substances, whatever their source, have entered the general circulation, their effects may possibly be neutralized by the development of antitoxins, or they may be quickly eliminated by the emunctories. Under the last-named conditions the urine, the sweat and the expired air might be expected to exhibit poisonous properties, although the demonstration would be surrounded by numerous difficulties.

A number of acute and chronic digestive disturbances are attended with symptoms of irritation or depression of the nervous system, such as headache, irritability, fatigue, disinclination to activity, hypochondriasis, vertigo and stupor, which have been attributed to the absorption of toxic substances from the gastrointestinal tract. Various cutaneous affections, such as urticaria, acne, pruritus, purpura, as well as dyspeptic asthma, periodic vomiting, tetany, cystinuria, the anemia and the toxic symptoms attending helminthiasis, pernicious anemia, and chlorosis have been considered results of the same cause.

Interstitial autointoxication includes uremic, diabetic and carcinomatous coma, exophthalmic goiter, Addison's disease, pancreatic diabetes, myxedema, cachexia strumipriva, cretinism, leukemia, pseudoleukemia, eclampsia and some psychoses. With regard to certain other conditions, such as migraine, some forms of neuritis, hemorrhagic purpura, polymyositis and gout, there has been doubt as to whether they should be attributed to intestinal or to interstitial autointoxication. With equal propriety acetoneuria, oxaluria, diabetes, icterus gravis, and acute yellow atrophy of the liver could be considered autointoxications. Some of the foregoing conditions, however, attend various diseases, while others do not throughout their course present the clinical picture of intoxication, but only at times, though these were better described as autointoxications in the course of the diseases named.

Two of the most conspicuous examples of autointoxication consist in poisoning with carbon dioxide, from interference with the respiration, and the symptoms resulting from suppression of transpiration from the skin, as after severe burns, the application of varnish, universal

³ *Jour. of Exp. Med.*, 1899, iv.

⁴ *Am. Jour. of Med. Sci.*, November, 1897.

⁵ *Ziegler's Beiträge*, 1899, xxvi.

¹ *Berliner Klin. Woch.*, February 12 and 19.

psoriasis and ichthyosis. In both of these conditions the interference with gaseous interchange is sufficient to explain the toxic manifestations. The evidence is, however, not so convincing as to the various other modes of auto-intoxication, in spite of the elaborate chemical and physiologic examinations of the urine, and studies of the blood, the sweat and contents of the gastrointestinal tract. It would, thus, appear that although clinical experience supports the hypothesis of auto-intoxication in connection with a number of morbid conditions, the unequivocal demonstration of the process has not been made on any considerable scale.

CHRONIC GLANDERS.

Roman von Baracz reviews the subject of chronic glanders in man on the basis of a remarkable instance of this infection as the test. The disease developed rather acutely, and so soon after the extraction of a tooth by a shoemaker that this little operation apparently had something to do with the infection, especially as there was no opportunity known whereby it might have resulted from contact with affected horses or with human cases. The instance is truly remarkable on account of the duration—fifteen years, during which the disease remained wholly latent for five years at one time. At first the process was confined to the face and the neck. After being latent for five years it broke out again with increased severity in the nose; soon characteristic foci appeared on the face and the neck, the submaxillary and cervical lymph glands being also involved—an unusual thing in chronic glanders, in which lymphatic involvement rarely occurs. Toward the end of life foci appeared on the trunk and extremities, accompanied by an irregularly intermittent fever. Death occurred in spite of repeated operations; internal remedies had no effect on the course of the disease. The diagnosis was fully controlled by bacteriologic examinations and experimental inoculations. At no time could glanders bacilli be discovered in the urine or in the blood in which they have been demonstrated in acute glanders. There was no atrophy.

Usually chronic glanders ends in recovery after a period of 1 to 6 years. In the case reported by Bayard Holmes,¹ which followed an infection of the index finger of a young man who at the time was caring for horses suffering from glanders, recurring explosive eruptions of foci occurred in various parts of the body; in all, fourteen distinct points of infection developed, perfect healing resulting after twenty different operations in two years. In v. Baracz's case there was also a tendency to recurring crops of lesions, especially in the spring and autumn.

Von Baracz also mentions the details of two fatal cases of glanders in two Polish physicians, that gave rise to much discussion in Polish medical circles. The first case was one of rather chronic course—eight months—the source of the infection being not clear. The second

physician operated on the knee of the first and wounded a finger; an acute glanders, associated with a mixed pyogenic infection, developed and ended fatally.

Fortunately glanders in man is a rare disease. As is apparent, the ravages of this infection may be severe and extensive. The two or three diseases with which glanders is likely to be confounded when it does develop in man, are syphilis, tuberculosis and actinomycosis; in the acute form, septicopyemia especially has to be also considered. The decisive diagnosis of glanders rests on the bacteriologic demonstration of the bacilli and on experimental inoculation of animals, especially the guinea-pig, in which the development of orchitis after intraperitoneal injection with glanders bacilli constitutes a valuable diagnostic feature.

RELATIONS OF PHARMACY TO THE MEDICAL PROFESSION.

Realizing the confusion that exists relative to the ethical status of the various medicinal preparations, especially with reference to their use by the medical profession and their appearance in the advertising pages of *THE JOURNAL*, and being also impressed with the desirability, if not necessity, of subjecting the entire question to a careful scrutiny in order to reach an intelligent conclusion as to what articles are not in accord with the ethics of medicine and pharmacy, *THE JOURNAL* this week begins a series of papers on the relations of pharmacy and medicine. It is proposed to make a careful survey of the entire field, and to present the various phases of the many interests involved, including those of the advertiser and the readers of *THE JOURNAL*. What medicinal preparations shall be admitted to, and what debarred from, the advertising pages of a scientific medical journal is a vexed question, but the ever-increasing number of preparations—many of which are secret nostrums—that are being foisted on the profession, makes it expedient that an answer be found if it is possible to find one. That the question is one full of interest to many is manifest by the large number of personal communications we have received on the subject since the appearance in *THE JOURNAL*, three weeks ago, of the editorial, "What Shall We Class as Ethical Preparations."

TREATMENT BY MUSIC.

It is said that certain prominent physicians in the East are organizing a movement to secure treatment by music in hospitals. This seems to us a refinement which we have not yet, as a race, fully reached. Music undoubtedly has certain effects on the nervous system, but so does any other kind of monotonous or rhythmic noise. Insomnia, for example, can be relieved by cannonading, if the subject is used to that method, and equally unmusical though less intense sounds are naturally still more effective. How far more elaborate sound combinations can produce a therapeutic effect, except through the action of the mind by suggestion, seems to us doubtful. The mental action may be considerable, particularly in those who have a natural or cultivated musical

¹ *THE JOURNAL*, 1893, xxi, p. 235.

taste, but any physical theory of therapeutic musical vibrations affecting the system in various morbid conditions is a little finely drawn at the present time. At least it has not been worked out and the laws developed, so whatever is done will have to be, at this time, altogether empirical. Music is a method of sensual gratification and its effects vary largely according to the education as well as the original sensory gifts of the individual. It has long been used as an adjunct to treatment of the insane, but only as a diversion; no special therapeutic value has been accepted as a result of general experience with its use. It may at times soothe, or it may excite, but that is apparently the limit of any effects that can be called remedial.

"CHRISTIAN SCIENCE" ABSURDITIES.

Those who have read Mr. Purrington's book, "Christian Science, an Exposition," noticed in this week's JOURNAL, will remember that he addressed to Mr. Carol Norton, representing the "Christian Scientists," certain questions. These the latter preferred to "shelve" at the time—they referred to Mrs. Eddy's inconsistency in claiming that her cult "removed the possibility of human and personal contention," and then resorting to the courts, and to what she or Mr. Norton would do in certain contingencies, e. g., having their heads injured by a brickbat, sitting alongside a case of confluent smallpox, etc. These, Mr. Norton, in a recent communication to the *New York Sun*, calls "wholly irrelevant," and designed to make the whole subject—"Christian Science"—ridiculous. As to their irrelevancy, we are not metaphysically minded enough to see it, nor can we see that they were designed to ridicule "Christian Science." There was no design about it; the fact that they do make it ridiculous is only a sort of inevitable accident, like the effect of the law of gravitation, for example. In the same communication Mr. Norton refers to a list of persons "of professional standing, honesty, and unquestionable integrity" who will vouch for the details of certain "Christian Science" cures. The "professional standing" of one of these, Mr. Carol Norton, is undoubtedly high among the C. S. Ds., but he is hardly a satisfactory reference to those who are not fixed in the faith in "Mother" Eddy. The names of the three M.Ds. he refers to are not to be found in any physicians' directory in our possession—a curious coincidence. As to the others, the subjects of the alleged cures and a couple of unknown parties, anybody can put his own value on them. On the whole it is perhaps not so very remarkable that the confirmation offered by Mr. Norton "made little impression" on Mr. Purrington.

A NEW SYMPTOM OF CEREBELLAR DISEASE IN EARLY LIFE.

The recognition of disease-conditions in children is often rendered exceedingly difficult because the diagnosis must be based almost wholly on evidence of an objective character, and while this is sometimes more trustworthy than are purely subjective symptoms, it is by no means always satisfactorily elicited. The difficulty is often enhanced in the discrimination of disease of the nervous system, as children respond so readily with nervous manifestations to various forms of irritation, while on the

other hand, from developmental and physical reasons, certain symptoms that are distinctive in the adult are wanting in the child. Thus cerebellar disease is attended especially with derangement of co-ordination, as exhibited in unsteadiness in standing and in walking, with vertigo and vomiting and often also with nystagmus; but co-ordination is naturally deficient in the young child and vomiting is common from other causes. An additional symptom of cerebellar disease in early life is described by Hahn.¹ This consists in constant rotation of the head from side to side. The patient whose case is reported was 4 months old and was brought by her tuberculous grandmother because of cough and vomiting for a month and rotatory movement of the head for two weeks. The neck was rigid and the head retracted. On percussion dulness was found at the upper part of the right chest anteriorly and, on auscultation, rough breathing. The liver was enlarged. The child was seized with a general convulsion while being prepared for lumbar puncture. The latter yielded 3 c.c. of clear fluid in which no tubercle bacilli could be found. On account of the disease in the grandmother, and the physical signs presented by the chest, a diagnosis of cerebral tubercle was made, and from the presence of the rotatory movement of the head the growth was localized in the cerebellum. Death resulting, a tubercle as large as a pea was found in the middle of the vermis, with circumscribed tuberculous meningitis at the base of the brain between the medulla and the cerebellum, in the form of a moderate number of submiliary nodules. It is pointed out that while rotatory movements of the head may not be rare in association with tuberculous meningitis, they have not been thoroughly described, nor do they seem to have been observed in connection with tubercle of the cerebellum, which is relatively common in children.

ARTIFICIAL PARTHENOGENESIS.

Some months ago the newspapers contained various sensational accounts of certain experiments by Prof. Jacques Loeb, of the University of Chicago, in regard to what they called his new theory of the reproduction of animals and of the origin of life. The investigator himself was quoted as saying to a reporter that by them "we have drawn a great step nearer to the chemical theory of life and may already see ahead of us the day when a scientist experimenting with chemicals in a test tube, may see them unite and form a substance which shall live and move and reproduce itself." Prof. A. B. Conklin,² of the University of Pennsylvania, reviews the subject and gently criticizes Loeb's rather premature conclusion that we have in his experiments an instance of "fertilization" by the ions of the magnesium chlorid solution in which he had temporarily placed the egg. It is in fact difficult to see how that experimenter, supposing that he had any knowledge of the facts of normal parthenogenesis, could have jumped to any such conclusion, unless it be that he was overanxious to find a chemical basis of vitality. The facts certainly do not justify him in this or in his other deductions that we can in this way, some time in the future, produce life from inorganic chemicals in a test-tube. The evidence that we

¹ Archiv. f. Kinderheilkunde, B. xxviii. H. 3 u. 4. p. 187.

² University Med. Mag., March.

will ever reach that point of biologic progress is as yet not forthcoming, and there are no facts that justify Professor Loeb or any one else in the assumption that we will. The most we can say is that, according to our present knowledge, the reproductive cells both of the ovum, and of the spermatozoon as shown by Delage, are capable of parthenogenetic development to a certain extent under specially favorable conditions, but that sexual reproduction is apparently one method by which Nature secures the needed variation and adaptation to external environment for the evolution and preservation of life. Artificial parthenogenesis, such as that described by Loeb, is not confined to the sea-urchins. Morgan has also produced it in Nematarians and Gephyreans: it shows perhaps a common, natural reversion tendency of many of the lower organisms. We do not know all the conditions under which this occurs: they are not likely to all be such simple chemical ones as those produced by Loeb in his experiments. The possibility he mentions of asexual generation in the higher forms of life has long been suggested by some well-known pathologic conditions which have lately more than ever begun to be accounted for in that way, but it is a long step from the teratoma to the fetus. The chemical fertilization of Loeb is a crude idea, apparently based on misconception of the facts, and every prognostication of the discovery of an ultimate chemical origin of life is pure assumption. When we have traced the earliest cell differentiation back to the earliest cell movements, and venture to inquire, as Conklin says, "into the cause of this cause we find ourselves in the position of those Indian cosmogonists, who having decided that the earth rests upon twelve oxen and that these stand upon a turtle, left the latter without any support."

SUCCESSFUL RESECTION OF THE INTESTINE FOR MULTIPLE TUBERCULOUS STENOSIS.¹

In 1897 Lennander removed about 50 cm. of the ileum, with the corresponding mesenteric glands, for multiple tuberculous stenoses. The proximal end of the bowel was sewed together and the distal end inserted, by means of Murphy's button, just above the closed upper end. Recovery ensued, but the button failed to pass out; it could be felt just above the posterior right vaginal vault. Some months later a second operation was made for removal of the button, which was found in a blind diverticulum formed at the insertion of one end of the resected intestine into the other. The diverticulum and the button were removed. There was absolutely no tuberculosis in the abdominal cavity; nor were there any evidences of tuberculosis elsewhere, hence it may be concluded that there had been a primary tuberculosis of the ileum and its mesenteric glands. Krogius describes a somewhat similar case occurring in a woman of 33 years, who for three months had presented symptoms of intestinal stenosis. Two movable swellings and one fixed, the latter in the ileocecal region, could be felt. A diagnosis of intestinal tuberculosis was made. Laparotomy disclosed two enlargements of ileum which were removed by resection and circular suture; the third swelling involved the lower part of the ileum, the cecum, and the adjacent ascending colon; this portion was also

resected, and the ends united by means of Murphy's button. Recovery ensued promptly. Two months later symptoms of disease of the gall-bladder appeared and, by cholecystotomy, 40 gall-stones were removed. The extirpated pieces of intestine showed a localized, hyperplastic form of tuberculosis with great narrowing of the intestinal lumen.

TREATMENT OF TUBERCULOSIS WITH CINNAMIC ACID.

According to current conceptions on the subject of tuberculosis, any plan of treatment, to be successful, must be directed to the improvement of the general nutrition, to the stimulation of those forces, as yet unknown, capable of repelling the invasion and of resisting the activity of the tubercle bacillus, of neutralizing its effects and of repairing the injury it has accomplished. The mere presence of this bacillus does not constitute the disease, which rather represents the reaction between the micro-organism and the tissues that have become susceptible to its attack by reason of depraved nutrition or other expression of impaired immunity. Many remedies have been proposed for the treatment of tuberculosis, but none has a specific influence, if we except tuberculin, and this has proved itself a two-edged sword. Among the drugs that have been recommended in the treatment of tuberculosis and from which encouraging results have been reported is cinnamic acid. This remedy was first advocated for the purpose named, by Landerer, some eleven years ago, on the conception that it antagonizes the development of tuberculosis by causing reactive inflammation about the unvascularized tubercles. Subsequently its action was attributed to its chemotactic and leucocytotic properties, and finally it was considered a natural protective substance. Whatever the mode of action of cinnamic acid, it has been contended that it is capable of curing experimental tuberculosis in guinea-pigs, although it is admitted that from this it can not at once be concluded that a similar result will be brought about in man. A large number of observers have employed the remedy clinically, and have attributed great therapeutic activity to it. Fraenkel² has, however, subjected the published statistics to a critical analysis as an outcome of which he expresses the opinion that the results are really no better than those that follow other methods of treatment. Further, he reports the results obtained in the treatment of ten cases of pulmonary tuberculosis, two of laryngeal tuberculosis, and five of lupus by means of cinnamic acid, at the clinic of Professor Erb in Heidelberg. In all but two cases the medicament was injected into a vein of the forearm, beginning with a dose of 1 mg., and increasing by that amount every second day until a dose of 10 mg. was reached, then increasing 2.5 mg. but never exceeding 25 mg. The results, however, were not satisfactory: nor were those obtained in experimental observations on animals.

ENTERIC FEVER among the Boer prisoners is causing anxiety among British officials at Cape Town and Simons Town, S. A. According to *The Lancet*, April 7, deaths at the latter point were occurring daily, and the outbreak was attributed to the "terribly insanitary conditions" under which they had been living and the hardships.

¹ Nord. Med. Arkiv, 1899, x.

² Deutsches Archiv f. Klin. Med., B 1xx, H. 5 u. 6, p. 480.

Medical News.

ACCORDING to the press dispatches, Congressman Boutelle, of Maine, who has been in a sanatorium for several months, was renominated on the statement of his physician that such action might effect a cure, whereas failure to secure a renomination would probably kill him.

THE PHILADELPHIA County Medical Society intends to organize a bureau of information for the use of members of the AMERICAN MEDICAL ASSOCIATION who pass through Philadelphia en route to and from Atlantic City. The College of Physicians will also extend its courtesies to the members of the ASSOCIATION and has ordered that the library and museum be opened to them.

THE ARMY RATION INCREASED.—Troops serving in the recently organized Department of Alaska have had their allowance of bacon, vegetables and sugar considerably increased, the increase being considered necessary on account of the severity of the climate. The change was made by the President, under the authority vested in him by Section 1146, Revised Statutes. Bacon is increased from 12 to 16 ounces; fresh vegetables from 1 pound to 1½ pounds, and sugar from 15 to 20 pounds per 100 rations. General Orders, No. 46, Headquarters of the Army, April 7, 1900, makes formal announcement of the increase.

PROGRESS OF THE PLAGUE.—According to the *British Medical Journal*, April 7, the disease seems to be practically in abeyance in Hongkong, and the latest reports show that during the week ending February 24 no fresh cases occurred and there was but one death. For the week ending March 29, in Mauritius, there were 6 new cases and 5 deaths. A correspondent writing from Sydney, N. S. W., February 27, reports another case there that week. The present plague epidemic in Bombay shows no signs of abeyance, and during the second week of March it caused 736 deaths. In Calcutta, from March 8 to 14, the daily reports of new cases were, respectively, 89, 129, 118, 111, 100, 127, and 116. The deaths from the same causes were 78, 105, 110, 99, 91, 107, and 93, on these dates. On March 15, 16, and 17 fully 6000 natives left the city on one railway line alone. The greatest mortality prevails in Bengal province outside the city, Patna accounting for 1581 deaths for the week ending March 17.

ILLINOIS.

ROCK ISLAND HOSPITAL.

Plans are being prepared for the New Rock Island Hospital. Twenty-five thousand dollars has been subscribed and a location in the central portion of the city has been offered. At the annual meeting of the Rockford Hospital Association the announcement was made of the gift of \$1000 from Mr. Wm. Halley of Owen. This amount will be added to the permanent fund of the hospital.

REGULATION OF MEDICAL PRACTICE.

The secretary of the Illinois State Medical Society has sent out a circular letter to the members of the profession in Illinois as follows:

Dear Doctor: You have received a notice through the columns of the state society's journal to be present at a meeting of officers of the various local societies of the state at Springfield, a day in advance of the state society's meeting.

The activity of those opposed to a proper regulation of medical practice makes it more imperative than ever that the better elements of the profession bestir themselves. What is needed is more thorough organization, without which all attempts at successful medical legislation must fall short of the demands of the profession.

The time allotted to the business sessions of the state society is too limited to give this subject the consideration its importance demands, hence it is deemed advisable to have this preliminary meeting, when the subject can be fully discussed and, as a result, some well-digested plan submitted to the regular session of the society. A large and representative gathering of local society members is necessary if the object sought is to be attained.

Please notify me of your acceptance of this invitation. Remember the date, May 14, 1:30 p.m., in the Christian Church, Springfield, Ill.

Yours fraternally,

J. W. PETTIT, M.D.

Chairman Committee on Medical Legislation.

Chicago.

DR. G. FRANK LYBSTON has returned from a month's outing in California.

DR. OTTO W. LEWKE is suffering from blood poisoning as the result of an accidental wound received while operating.

A MEETING of the Illinois State Board of Health was held here April 10-13, for the examination of candidates for license to practice medicine in the state.

AT the annual meeting of the Ladies' Aid Society of the Presbyterian Hospital, a plan for building a maternity was discussed. The sum of \$40,000 was conditionally promised for this purpose. When completed the Hospital will cost \$100,000.

THE MEDICAL inspectors of schools made 4138 examinations during the past week; 251 pupils were excluded from school. The inspectors will be withdrawn in a few days, a few being retained for emergency duty. Service will be resumed with the opening of schools in September.

COLLEGE OF PHYSICIANS AND SURGEONS.

The eighteenth annual commencement of this college, the medical department of the University of Illinois, was held April 18. The graduating class numbered 136. The doctorate address was delivered by Dr. Victor C. Vaughan, dean of the school of medicine of the University of Michigan. The ad eundem degree was conferred on Dr. George F. Butler, and honorary degrees on Dr. V. C. Vaughan, Ann Arbor, Mich., and Drs. Wm. E. Quine and J. B. Murphy, of Chicago.

EXAMINATION FOR EXTERNES.

A competitive examination for three positions as externe, beginning May 1, 1900, will be held at the Michael Reese Hospital April 26, 27 and 28, at 2 and 7 p.m. The examination will be both written and oral, on internal medicine and physiology, surgery and anatomy, gynecology, obstetrics, children's and skin diseases. Applicants must present their class gradings of the past three years, and certificates of good moral character, on or before April 22, to the Board of Directors of the Michael Reese Hospital. The term of externship is for eight months. Satisfactory service during the externship entitles the candidate to an appointment as interne for one year, beginning Sept. 1, 1900, January 1, 1901, and May 1, 1901.

NEW YORK.

AT ITS annual meeting, the State Board of Charities unanimously elected William Rinelander Stewart, New York City, president, for the eighth consecutive term, and Enoch V. Stoddard, Rochester, vice-president, for the sixth consecutive term.

BY THE will of the late James D. Sarven, of Tarrytown, Harriet L. Burgess, a nurse in the Tarrytown Hospital, is bequeathed 200 shares of railroad stock for her constant attendance on the deceased and for her help in keeping his books.

CONCERNING THE INSANE.

A bill, just signed by Governor Roosevelt, amends the insanity law in such a way as to make a number of changes in the powers and duties of the State Lunacy Commission. That body is permitted to endeavor to secure legislation from Congress looking toward the more effectual removal of alien and non-resident insane, and is allowed to expend a reasonable sum therefor. The law provides that the Commission, or a majority of its members, shall visit every state hospital at least twice a year. With the approval of the Commission officers or employees of the state hospitals may live outside of such institutions, their salaries being commuted accordingly. All goods for these hospitals must be bought, as far as practicable, from the manu-

facturers or their immediate agents, and contracts must be let to the lowest responsible bidders.

New York City.

YELLOW FEVER IN PORT.

Two yellow fever ships have come to the quarantine station of this port within the past few days. On the first there had been one fatal case, a few days after leaving Manaus, but as more than five days had elapsed since that occurrence, the ship was disinfected and allowed to come into port at once. The master of the other ship had died of yellow fever at Rio Janeiro, and on the voyage here the chief officer had been attacked, but had recovered.

SUPPOSED RABIES

An employee of the park department died last week at the St. Vincent's Hospital, apparently from rabies. He had been bitten on the right cheek by a strange dog, on March 9, and, after the wound had received surgical treatment for a few days at the hospital, he was pronounced cured. On April 10 he became ill, and was taken to the Pasteur Institute, where his case was considered hopeless. As the dog had been shot almost immediately after the man had received the bite, there was no positive proof that the disease was really rabies.

AN INCUBATOR INFANT'S EXPERIENCE.

An unusual feature of a recent fire in a Harlem apartment house was the rescue of a premature infant which was being reared in an incubator. A hurried attempt to drag out the incubator proved a failure, because the latter was too large to be easily brought through the doorway into the elevator. The nurses hesitated to take the tender morsel of humanity out of its box, but a physician who happened to live near by finally decided to do this, and the child was wrapped up in a blanket and carried through the smoke. The mother meanwhile implored the firemen to save the incubator, for this, to her mind, meant the saving of the life of her infant. After the fire had been partially controlled, two men succeeded in saving the incubator. The little one was apparently none the worse for this latest addition to its short but chequered experience.

PRACTICE BY MIDWIVES.

The recent legislature passed a bill requiring licensing of midwives in this city, and providing that no person should practice midwifery without having passed a satisfactory examination before a board of five physicians appointed for the purpose by the health department. The bill was given a hearing by the mayor, on the 13th. The Midwives' Association, about fifty members being present, requested that it should be disapproved because one of its sections requires that midwives who have already been in practice must undergo the examination as well as new applicants for license. Under the present laws the Board of Health is compelled to issue a license to any person who holds a diploma from an incorporated college, and it is well known that such diplomas can be purchased by those who have no training. The Gerry Society is heartily in favor of the bill, on account of the large number of children who are rendered blind through the criminal carelessness and ignorance of midwives.

HOSPITAL APPOINTMENTS.

As a result of the resignation and retirement of Dr. Charles McBurney from the position of chief surgeon of the Roosevelt Hospital, previously noted in these columns, some important changes will take place in the personnel of the surgical staff of that and the New York Hospital. Dr. Robert F. Weir and Dr. William T. Bull have been appointed to succeed Dr. McBurney, and this will cause two vacancies on the surgical staff of the New York Hospital. They assume charge at Roosevelt Hospital on April 16. These new appointments will be an advantage to the College of Physicians and Surgeons, because the students will now only have to go across the street to attend the surgical clinics instead, as heretofore, of going to a distant portion of the city.

HOSPITAL FUNDS.

The treasurer of the Hospital Saturday and Sunday Association reports that the collection for 1899-1900 amounts to more than \$74,000, or nearly \$4000 in excess of the sum collected last year. Of this amount, over \$9000 was collected by the Woman's

Auxiliary. About \$13,000 was specially designated to various hospitals by individual donors, and \$3000 was reserved for future expenses, leaving \$58,000 to be distributed to the various hospitals on the basis of free work performed. The Montefiore Home and St. Luke's Hospital received the largest amounts, \$5800 and \$5161.67, respectively; six other hospitals, sums ranging from \$2057 to \$4915.59; ten others, amounts varying from \$1000 to \$2000, and nineteen, sums ranging from \$250 to \$964.

PENNSYLVANIA.

At a special meeting of freeholders, in Mount Holly, April 10, it was decided to recommend the erection of an insane asylum on the county farm at New Lisbon.

By the will of the late Jacob Justice, \$60,000 has been devised for the establishment of a nonsectarian dispensary for the treatment of the poor and distressed, at Mount Pleasant.

SALE OF OLEOMARGARIN.

At the Governor's request, a report has been filed by Secretary of Agriculture Hamilton in regard to the enforcement of the law in regard to the sale of oleomargarin in this state. Of 402 samples recently analyzed, 75 per cent. were pure butter, 27 renovated butter, and 300 oleomargarin. During the past year 256 prosecutions were brought for selling oleomargarin, of which 76 were dismissed by magistrates or grand juries, and 80 are still pending. Of 120 suits brought, 70 were in Philadelphia. The provision in regard to the color law has been contested in Pittsburgh and Philadelphia. Since January 1, 1417 licenses have been granted for the sale of oleomargarin.

Philadelphia.

The H. C. Wood Medical Society held its annual reception on April 7.

By request of Matilda Kaufman, \$1000 has been given the Jewish Hospital.

Dr. SAMUEL WOLFE has resigned from the medical staff of the Philadelphia Hospital.

Dr. ALBERT E. ROUSSEL, of the Medico-Chirurgical College, has been appointed consulting physician to the Hayes Mechanics Home.

The two concerts for the relief of families of American soldiers and sailors now in the Philippines, realized \$13,000.

Dr. E. B. MONGEL, of the Samaritan Hospital, who has for some time been confined to his bed with diphtheria, has resumed his duties.

The PENNSYLVANIA Hospital has purchased certain property opposite the hospital grounds, on which to build a home for nurses.

A MAN and his son of 5 years were recently admitted to the Pennsylvania Hospital, suffering from ptomain poisoning from bean soup which had been preserved in tin cans.

Dr. GEORGE M. BRADFIELD, surgeon of the Seventh U. S. Infantry, stationed at Fort Ontario, N. Y., has been spending a few days in this city. He was in charge of the medical staff during the outbreak of yellow fever at Savannah in 1899.

The NET proceeds of the Hebrew charity ball, held February 20, amounted to \$19,656.56. The funds have been distributed as follows: Jewish Hospital Association, \$5417.65; United Hebrew Charities, \$230.83; Jewish Foster Home and Orphan Asylum, \$5044.02; Orphans' Guardians, \$1307.71; besides some to various other charitable organizations.

THE DEATHS during the past week numbered 691, a decrease of 41 over last week, and an increase of 171 over the corresponding period of last year. The causes were: nephritis, 34; cancer, 11; tuberculosis, 53; diabetes, 1; heart disease, 49; influenza, 46; appendicitis, 2; rheumatism, 3; septicaemia, 6; suicide, 1.

MARYLAND.

The NEW group of buildings at Springfield Insane Asylum (Sykesville, Md.) is about completed and will be ready to be turned over to the Board of Managers this week.

MEDICAL LEGISLATION.

The governor has vetoed the bill passed by the legislature "To amend the health laws subtitled 'Local Boards of Balti-

more County." The following acts of the legislature have also become laws by the approval of the governor. One to relieve Frederick City Hospital Association; one to establish a commission of state aid and charities; one to amend the lunacy law relative to the commitment of insane paupers; the Western Maryland Hospital, Cumberland, receives an appropriation of \$5000 for building, etc., and \$3000 annually for two years for maintenance. Of the former amount, \$4000 will be spent in the erection of an operating-room, and \$1000 on interest on the hospital debt.

Baltimore.

A COLORED man was found ill with the smallpox, in the eastern part of the city, on the 11th. He was sent to the quarantine hospital, where there are two cases from Sparrow's Point.

DRS. W. W. RUSSELL and Thomas S. Cullen, heretofore connected with the department of gynecology in the Johns Hopkins University, have been appointed associate professors.

REV. AUGUST POHLMANN, M.D., who has been a medical missionary in Liberia, Africa, for the last two years, representing the English Lutheran Church, has arrived here, in poor health.

THE ANNUAL commencement of the Baltimore University School of Medicine was held at Ford's Opera House, April 11. Prof. E. Miller Reid, M.D., of the faculty, delivered the oration. There were 49 graduates, one a Maryland woman, formerly a pupil at the Woman's Medical College. A banquet followed.

AT THE meeting of the Johns Hopkins Historical Club on the 9th inst., "John Locke's Notes on a Case of Tic Douloureux" in the English ambassador's wife in Paris, were read and commented on by Dr. Harvey W. Cushing. Dr. Wm. H. Welch delivered the first of two lectures on the "History of the Doctrines of Fever."

FIFTY-NINE of the seventy students of the senior class of the Baltimore Medical College have passed satisfactory examinations and will receive their diplomas at the approaching commencement. J. K. B. E. Seegar, of Maryland, received the gold medal, the surgical and gynecologic prizes, and will also be awarded the degree *magna cum laude*.

OBSERVATIONS ON PNEUMONIA.

An interesting "symposium" was held by Dr. Wm. Osler, at his public weekly clinic on the 11th. To four of the third-year class he assigned the duty of preparing papers on the etiology, pathology, symptomatology and treatment of pneumonia, respectively. The reading of these occupied the entire hour. They were based on the cases of pneumonia which have been in the hospital since Oct. 1, 1899. A tabulated record of these cases, fifty-eight in number, was exhibited on blackboards, also colored chalk drawings of pathologic conditions.

The following points of interest in connection with the series may be mentioned: Of the 58 cases, 6 should be omitted, 3 being children with bronchopneumonia, and 3 being tuberculous. Of the 52 remaining, 19 died. Marked delirium occurred in about one-fourth. The blacks were to whites as 3 to 2, although the entire admissions show a proportion of 1 to 7. The right lung was affected about twice as often as the left, and about one-third oftener than both lungs together. The maximum leucocytosis varied from 6875 to 71000, the ages from 18 to 70-odd years; 4 or 5 were bled; in 4 serum was employed, but without marked effect, 1 of the 4 died. There has been much employment at this hospital of injection of saline infusions, and oxygen inhalations, but all treatment has been ineffectual, and the mortality during the season has been very high. Dr. Osler remarked that pneumonia was the most fatal of all acute diseases. He added that fibroid induration was a rare sequel, not an instance having occurred in the hospital. The longest instance of delayed resolution he had known was thirteen weeks. Interesting in the tables is the vexed question of the relative severity of upper lobe and lower lobe pneumonias. In 9 a single upper lobe was involved (7 right, 2 left); in 15 a single lower lobe. The mortality of the former was 2, of the latter 4. A comparison of the two series does not show any marked difference as to symptoms and prognosis.

LONG LITIGATION ENDED.

The Supreme Court of the United States has disposed of the long-continued litigation between the nieces and nephews of the

late Enoch Pratt, of Baltimore, and the Trustees of the Sheppard Asylum. After the decision of the Maryland Court of Appeals, the plaintiffs sued out a writ of error and the case went on the docket of the Supreme Court, where it would not be reached for two years. The counsel for the trustees, some weeks ago, filed a motion to dismiss the writ, on the ground that there was no Federal question involved and no impairment of contract between the state and "Trustees of the Sheppard Asylum," the corporation to which Moses Sheppard bequeathed the legacy for the asylum, and that if there were any such impairment of contract, the Pratt relations were not parties nor privies to the contract, and had no standing in the Supreme Court in the matter. The Supreme Court adopted this view and dismissed the writ. The decision of the Court of Appeals therefore stands unchallenged, and the large bequest of Enoch Pratt is available for the increased work of the institution, under the conditions set by him, one of which was that his name should be added to its title. The additions to the hospital, designed by Mr. Pratt, will be at once undertaken.

OHIO.

THE TRUSTEES of the Massillon State Hospital have decided to begin the erection of the new assembly hall immediately. It will cost \$50,000, the entire amount of the construction fund allowed by the legislature.

THE SEMI-ANNUAL report of the directors of the Toledo Infirmary states that during the past six months 23 inmates have died and 122 have been discharged. The number of inmates on March 1 was 317.

Cincinnati.

DR. CLARK DAVIS has been appointed health officer.

DR. SANFORD McCLEURE, lately internic to the Cincinnati Hospital, has been appointed an assistant surgeon, U. S. A., with the rank of lieutenant. He is ordered to the Philippines.

APPOINTMENTS.

After eighteen months' service in the City Hospital, Drs. H. W. Hines, A. H. Smith, N. P. Graham, and C. H. Beeson were relieved of duty April 10, their terms having expired. Their places were filled by Drs. Hawes, Brankamp, Hiff and Ayres. Drs. Pritchard, Stix, Terry and Taylor, the successful candidates of a month ago, will enter hospital service at the same time.

INDIANA.

DR. W. R. FRANCIS, Marion, has been appointed a member of the Grant County Pension Board.

THE ANNUAL commencement of the Fort Wayne Medical College was held March 27. Five students were graduated.

Indianapolis.

DR. W. G. RICE has been appointed government pension examiner for the Eighth Congressional District.

THIRTY-FOUR degrees were conferred at the annual graduating exercises of the Medical College of Indiana, held April 8.

THE ANNUAL commencement of the Central College of Physicians and Surgeons was held April 7, with a graduating class of seventeen.

A MEETING of the City Board of Health was held April 7, to consider the crowded condition of the city hospital. A separate building for nurses, to cost \$5000, and a \$25,000 addition to the hospital were urged. Action on the matter was deferred.

INDIANA MEDICAL COLLEGE.

Contracts have been closed by the Indiana Medical College, with St. Vincent's Hospital and the Protestant Deaconess' Hospital for wards to be used during the next college year, for bedside instruction of the senior class. The hospitals are to furnish beds, food and nurses, while the treatment will be in the hands of the medical college.

KENTUCKY.

APPOINTMENTS.

The following appointments have been made by the "Governor": Dr. L. L. Robertson, Middleboro, as a member of the State Board of Health, vice Dr. Dickenson, whose term had expired; Senator J. G. Furnish, M.D., an ardent supporter of the late William Goebel, as Superintendent of the Lakeland

Asylum, and Dr. J. W. Hill of Bardstown as first assistant physician. Dr. M. M. Lively, the appointee of Governor Taylor, refuses to give up the position of superintendent until after the supreme court has acted on the question of who is governor of Kentucky. An agreement has been reached between the two appointees to await this decision.

Louisville.

AT THE reunion of the class of 1894, of the medical department of the University of Louisville, held recently, Dr. J. C. Pannenberg, of Hammond, Ind., was elected president, instead of Dr. Vernon Robbins, as previously noted in these columns.

NORTON INFIRMARY.

There is to be a new wing to the present building, doubling the capacity of the institution, at a cost of \$50,000. One of the objects of erecting this is to make the Infirmary self-sustaining by the increased capacity. It is under the management of the Episcopal Church, but is entirely non-sectarian in its work.

MEDICINE VENDORS.

The Kentucky Board of Pharmacy, at its last meeting in this city, decided to wage war against the patent medicine fakirs and street vendors of medicine who are not recognized by the Board. Already many convictions in various parts of the state have been secured for violation of the state law. The report of the secretary shows there are about 2000 registered druggists in the state.

KANSAS.

A NEW HOSPITAL is in course of construction at Winfield.

PLANS AND specifications for the Gage annex to Stormont Hospital, Topeka, have been completed. Mrs. Gage has set aside \$10,000 for the building and equipment of the new structure, which will double the capacity of the hospital.

HEALTH BOARD FUND.

The fourteenth annual report of the State Board of Health has just been issued. It gives special attention to contagious diseases, and the secretary calls the attention of the Governor and legislature to the fact that while the Board is required by law to establish quarantine against contagious diseases, no emergency fund has been set aside for the fulfilling of these requirements. He urges that there should be such a fund at the disposal of the Board.

CALIFORNIA.

DR. W. D. ANDERSON, Vallejo, has been elected secretary of the Board of Health and ex-officio health officer of that city.

San Francisco.

SOME DIFFICULTY is being experienced by the San Francisco Board of Health in its efforts to cleanse Chinatown, several Chinamen having filed suit to restrain the Board from compelling them to move to more sanitary quarters.

THE REPORT of the Los Angeles Health Department for March shows a mortality of 171, which is equivalent to an annual death-rate of 19.92 per 1000 inhabitants. During the month 113 cases of contagious diseases were reported.

DR. R. W. HILL, Los Angeles, was elected president of the State Board of Health, April 7. A resolution was adopted by the Board calling on the State Board of Examiners to make renewed inquiries into the qualifications of the medical practitioners of the state and, on investigation and proof, to annul the license of all those not qualified to practice.

OREGON.

AT THE commencement of the Medical Department of the University of Oregon, Portland, a class numbering twelve was graduated.

TENNESSEE.

A MEETING of the State Board of Health was held in Nashville, April 3, and resolutions adopted on the death of Dr. Ernest B. Sangaree, bacteriologist of the Board. Rules were promulgated governing the transportation of bodies for anatomic purposes.

THE NUMBER of graduates at the recent commencement of the Medical Department of Vanderbilt University, Nashville, was 94 instead of the number given in last week's JOURNAL.

TEXAS.

THE COMMENCEMENT exercises of the medical department of Fort Worth University were held April 5. Degrees were conferred on twenty-four.

IOWA.

SIX STUDENTS were graduated from the Sioux City College of Medicine, April 4.

UTAH.

AT A MEETING of the State Board of Medical Examiners, April 4, it was decided that all applicants for license to practice obstetrics must have reached the age of 21 years.

ARKANSAS.

THE TWENTY-FIRST commencement of the Arkansas University's medical department, Little Rock, was held April 5. There were eight graduates.

SOUTH CAROLINA.

THE COMMENCEMENT exercises of the medical department of the State University of South Carolina, Charleston, were held April 8. Diplomas were awarded to forty-three.

MISSOURI.

St. Louis.

AT THE commencement of the Beaumont Hospital Medical College, March 30, fifty-four were graduated.

THE COMMENCEMENT exercises of Barnes Medical College were held April 12. There were 106 graduates.

ALABAMA.

A CLASS of fourteen was graduated from the Birmingham Medical College, April 2.

IT IS proposed to establish a hospital in Montgomery for the accommodation of pay and charity patients.

WISCONSIN.

THE ANNUAL report of the director of the Milwaukee Hospital shows that 663 patients were treated during the year.

THE SEVENTH annual commencement of the Wisconsin College of Physicians and Surgeons, Milwaukee, was held April 3. There were ten graduates.

MINNESOTA.

INCREASED MEDICAL REQUIREMENTS.

AT the annual meeting of the board of regents of the state university, in Minneapolis, April 5, it was decided to raise the standard of admission to the medical school. After 1902 those who wish to enter the school will be required to pass an examination equal to that now required from sophomores in the academic department, and the following year this will again be raised to equal those requirements now demanded of the junior class in the academic department.

CANADA.

DR. W. L. WATT, Winnipeg, has gone to Dublin to take a course at the Maternity Hospital.

DR. G. S. RYERSON, Canadian representative of the Red Cross in South Africa, writes that there are over eighty Canadians in the hospitals there, with enteric fever.

DR. SHIRRES, Montreal, is prosecuting studies in Baltimore, Md., on the pathologic and clinical conditions of the nervous system, under Drs. Barker and Berkeley of Johns Hopkins University.

THE MEDICAL department of Toronto University has sent broadcast, throughout the province, a circular letter to the profession, setting forth the objections to the proposed legislation as indicated in the bill of Dr. Mackay, referred to in previous issues of THE JOURNAL.

SURGEON-MAJOR D. A. CAMPBELL, of the 63rd Rifles, Nova Scotia, will retire with the rank of surgeon-colonel; and Sur-

geon-Captain A. W. Cogswell will be promoted to surgeon-major.

NOVA SCOTIA, at the session of the legislature just prorogued, passed an act prohibiting expectoration in all tram-cars. Local boards of health are empowered to prosecute in case of infringement of this ordinance.

DR. R. M. BUCKE, superintendent of the London (Ont.) Asylum for the Insane, in company with the chief engineer of the Public Works Department of Ontario, is visiting leading American hospitals for ideas in connection with the equipment of the infirmary about to be erected at the London asylum.

THE SECRETARY of the Victoria (B. C.) Medical Society writes that two of their number after signing the agreement to abstain from all lodge practice, previously discussed in these columns, have been expelled from the Society on account of contracting with the fraternal societies to do all this work in Victoria.

GENERAL SURGERY IN THE LONDON ASYLUM.

In last week's correspondence to THE JOURNAL, note was made of the gynecologic work prosecuted at this asylum, and it may prove interesting now to record that of a general character. During the last five years 51 operations have been performed, as follows: Bassini's, for radical cure of hernia, 31 times; operations for removal of cancer, 2; appendicitis, 2; trephining, 1; for hydrocele of the tunica vaginalis, 2; for chronic prolapse of the rectum, 1; for volvulus of the large intestine, 1; for fracture of the lower jaw—wired, 1; minor operations, 10. No deaths occurred as a result of the operations. Radical cure was obtained in all of the hernia cases. All the operations were successful except that for fracture of the jaw, in which union was not obtained. As regards the effect mentally, only one of these patients received benefit to the extent of complete restoration, and that was a female. In the report the age is not given; she was confined for acute mania, had suffered from chronic appendicitis, and had her appendix removed on June 13, 1899. It is further recorded that these patients were all improved to the extent that they seemed better tempered than before.

MATTERS MEDICAL IN MANITOBA.

Tuberculosis seems to claim as many victims in Manitoba as in the other provinces.

During the year, there was an outbreak of diphtheria in the Winnipeg General Hospital, attributed to bad sanitation in the building, and as a consequence, extensive alterations and repairs were made last summer.

At present, in conjunction with Dr. Torrance, a research is being carried on into the causes of swamp fever in horses, which prevails chiefly in the eastern portions of the province. It is stated that this disease commits greater ravages than any other equine disease in Manitoba.

During the year the provincial bacteriologist, Dr. Gordon Bell, made the following examinations at the laboratory: Diphtheria swabs, 2563; sputa, 529; urine, 179; blood, 62; pus, 57; pathologic tissues, 50; milk, 120. This work was double that for the previous year.

According to recent published reports, Manitoba has nine insane to every 10,000 of the population, as against 23 in Ontario. Of feeble-minded, there is 1 as against 3 in Ontario; and 3 deaf and dumb to 4 in Ontario. In the Home for Incurables, thirty patients were admitted during the last year, and 269 patients were admitted to the asylums of Manitoba from the Northwest Territories and Keewatin, up to December, 1898, the number on that date, from these districts, being 104. The cost per patient at the asylums of Manitoba was as follows: Selkirk, 48½ cents; Brandon, 48 cents; Home for Incurables, 47½ cents. As to Manitoba hospital statistics, at the Winnipeg General Hospital, 1866 patients were admitted during the year, 1140 being male and 726 female; 153 died. At the Brandon Hospital, there were 344 males and 182 females; 33 died. At Morden, 276 patients were admitted, 165 males and 111 females; there were 6 deaths. At St. Boniface 1089 males and 839 females were admitted; 65 died. At the Maternity, Winnipeg, 54 were admitted during the year, and 8 died. On Jan. 1, 1900, 5 remained in the latter institution. The general

health of the province during the year was unusually good, with no serious epidemic. Only one case of smallpox was recorded, although there were hundreds in Ontario and Quebec. The Board of Health of the province recommends that a check quarantine be established by the Dominion Government at Selkirk, and that closer inspection be made at Halifax, N. S.

MATTERS MEDICAL IN THE ONTARIO LEGISLATURE.

Consumptive Sanatoria.—During the past week there was an explanation of the policy of the government in regard to the consumptive sanatoria. The provincial secretary, the Hon. Mr. Stratton, in moving the second reading of this bill, explained that it was in accord with the government's policy in aiding suffering humanity to the fullest possible extent. It provided that the council of any county might take the initiative, or a group of municipalities or counties could unite for the purpose of erecting sanatoria. The management and control of the institutions were to be in the hands of trustees elected by the municipalities. The lieutenant-governor-in-council could grant one-fifth of the sum expended on the site, building and equipment, but the sum this year for such purpose should not exceed \$4000. Then the municipality would be obliged to pay \$1.56 a week for each patient whose admission was approved, and a similar sum might be paid by the lieutenant-governor-in-council, out of such moneys set apart by the legislature for this purpose. Altogether, it can not be said that the Ontario government has been too lavish in this respect.

Antivaccinationists.—A deputation of antivaccinationists, headed by two or three homoeopaths and accompanied by a handful of dentists, a preacher, a bread-maker, and a goodly company of women, waited on the government, asking for the abolition of compulsory vaccination before a child could be admitted to the public schools. One of the homoeopaths, unused to the responsibility cast on him, read a short essay on vaccination, which he characterized as "the most colossal medical delusion of the century," no doubt forgetting homoeopathy in the exuberance of his animosity and verbosity. After a woman physician had exhausted her persuasive powers on the premier, a request was made by him for literature on the subject; and it is stated that large quantities were immediately forthcoming. The end of this will be a lingering death in the depths of his "serious consideration." (It is worthy of note that the item following this in the parliamentary reports deals with the "Prevention of Floods.")

Treatment of Dipomania.—Dr. Roseburgh introduced another deputation having a more laudable end in view, viz., the treatment of dipomania. He was accompanied by a number of medical gentlemen from the city, and members of the profession in the legislature, who conferred with the government as to measures to be undertaken by the government regarding the proposed hospital for inebriates. The deputation suggested the probation system for all cases of drunkenness, with a system of fines and imprisonment for confirmed drunkards, along with a grant to hospitals for treatment of the same.

Correspondence.

The Pasteur Institute.

PARIS, March 23, 1900.

To the Editor: Pasteur said, "Science has no country, but the man of science must have one, and it is to her he should bring all the influence his works might have in the world." That was Nov. 14, 1888, in his address at the inauguration of the Institute which was to bear his name. And to-day the wishes of the grand scientist and patriot had been fulfilled, the Pasteur Institute is the Mecca, to whose laboratories of research students and savants from all parts of the globe come to work, and at whose shrine, the tomb of Pasteur, the world pays homage.

The Pasteur Institute is composed of two large stone and brick buildings, style of Louis XIII, connected by a perpendicular axis building, situated in the center of well-kept grounds of almost eleven thousand square meters, at 25 Rue Dutot. The present institution was never intended as a hospital, but as a

laboratory of research, to which the hydrophobia patients could come for treatment. But there is nearing completion, across the street, and connected by an underground passage-way, a magnificent structure donated by Baroness Hirsch, in which the gravest forms of disease can be hospitalized, and where, in a most modern amphitheater and laboratories, biologic chemistry can be taught and its practical application followed at the bedside.

We enter the grounds by the iron gate near the house of the Concierge Jupille, who usually accompanies the stranger. Jupille wears several medals for bravery, as it was he who, when a shepherd boy in the Jura, strangled a mad dog, as represented by a statue in bronze before the entrance. He was one of the first patients inoculated with the attenuated virus.

The western end of the front building is occupied by Madame Pasteur and her son and grandson. Here for seven years, within a few steps of his workroom, Pasteur most happily spent the closing years of his active life, and in accordance with his modest dying request, is buried beneath his laboratory. The Pantheon longs to have his tomb among her great men. *La Patrie reconnaissant*, but with poetic instinct he is buried beneath the room where are shipped to the entire world, the curative viruses—antitoxin of diphtheria, antipest serum, mallein, vaccin Charb., antivenere, vaccin of hog erysipelas, of chicken cholera, tuberculin and, greatest of all, antitoxin of tetanus. The tomb is opened to the public on the first and

But when, after so many efforts, one at last reaches certitude, then one feels the greatest joy known to man—contributing to the honor of one's country."

Into the chaotic state of knowledge concerning molecular structure existing prior to 1840 he brought light and system. He showed that the rotary power of the molecule on polarized light was due to dissymmetry of molecular construction and lighted up the way for modern synthetic chemistry. The great bearing on biologic chemistry, of his discovery that the protoplasm of all living cells is gifted with rotatory power, and that they contain in consequence dissymmetric molecules, and that this dissymmetry is in relation to the stability or instability of composition and can not fail to play a rôle in all the chemical compositions of which the protoplasm is the seat. His observation of the change produced in a paratartrate of ammonia solution by the action of a "penicillium" growth, conferring on this solution a left rotatory action on polarized light led him to take up the great questions of fermentation and spontaneous generation. This affinity of the penicillium for only the "right" tartrate was to him the key for opening up the secrets of special culture-media. Great were the scientific battles fought on the questions of spontaneous generation and fermentations. The confusion of ideas prevailing was largely due to the fact that the philosophic or speculative method was employed instead of the experimental and scientific which Pasteur introduced into the study of these problems. Latour, Schwann, and Helmholtz knew of the presence of these microscopic cells, but



DUCLAUX, DIRECTOR INSTITUTE PASTEUR.

third Saturdays of each month. The first time I visited it was when Roux took the class, in 1898. There was an expression of reverence and sorrow which we all felt was genuine. The thought of the address of Pasteur came into my mind, of the two principles destructive and constructive, war and peace, and I could not help comparing this tomb with that of Napoleon, with its halo of glory, its sarcophagus of prophesy, and the vault which, if filled to the dome of the Invalides, would scarcely contain the skulls of his victims—to this modest black slab, in the center of a simple vault whose walls represent (in mosaic) dogs, pigeons, chickens, cows, pigs, silkworm workers, all testifying their gratitude, while on a tablet was listed his great battles in science, not of carnage such as Austerlitz, Jena, Wagram, but: 1848, dissymmetric moleculaire; 1857, fermentation; 1862, générations dites spontanées; 1863, études sur le vin; 1865, maladies des ers a soie; 1871, études sur la biere; 1877, maladies virulentes; 1880, virus vaccins; 1885, prophylaxie de la rage. What glorious victories these were for mankind! What an amount of research and experimentation they represented, as Pasteur once said: "To believe that one has discovered an important scientific fact, to have the fever of announcing it, and to constrain oneself for days, weeks, and even years, to combat oneself. To force oneself to ruin one's own experiments, and not to proclaim the discovery until all the contrary hypotheses are exhausted, is indeed a difficult task.



failed to demonstrate their rôle. Liebig was his bitterest opponent in claiming that these little cells were in decomposition and brought other bodies into the same state of decomposition, whereas Pasteur showed they were living cells, which in breaking up the sugar to get carbon for their own growth, left alcohol and carbonic acid behind.

His studies led him into consideration of the fermentation of milk, where his discovery of the vibron butyric opened the field of anaërobic life. Thence followed the explanation of putrefaction, the aerobic cells consuming the oxygen and forming a barrier at the surface, behind which the anaërobes were free to fabricate the hydrogen compounds and liberate the stinking gases. He explained adaptation of aërobes to anaërobic existence, and vice versa. He demonstrated the spore form of resistance requiring sterilization under several atmospheres of pressure, with the introduction of autoclaves into laboratories. His fractional sterilization of liquids which were injured by boiling, allowing time for spores to become cells to be more easily killed, gave us Pasteurized milk. The idea of spontaneous generation was completely exploded. Pasteur demonstrating that germs were always introduced by the air or external contamination. The sterile flask of bouillon which he presented before the Academy of Science in 1862, remains to-day, after thirty-eight years, as limpid as originally. His triumphs in wine and beer fermentation have added incalculable wealth to his country, and from a purely financial point of view

have been nearly or quite equaled by prevention of phylloxera and studies on diseases of silk worms.

The real humanitarian battle-field, however, only commenced with his discoveries in regard to anthrax and the bacillus of malignant edema, hog erysipelas, chicken cholera and hydrophobia. Chicken cholera was especially interesting because, in studying this, he found that old cultures gave a mild disease on inoculation, which conferred immunity on the animal inoculated against the virulent disease, and thus was the theory of attenuated virus launched. By cultivating anthrax at a temperature of 107 F. for eight days, spore fermentation was prevented and virus attenuated. From the decisive test of fifty inoculated sheep at Pouilly-le-Fort in 1881 until 1894 there were nearly four million sheep inoculated in France, with a mortality of only 1 per cent.; one-half a million cattle with less than 3 per cent. mortality. Pasteur's most popular discovery was the attenuation of the virus of hydrophobia. This dreadful disease, so frequent in France, appealed to the imagination of all, and the astonishing statistics published in 1894, of 20,000 patients treated with a mortality of only 5 per 1000 has conquered even the German prejudice.

But why try to enumerate the benefits of Pasteur's works? It can never be done. His influence and spirit of research have fallen like a mantle on his disciples, Roux, Duclaux, Metschnikoff, Borel, Martin, Calmette, and the natural respect among the French for their *Maîtres* has in this case become a "cult" from whose chief temple high priests of science have gone forth to establish branch Pasteur institutes in India, China, Japan, Africa, Russia, and the United States. When the plague threatened Europe at Opatto, it was the Pasteur Institute which sent Calmette and Salimbeni, to whose efforts are due the splendid results of reducing the mortality from 62 per cent. in untreated to 14 per cent. in those treated by pest antitoxin.

We visited the rest of the building, ascending to the large, handsome, well lighted library, with the current medical literature of the world as well as a most complete medical library, especially well supplied in works on bacteriology and pathology. Passing through the corridor to the rear building we turn to the right into the large laboratory for class instruction. Two courses of two months each are given here in microbiology—commencing in November and February. The cost is but nominal, nearly all material being furnished free. At no place in Paris are foreign medical men so well treated as at Pasteur's Institute, and while the French students usually have to inscribe a year in advance, foreigners are given places at once.

There is a probability of a course being given during the summer, especially for foreigners. M. Roux, whose modesty and enthusiasm for science make him a warm favorite with the students, has been in poor health for some time, and his course is given by Metschnikoff and Borel, with the collaboration of such specialists as Calmette on pests, Nocard on glanders, Martin on diphtheria, Vaillard on tetanus, Sabouraud on trichophytosis, Morox on gonococci, Laveran on malaria, and others. The lectures are given from 1:30 to 3 p.m., after which there is practical work in all the processes used in bacteriology. Students who wish to follow some special line of work are allowed to continue after the termination of the spring course. If a worker already known for his researches desires the facilities of the Institute, the courtesies of Metschnikoff's laboratory on the floor above are usually extended.

Next to the general laboratory are the private laboratories of Roux and Borel, and returning to the main corridor we cross over into the domain of Duclaux and his corps of workers. Here is a most completely equipped chemical laboratory, where the successor of Pasteur as director of the Institute, reconciles into perfect harmony the sciences of bacteriology and chemistry. As professor in the Sorbonne he gives a course of lectures on biologic chemistry in his special amphitheater. As author of the most extensive work on bacteriology, not yet finished, as well as director of "Les Annales d'Institut Pasteur," which was founded under the patronage of Pasteur in 1887, and which contains in detail the unequalled work of the Institute for the past thirteen years, Duclaux is one of the hardest worked savants in Paris.

Ascending to the third floor, we find mostly private labora-

tories. Here are such men as Morox, Wasserman, and Christmas, whose work on the gonococcus is well known, Marmorek, known for his antistreptococcal serum and others.

Descending to the first floor, to the right are the microphotographic rooms, aquarium, and glass-blowers' room.

To better control its results the Institute tries to have every thing made on the spot. Hence they manufacture all the glassware used in cultures, peptones, etc. The librarian also fills the functions of lithographer for "Les Annales."

Crossing over to the western wing, we enter the service of the "rage" or hydrophobia. Here is a large waiting-room, to which, every day at 10 a.m., about fifty patients come for treatment. They pass first into the registry-room, where complete records of cases can be kept. Cases are categorized under three groups: 1. Those where "rage" is demonstrated to exist in the animal inflicting the wound, as shown by inoculation into the brain of a rabbit, with resulting paraplegia and death in eight days. 2. Those with a veterinary surgeon's certificate. 3. Those with no scientific proof of the existence of rabies in the suspected animal. In the next room the inoculations are made. All necessary antiseptic precautions are used, and there are never any unpleasant symptoms following injections, which are commenced in a new case with triturations of the rabbit's spinal cord, which has been attenuated for fourteen days, increasing the intensity of the dose up to eight days' attenuation, then recommencing.

In the next room the rabbits are inoculated by trephining the skull and introducing the trituration of the spinal cord of the rabbit that died the day before. A rabbit has died of hydrophobia each day for twenty years. This maintains the culture in all its virulence. For the attenuation, acting on the same ideas as with chicken cholera, i. e., cultures in becoming old lose virulence, the removed cord is suspended in a sterile jar containing caustic postash in the bottom. This jar is placed in one of a row of compartments with wire gauze doors, in a dark room, kept at a uniform temperature of 23 C. At the end of fourteen days the cord loses its toxic properties. A control tube of bouillon into which a fragment of the cord was placed on removal from the rabbit indicates freedom from contamination. This must remain clear, otherwise the cord is condemned and not used. The rabbits which have been inoculated are kept in very hygienic cases which can be flushed and food introduced without disturbing the animals. Several outhouses contain guinea-pigs, rabbits, chickens, geese, ducks, pigeons, mice and rats for use in the laboratory. A separate house contains the cages of animals inoculated and under observation.

The farm adjunct at Garches, near St. Cloud, has 200 horses which furnish the antitoxins of diphtheria, tetanus and pest.

A. D. NEWBORN, M.D.

Bacteriology and Pathology Society.

April 12, 1900

To the Editor: The undersigned believe that the time has come for the formation of a national society, devoted to the advancement of the interests of the medical sciences, as distinct from the clinical side of medicine. The proposed society will be specially concerned with pathology and bacteriology, and a meeting for discussion of its plan and scope will be held in Washington, D. C., on the afternoon of Monday, April 30, at 2:30 p.m., in the Arlington Hotel. The general plan of the Society, so far as yet suggested, is:

1. Membership is limited to those who have already accomplished creditable work in research in pathology or bacteriology. 2. Meetings to be held annually in some important center, as may be determined (in May or June). 3. Members of the society to see that the work done by them, or under their control, is represented at the meetings of the society.

Very truly yours,

WM. T. COUNCILMAN.
HAROLD C. ERNST.
SIMON FLEKNER.
LUDVIG HEKTOEN.
WM. T. HOWARD, JR.
W. H. PARK.
THEOBALD SMITH.

Ethical Proprietary Preparations.

NEW YORK CITY, April 8, 1900.

To the Editor: I read your editorial and notice to your advertisers in THE JOURNAL of March 31, and believe that as far as a criterion can go by which to accept or reject advertisements of the proprietary medicines used by physicians, the one you have adopted is the most practical of any that has come to my knowledge. As editor of the "Medical Directory of New York, New Jersey and Connecticut," I was compelled to study the subject of the advertising of proprietary medicines, and while I believe that an ethical preparation is one, the published formula of which, in the hands of a competent pharmaceutical chemist, will reproduce the identical preparation found on the market, yet the standard adopted by you, to-wit: "the publication of the quantity of the active ingredients in all proprietary medicines advertised to physicians only," is a practical solution of the question and perfectly fair to honest commercial interests and to medical science. My definition of an ethical preparation must be considered ideal as applied to the business end of medical publications. In other words, it is ideal but not practical. If physicians know the quantity of the active ingredients of proprietary medicines brought to their notice, it seems to me to be as much as the profession can ask of honest commercial houses. The nicety of the preparation, so far as it is due to filtration or the cleanliness or the temperature or some other trade secret connected with the art of uniting the active ingredients in the quantities given to produce an elegant preparation, must be considered as belonging to the rights of honest commercialism. While we hope that the time will come when commercialism will not be considered as having any rights in inventions or discoveries that have to do with the promotion of public health and the treatment of disease, yet it does seem as though honest commercialism should be to-day recognized in the protection, for a limited time, which the patent laws grant to inventors and discoverers as a stimulus to their work of continuing what might be a profitless investigation without government protection. The abuse of the copyright and trade-mark laws so as to protect secret preparations in perpetuity is a matter worthy of the immediate consideration of Congress.

There is always a conflict between an ideal and a practical standard of judging any question. I am one of those who believe that the practical solution of any question leads to something better and thereby approaches the ideal.

You are to be congratulated for starting to clean up the advertising pages of THE JOURNAL, and may your good beginning lead all medical publications to a higher end.

E. ELIOT HARRIS, M.D.

Chairman of the Committee on Legislation, New York State Medical Association.

Book Notices.

A MANUAL OF SURGERY. By Charles Stonham, F.R.C.S., Senior Surgeon to the Westminster Hospital. In three volumes, Vol. I. General Surgery. Vol. II. Injuries. Vol. III. Regional Surgery. Cloth. \$6. New York: The MacMillan Co., 1900.

This is an American reproduction of an English work on surgery which has as its chief purpose to give a brief succinct account of surgical principles and measures and to serve as a convenient manual for students and practitioners. It is different in form from the usual American text-book, divided into three volumes, each of convenient, almost pocket, size. This has its advantages for study and handy reference, and might be more generally adopted without causing complaint, provided the work is not thus made any more expensive as a whole.

The first volume deals with general surgery and surgical diseases, and gives within a comparatively brief compass a detailed account of the subject. In the second volume injuries are considered and the third covers the subject of regional surgery. As compared with most American works of the same general compass less detail is given to some subjects, such as inflammation and its varieties, appendicitis, and some others,

but these are fairly handled, and as a manual rather than as an exhaustive treatise it covers, in its 1200 and more pages, the general subject of surgery quite fully. It is English largely in its references to apparatus, etc., some of which are not so likely to be useful to the student in this country on that account, but this is comparatively a minor matter. One can honestly recommend the work for the purpose for which it was designed. A very convenient feature is the complete index repeated in each volume.

"CHRISTIAN SCIENCE." An Exposition of Mrs. Eddy's Wonderful Discovery, Including its Legal Aspects. A Plea for Children and other Helpless Sick. By William A. Purring-ton, Lecturer in the University and Bellevue Hospital Medical College. Cloth. Pp. 194. Price \$1. New York: E. B. Treat & Co. 1900.

This is largely a reproduction of articles published in the *North American Review*, *Medical Record* and *New York Sun*. The author is a well-known legal authority and a lecturer of Bellevue Hospital Medical College. He also, as might be expected, has very accurate and adequate ideas of the questions of medical science so far as they are involved in the subject treated. If any one wishes to get a fair idea of the modern delusion called "Christian Science," as seen from a medico-legal point of view, we would advise him to read this work. Besides the articles on Eddyism there are two chapters on subjects equally of interest to the medical practitioner, one on "How Far Can Legislation Aid in Maintaining a Proper Standard of Medical Education?" the other on "The Evolution of the Apothecary." Inasmuch as almost every physician has to deal directly or indirectly with the delusion of "Christian Science," or is liable to in his practice, acquaintance with this volume will certainly be of advantage.

A SYSTEM OF MEDICINE. BY MANY WRITERS. Edited by Thomas Clifford Allbutt, M.A., M.D., LL.D., D.Sc., F.R.C.P., F.R.S., F.L.S., F.S.A., Regius Professor of Physic in the University of Cambridge. Volume IX. Cloth. Pp. 998. Price, \$5. New York: The MacMillan Co. 1900.

The eighth volume of Allbutt's System of Medicine (numbered 9 in the title page and cover) contains a continuation of the subject of nervous diseases, with the section on mental disorders and that on disorders of the skin. In the first part we have, among other things, elaborate articles on hysteria, by Ormerod; on neurasthenia, by the editor, Dr. Allbutt; on traumatic neurasthenia by Professor Horsley. All of these, as well as the shorter ones, are valuable and important contributions. We should mention as also noteworthy the article by Risien Russell on tetany, which has also quite an extensive bibliography appended. The longest, and in some respects most noteworthy, article, that of Dr. Mercier on "Vice, Crime and Insanity," is well worth reading. The section on mental disease is contributed to by such authors as Drs. Savage, Warner, Shuttleworth, Beach, Mercier, Clouston, Rayner, Batty Tuke and others whose names are a guarantee of the value of the separate chapters. As in all composite works, however, there is some lack of perfect co-operation. The section on skin diseases occupies the larger half of the work. The names of the contributors include Drs. Stephen Mackenzie, Payne, the editor of the section, Dr. Brooke, of Owens College, Drs. Crocker, Malcolm Morris, Jonathan Hutchinson, Henry Head, and others scarcely less well known. The section forms a very useful and apparently thorough text-book on skin diseases. As a whole the volume very worthily fills out the series.

IMPERATIVE SURGERY FOR THE GENERAL PRACTITIONER, THE SPECIALIST AND THE RECENT GRADUATE. By Howard Lilienthal, M.D. Price \$4. New York: The Macmillan Co.

In criticising this work one is somewhat dismayed by the statement in the preface that it "presupposes the absence of a surgeon and the impossibility or inexpediency of removing the patient or of waiting for expert assistance." The number and distribution of good surgeons would make the fulfilment of the above conditions a very rare occurrence in this day. Some of the advice approaches very near the laity, and repetition is common, as the author remarks. The use of the dangerous 4 per cent. solution of cocaine subcutaneously as a local

anesthetic, when Schleich's solutions are so harmless and efficient, can not be endorsed. Nor can the advice to suture the gall-bladder to the skin in cholecystostomy, owing to the difficulty often experienced in closing such fistulae. The recommendation to leave the skin unsutured and pack with gauze in the radical operation for hernia shows a lack of confidence in the ability to do clean work, and increases much the danger of secondary infection of the deep layers.

There are certainly emergencies in all lines of work, which must be met on the spur of the moment with what lies next to hand, but the majority of the subjects handled in this volume do not come under that head. The illustrations are good, and the publisher's work has been well done.

CLINICAL STUDIES IN VICE AND INSANITY. By George R. Wilson, M.D., Medical Superintendent, Mavisbank Asylum. Cloth. Pp. 235. Price \$3. New York: The MacMillan Co. 1899.

Most works on mental diseases have a certain interest in their clinical histories, but there are very few in which the accounts of cases are written more racy or entertainingly than in this. The book is made up chiefly of the accounts of some twenty-seven cases of alcoholism or alcoholic insanity and other forms of mental disease in which the moral sense is more or less involved in the general aberration. The author introduces it as usual with certain general chapters on the pathology of drunkenness, etc., but they occupy only some fifty out of over 200 pages. The book is also quite instructive as to methods and management, and the author is evidently a man of experience and judgment in the handling of these cases. He does not make any attempt to classify them; in fact he does not believe in the classification of insanity, and some of the cases, the histories of which he gives, would be rather puzzling to place. There may be differences of opinion in regard to some of his ideas, though it can not be questioned that he has given a valuable as well as unusually interesting work.

THE DISEASES OF CHILDREN. MEDICAL AND SURGICAL. By Henry Ashby, M.D., F.R.C.P., Physician to the General Hospital for Sick Children; and G. A. Wright, B.A., M.B., Oxon, F.R.C.S., Assistant Surgeon to the Manchester Royal Infirmary. Fourth Edition. Edited for American Students, by William Perry Northrup, A.M., M.D., Professor of Pediatrics, The University of Bellevue Hospital Medical College. Cloth. Pp. 894. Price, \$5. New York, London and Bombay: Longmans, Green & Co. 1900.

This American reproduction of a well-known British work is a valuable addition to our literature on its subject. In the main, the American editor has, as he says, left the text intact, adding only, in the appendix, a few notes on dietetic preparations, intubation, drugs, etc., and certain surgical procedures, these last additions being made by Dr. T. Halsted Myers. The formulae have been entirely rewritten to conform to the U. S. Pharmacopoeia. Inspection of the work shows it to be a modern text-book that will very fairly meet the needs of the practitioner. Some subjects that just now are prominent are rather briefly treated, that of adenoids for example, which is disposed of in hardly more than half a page, but what is said is probably sufficient. The book is well illustrated and has an excellent index.

A PILGRIMAGE: OR THE SUNSHINE AND SHADOWS OF THE PHYSICIAN. By Wm. Lane Lowder, B.S., M.D., McKinney, Ky. Price, \$1. Published by the Author.

The book is made up principally of essays and papers presented to different medical societies, on subjects relating to the physician's personal and professional life. They cover the mental, moral, literary and professional qualifications of the physician, his relationship to the public, the profession, and to himself, medical ethics, medical societies, etc. Although a little unpretentious volume of only 196 pages, it contains much good sound sense, and is well worth reading.

TRANSACTIONS OF MISSISSIPPI VALLEY MEDICAL ASSOCIATION. Twenty-fifth Annual Session, held at Chicago, Ill., Oct. 3, 4, 5 and 6, 1899. Vol. 1. 1899.

This is the first time that the Mississippi Valley Medical Association has published its transactions. These make a large book, nearly 500 pages, and it includes all of the papers read at

the last meeting, as well as the discussions. The Constitution and By-Laws of the Association are included, but not the list of members. The book, as a whole, is a credit to the publication committee, and the committee is to be congratulated on the result of its efforts. The color adopted for the binding—blue—may reflect the condition of the committee at the time this was selected, but, as a thing of beauty, it does not add to the artistic appearance of the book. This, however, may be simply a matter of taste.

THE YEAR-BOOK OF THE NOSE, THROAT AND EAR. Edited by G. P. Head, M.D., Professor of Laryngology and Rhinology in the Post-Graduate Medical School of Chicago, and Albert H. Andrews, M.D., Professor of Otology in the Post-Graduate Medical School of Chicago. Cloth. Pp. 275. Price \$1.50. Chicago: Chicago Medical Book Co. 1900.

The editors of this year-book have produced what ought to be of service to those engaged in the specialty of rhinology and otology and can also very well be of value to the general practitioner. They have brought together and classified in readable, abstract form the substance of leading articles which were published during the past year on diseases of the nose and throat and of the ear, collected from the current medical literature and from monographs. The venture is practically a new one, but it starts well and we hope it will be as worthily continued.

HISTOLOGY AND PATHOLOGY. A Manual for Students and Practitioners. By John Benjamin Nichols, Demonstrator of Histology, Medical Department of Columbian University, Washington, D. C.; and Frank Palmer Vale, M.D., Assistant in Pathology, Medical Department of the University of Georgetown, Washington, D. C.; Series Edited by Bern B. Galaudet, M.D., Demonstrator of Anatomy and Instructor in Surgery, College of Physicians and Surgeons, Columbia University, New York City. Illustrated with 213 Engravings. Cloth. Pp. 458. Price, \$1.75. Philadelphia and New York: Lea Brothers & Co.

This volume appears to serve its purpose in presenting the essential facts relative to the normal and pathologic histology and anatomy of man in a concise and systematic way. It seems to be a very good compilation on the subject, is well illustrated, and for those who desire merely brief data without discussion or elaborate explanation it will serve a useful purpose. So far as we can see it is up-to-date and the facts are generally reliable.

Association News.

Committee on National Legislation.—Notice has been sent to the delegates to the National Legislative Conference of the AMERICAN MEDICAL ASSOCIATION, to meet in Washington on May 1 and 2 next, with headquarters at the Arlington Hotel. Arrangements have been made for rooms at the hotel for \$4 and \$5 a day, American plan. The delegates are requested to communicate with Mr. Bennett, manager, and secure reservations, and also notify the legislative committee through its chairman, Dr. H. L. E. Johnson, that they will be present at the time appointed.

Hotel Accommodations in Atlantic City.—The communications received from the leading hotels of Atlantic City in reply to inquiries made by the Hotel Committee are most satisfactory expressions of the readiness of hotel managers to make the members of the ASSOCIATION and their families as comfortable as possible during their sojourn in the city. The Committee sent to the principal houses printed forms to be filled in, thus securing clear statements as to rates and precluding all possibility of any annoying overcharges or "extras" appearing later on the bills of their guests. In almost all the hotels named in the subjoined list special and reduced rates are appended:

NAME.	CAPACITY.	RATES PER DAY.	
		SINGLE.	DOUBLE.
Albemarle	350	\$2.50	\$4.00
Arglen	200	2.00	3.00—\$3.50
Avon Inn	200	2.50—3.50	4.00—6.00
Brexton	300	2.50	4.00
Brighton	300	3.50—6.00	8.00—12.00
Berkley	300	3.00	5.00

NAME	CAPACITY.	RATES PER DAY.	
		SINGLE.	DOUBLE.
Belmont	300	3.00	5.00
Bleak House	300	3.00—5.00	5.00—6.00
Boscobel	150	2.50	4.00
Cornell Inn	200	2.00	6.00
Chalfonte	250	3.00—4.00	6.00—7.00
Canfield	50	2.00	4.00
Colonial	80	2.50	5.00
Dennis	425	3.00—5.00	6.00—10.00
DeVille	300	2.50—3.00	5.00—6.00
Edison	50	2.00	3.50
Garden	300	3.00—5.00	5.00—8.00
Grand Atlantic	600	3.00	6.00
Glaslyn	300	3.00	5.00
Holmhurst	300	3.00	5.00
Haddon Hall	450	3.00—5.00	6.00—10.00
Hotel Esmond	150	2.00—3.50	4.00—6.00
Irrington	200	2.00	4.00
Imperial	300	2.50—3.00	4.00—6.00
Lelande	250	2.50	4.50
Laurence	200	2.00—3.50	4.00—6.00
Loraine	250	3.00	5.00
Luray	400	3.00 up	6.00 up
LaBelle Inn	125	2.00—2.50	4.00—5.00
Morton	250	2.00—3.00	4.00—6.00
States Villa	65	2.50—3.00	4.00—5.00
Majestic	250	3.00—3.00	4.00—6.00
New England	500	5.00	5.00
Oriental	150	3.00	5.00
Ponce de Leon	300	2.50—3.00	5.00—6.00
Pennhurst	150	2.50—3.00	5.00—6.00
Pierpont	350	3.00—4.00	4.00—6.00
Raleigh	300	2.50	4.00
Raymond	125	2.00	4.00
Runnymede	200	2.50	4.00
Revere	100	2.50	5.00
Rudolf	600	3.00—4.00	8.00
Richmond	290	2.50	4.00
Royal Palace	500	3.50 up	7.00 up
Sea Bright	100	2.00—2.50	4.00—5.00
Shelburne	350	3.00—4.00	6.00—7.00
St. Charles	225	3.50	6.00
Senate	250	3.00	5.00
Strand	250	2.50	5.00
Seaside House	300	3.00—4.00	6.00—8.00
Scarborough	250	3.00	5.00
Slickney	150	2.00	3.50
Traymore	450	3.50—5.00	7.00—10.00
Westminster	200	2.50	4.00
Wiltshire	300	2.50	4.00
Windsor	300	3.50 up	7.00 up

In order to assure our members that their convenience has been carefully studied it is well to state that the above list includes only the principal hosteleries from half a square to twelve squares distant from the main rendezvous of the ASSOCIATION. All are in close proximity to the board walk, which famous marine promenade leads directly to all points of interest. The scale of prices for accommodations will be found most moderate for the season, and when it is added that the necessarily limited list excludes all mention of hundreds of smaller hotels and boarding-houses in Atlantic City, it is plain that visitors will have wide latitude for choice. All may come assured of comfort and convenience at rates varying from \$1.50 per diem to the highest figures quoted in the above list. It should perhaps be added that visitors who desire to stay in the hotels of the quiet and beautiful Chelsea suburb will find, in the electric cars, easy transportation to and from the meetings—the cars taking them within two squares of all such points. Then the city's copious omnibus service, with ten-cent fares affords unusual facilities for the transport of individuals or parties in all directions, and at all hours. The Committee recommends that application for rooms be made directly to the hotels, but they hold themselves ready to attend promptly to any correspondence and to furnish any special information that may be required.

EMERY MARVEL, M.D., Chairman, 811 Pacific Avenue.

Section on Surgery and Anatomy.—The titles of papers thus far received for the Section on Surgery and Anatomy, for the meeting at Atlantic City, N. J., June 5-8, 1900, are as follows:

A New Leg Splint—Edward A. Tracy, South Boston, Mass.
 Appendiceal Fistula—John B. Deaver, Philadelphia.
 Surgical Shock; Second Paper—Fenton B. Turck, Chicago.
 Auto-Irrigations of Urethra and Bladder—Ferd C. Valentine, New York City.

Treatment of Obstinate Constipation, Dependent on New Points in Anatomy and Histology of Rectum and Colon—Joseph M. Mathews, Louisville, Ky.

Anatomy of Hanging—E. W. Holmes, Philadelphia.
 Gall-Bladder—M. H. Richardson, Boston.
 Ligation of Carotid—W. P. Nicholson, Atlanta, Ga.
 Dislocation of Thumb—H. R. Wharton, Philadelphia.
 Drainage of Lung Cavities—W. S. Willis.
 Dislocations—A. D. Bevan, Chicago.
 Injection Cure of Hernia—G. G. Cotton.
 Old Age Influencing Surgical Operations—J. P. Tuttle, New York City.

Report of Case of Specific Myositis, Simulating Retroperitoneal Sarcoma—Ernest Laplace, Philadelphia.
 Colostomy for Permanent Fecal Fistula—John A. Wyeth, New York City.

Non-Perforating Gastric Ulcer, With and Without Hemorrhage—W. L. Rodman, Philadelphia.

Removal of Mucous Membrane of Gall-Bladder, a Substitute for Cholecystectomy—William J. Mayo, Rochester, Minn.

Proctoscopy at the Bedside, by Means of a New Device—Thomas Charles Martin, Cleveland, Ohio.

Restitution of Continuity of Shaft of the Tibia, by Transplantation of Patella Between the Fragments—N. Senn, Chicago.

Destruction of Cancerous Growths Within Organs by Cathaphoric Sterilization, Without Removal of the Unaffected Portions of the Organs—G. Betton Massey, Philadelphia.

Coccygeal Dermoids—J. R. Eastman, Indianapolis, Ind.
 Cystitis—C. C. Thayer, Clifton Springs, N. Y.

Bone Tuberculosis—DeForrest Willard, Philadelphia.
 Cure of Functional Impotence—J. Murray, Clearfield, Pa.
 Fractures of the Patella—J. M. Barton, Philadelphia.

Presentation of Surgical Table—A Munger, Spencer, Iowa.
 Operative Treatment of Diseases of Shafts of Long Bones—Stewart L. McCurdy, Pittsburg, Pa.

Movable Kidney—M. L. Harris, Chicago.
 Vesico-rectal Anastomosis for Exstrophy of Bladder, With Report of Case—A. E. Halstead, Chicago.

Treatment of Hernia in Children—A. J. Ochsner, Chicago.
 Exclusion of Intestinal Area from Fecal Tract—J. B. Murphy, Chicago.

Treatment of Injuries of Ureter—B. B. Davis, Omaha, Neb.
 Comments on Appendicitis as Commonly Practiced—Joseph Price, Philadelphia.

Tuberculosis of Prostate and Vesiculae Seminales—Albert I. Bouffler, Chicago.

Ambulatory Treatment of Fracture With Demonstration of a New Apparatus for Ambulatory Treatment of Fractures Below the Knee—Edward H. Lee, Chicago.

Skiagraphic Errors in Surgery—Carl Beck, New York City.

Section on Materia Medica, Pharmacy and Therapeutics.—The following program is announced for this Section, at the coming meeting of the ASSOCIATION:

Chairman's Address—L. L. Solomon, Louisville, Ky.
 Title to be announced—E. G. Janeway, New York City.
 Heart Tonics—J. N. Upshur, Richmond, Va.

Symposium of the Newer Remedies, Including their Chemistry, Physiologic Action and Therapeutic Applications, together with New Applications of Some of the Older Remedies—J. W. Wainwright, New York City.

Aconite—E. C. Brush, Zanesville, Ohio.
 Action of Chloralose as a Hypnotic—James Tyson, Philadelphia.

Neglect of Old Remedies—Herschel Fisher, Lebanon, Ohio.
 Treatment of Chronic Interstitial Nephritis—Chas. Lyman Greene, St. Paul, Minn.

Therapeutics of Croupous Pneumonia—J. M. Allen, Kansas City, Mo.

Therapeutic Progress—J. Tracy Melvin, Saquache, Colo.
 Relative Value of Various Forms of Local Treatment in Erysipelas—H. A. Hare, Philadelphia.

Some Dangers from the Use of Narcotics in Young Persons—T. D. Crothers, Hartford, Conn.

Treatment of Gastric and Duodenal Ulcer—F. L. Shattuck, Boston, Mass.

Therapeutics of Vertigo—Leonard Corning, New York City. Use of Adhesive Plaster in Various Internal Conditions—J. H. Musser, Philadelphia.

Pharmacology and Ethics—F. E. Stewart, New York City. Gastrointestinal Remedies in Typhoid Fever—J. M. Anders, Philadelphia.

A Protest Against the Use of Patented Synthetics and Proprietary Remedies—D. R. Brower, Chicago.

Importance of Early Recognition of Tuberculosis—A. M. Holmes, Denver, Colo.

Present Views on the Use of the Unbroken Skin as an Absorbing Medium—T. F. Reilly, New York City.

United States Pharmacopoeia of 1900—Jos. P. Remington, Philadelphia.

Therapeutic Application of the Organic Extracts—O. T. Osborne, New Haven, Conn.

Classification of Medicines Based on the Time Required to Produce Their Effects—W. H. Thompson, New York City.

Dietetic Treatment of Diabetes—N. S. Davis, Jr., Chicago. Plea for Greater Simplicity in Therapeutics—L. F. Bishop, New York City.

Rôle of Drugs in Management of Consumption—S. Solis-Cohen, Philadelphia.

Pharmaco-Physiologic Action of Drugs as Contrasted with Their Alleged Specific Action—Geo. F. Butler, Chicago.

Treatment of Alcoholism by Large Doses of Digitalis—H. P. Loomis, New York City.

Ointments—Frank Woodbury, Philadelphia.

Pharmacologic Assay of Drugs and Its Importance in Therapeutics—E. M. Houghton, Detroit, Mich.

Psychic Therapeutics—J. C. Culbertson, Cincinnati, Ohio. Hydratic Treatment of Chronic Disorders—J. H. Kellogg, Battle Creek, Mich.

Treatment of Addison's Disease, with Case—John V. Shoemaker, Philadelphia.

Irrigation of Colon as a Therapeutic Measure—Geo. J. Loeb-boeher, Washington, D. C.

Therapeutic Skepticism—H. V. Sweringer, Fort Wayne, Ind. Lavage of Stomach as a Therapeutic Measure in Treatment of Constipation—C. D. Spivak, Denver, Colo.

Therapy of Malignant Cases of Acute Infections—J. C. Lange, Pittsburg, Pa.

Treatment of Migraine—E. W. Mitchell, Cincinnati, Ohio.

Some Points in Treatment of Gastric Ulcer—D. D. Stewart, Philadelphia.

Title to be Announced—W. B. Hill, Milwaukee, Wis.

Title to be Announced—C. C. Yarbrough, Detroit, Mich.

Title to be Announced—T. H. Stucky, Louisville, Ky.

Value of Potassium Bicarbonate in Practice—Stephen Harns-borger, Catlett, Va.

Decadence of the Crude Drug—Lucius E. Sayre, Lawrence, Kan.

The Metric System—F. G. Wheatley, North Abington, Mass.

Management of the Third Stage of Diabetes Mellitus, and of the Coma Diabeticum, also Dietetic Treatment of Cyclic Albuminuria—H. Stern, New York City.

The Pharmacopoeia, the Medical Journal and the Profession—A. L. Benedict, Buffalo, N. Y.

Deaths and Obituaries.

BENJAMIN F. LEONARD, M.D., died in Baltimore, Md., April 10, of pneumonia. He was born April 14, 1847, educated at West River Institute, took the degree of M.D. at the University of Maryland School of Medicine in 1876, and pursued post-graduate study at the College of Physicians and Surgeons, Baltimore, and at Bellevue Hospital Medical College, New York City. He became a member of the Medical and Chirurgical Faculty of Maryland in 1877 and was later professor of diseases of women and children in the Baltimore Medical College. He latterly paid most attention to diseases of the rectum.

HOLLY R. WINCHESTER, M.D., a graduate of the Baltimore

University School of Medicine, 1890, committed suicide near Annapolis, on the 9th inst., by shooting himself. He had been in ill-health for some time. For some years he practiced in Chicago, but since 1896 had been practicing in Annapolis.

CHARLES D. BRADLEY, M.D., Chicago, died April 7, aged 49 years. He was born in Quebec, Canada, and came to Chicago fifteen years ago. Soon after establishing himself here he became a member of the staffs of St. Joseph's and St. Anthony's hospitals, and was made chief surgeon to the House of the Good Shepherd and St. Vincent's Orphan Asylum.

FRANK D. KIMBALL, M.D., aged 24 years, for two years house surgeon of the City Hospital on Blackwell's Island, N. Y., died April 12, from suppurative meningitis resulting as a complication of influenza. He was a graduate of Dartmouth College and the University Medical College, New York City.

CHARLES C. EASTMAN, M.D., Geneva Medical College (now extinct), 1866, assistant manager of the Binghamton (N. Y.) State Hospital for the Insane, died in that town, April 12. He had been connected with the institution since its establishment, in 1869.

ROBERT FRANCIS CUNNING, M.D., College of Physicians and Surgeons, N. Y., 1892, of Brooklyn, N. Y., died in that city April 7, aged 30 years.

W. D. BRENLE, M.D., of Henry County, Va., formerly of Frederick County, Md., died near Ridgeway, Va., April 9, of heart disease. He was 62 years old.

GEORGE H. CONKLIN, M.D., died April 12, at Babylon, N. Y. He was born in 1811.

WILLIS H. HUNT, M.D., Camden, N. J., died April 11, aged 45 years.

JAMES PHELPS BING, M.D., Portsmouth, Ohio, died April 8, aged 78 years.

Miscellany.

Medical Pigeon Service.—Dr. Bonenfant of Linselles, Nord, France, writes to the *Gaz. Méd.* that he has been using carrier pigeons since 1894. He has a small office in a village nearly three miles distant, where the sick in the neighborhood apply when they need him. The caretaker of the office despatches a pigeon to him with the various calls, before he leaves home, so that he can plan his route and save much time and trouble.

Best Means of Preventing Disease and Deformities.—Professor Hegar comments admiringly on the legislation in North Dakota and Michigan prohibiting marriage to persons known to be idiots or insane or affected with still uncurred gonorrhoea or syphilis, and hails it as a great progress, in an article with the above heading in the lay magazine, *Deutsche Revue* (xxv, 1). He observes that animals are incapable of looking out for the welfare and health of their young, and man does it for them by judicious breeding. "Man degrades himself to the level of an animal when he neglects to do this for his own offspring." Hegar hopes to see public opinion educated until marriage between relations or persons resembling each other too closely will cease to occur. He adds that even a good point, doubled in the descendants by inheritance from both progenitors, may be so exaggerated as to be a defect. He would like to see marriage prohibited by legislation to all persons with a deformity, an infirmity, a disease or an intoxication, whenever appreciable and permanent injury to the descendants may be anticipated. He considers improvement and cure more probable with tuberculosis and alcoholism than in case of syphilis. "Continuous general good health indicates that recovery is complete." He includes among the infirmities which should bar marriage the growing together of fingers and toes, hare-lip, cleft palate, diseases of the blood, epilepsy, insanity, idiocy and perverse sexual characteristics. "Crossing with good blood is too long and uncertain a process and it is unjust to the good blood to mate it with disease." "We build sanatoria to remedy effects, when by keeping city streets free from dirt and dust and giving the poor sanitary homes, we would accomplish far more by eradicating the chief causes, and by bolting the door against the birth of crippled and

diseased children—congenital martyrs who may in turn propagate others—diseases and deformities would be reduced in geometrical progression."

BOOKS AND PAMPHLETS RECEIVED.

Acknowledgement of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. Selection from these volumes will be made for review as dictated by their merits, or in the interests of our readers.

A CYCLOPEDIA OF PRACTICAL MEDICINE AND SURGERY. A Concise Reference Book, Alphabetically Arranged, of Medicine, Surgery, Obstetrics, Materia Medica, Therapeutics, and the Various Specialties, with Particular Reference to Diagnosis and Treatment. Compiled under the Editorial Supervision of George M. Gould, A.M., M.D., and Walter L. Pyle, A.M., M.D., Assistant Surgeon to Wills Eye Hospital. 743 pp. Quarto. Illustrated. Sheep or Half Dark Green Leather. \$10; Thumb Index, \$11. Half Russia, Thumb Index, \$12. Philadelphia: P. Blakiston's Son & Co., 1900.

DISEASES OF THE STOMACH. Their Special Pathology, Diagnosis, and Treatment, with Sections on Anatomy, Physiology, Chemical and Microscopic Examination of Stomach Contents, Diets, Surgery of the Stomach, etc. By John C. Hemmeter, M.D., Professor to the Medical Department of the University of Maryland, Baltimore. With many original illustrations, a number in colors. Second Edition. Enlarged and Revised. Octavo. Pp. 585. Cloth. Price, 85 net. Philadelphia: P. Blakiston's Son & Co., 1900.

ESSENTIALS OF SURGERY, Together with a Full Description of the Hand-kerchief and Roller Bandage. Arranged in the Form of Questions and Answers. Prepared Especially for Students of Medicine. By Edward A. Harkness, M.D., Clinical Professor of Genito-Urinary Diseases in the University of Pennsylvania. Illustrated. Seventh Edition. Revised and Enlarged, with an Appendix Containing Full Directions and Prescriptions for the Preparation of the Various Materials used in Antiseptic Surgery; also Several Hundred Receipts Covering the Medical Treatment of Surgical Affections. Cloth. Pp. 335. Price, \$1. Philadelphia: W. B. Saunders, 1900.

ELEMENTS OF CLINICAL BACTERIOLOGY. For Physicians and Students. By Ernst Levy, M.D., Professor in University of Strassburg, and Felix Kleber, M.D., Private Docent in University of Strassburg. Second Enlarged and Revised Edition. Authorized Translation by Augustus A. Eshner, M.D., Professor of Clinical Medicine in Philadelphia Polyclinic. Cloth. Pp. 425. Price, \$2.50. Philadelphia: W. B. Saunders, 1900.

TWENTIETH CENTURY PRACTICE. An International Encyclopedia of Modern Medical Science. By Leading Authorities of Europe and America. Edited by Thomas L. Stedman, M.D., New York City. In Twenty Volumes. Volume XIX, "Malaria and Micro-organisms." New York: William Wood & Company, 1900.

ANESTHETICS. Their Uses and Administration. By Dudley Wilton Buxton, M.D., B.S., Member of Royal College of Physicians. Third Edition. Cloth. Pp. 320. Price, \$1.50. Philadelphia: P. Blakiston's Son & Co., 1900.

ON DIABETES MELLITUS AND GLUCOSURIA. By Emil Kleen, Ph.D., M.D., Octavo. Pp. 313. Price, Cloth \$2.50 net. Philadelphia: P. Blakiston's Son & Co., 1900.

INTERNATIONAL MEDICAL ANNUAL AND PRACTITIONER'S INDEX: A Work of Reference for Medical Practitioners. Pp. XII, 748. Price, \$3. New York: E. B. Treat & Co., 1900.

The Public Service.

ARMY CHANGES.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., March 30 to April 6, 1900, inclusive:

Wm. H. Arthur, major and surgeon, U. S. A. in addition to his present duties is assigned as medical superintendent of the army transport service at San Francisco, Cal.

Lawrence C. Carr, major and surgeon, Vols., now at Santiago, Cuba, to duty as chief surgeon, Department of Santiago and Puerto Principe.

Carl DeWitt, lieutenant-colonel, deputy surgeon-general, U. S. A., relieved from duty as chief surgeon of the Division of Cuba, to proceed to New York City, and report by telegraph to the adjutant-general for further orders.

Benjamin E. Eder, lieutenant and asst.-surgeon, U. S. A., from the Military Academy, West Point, N. Y., to San Francisco, Cal., for duty in the Department of California.

Charles G. Elcher, acting assistant-surgeon, now at Jefferson Barracks, Mo., is relieved from further duty in the Department of Puerto Rico and assigned to duty in the Department of California. Valery Havard, major and surgeon, U. S. A., from the Department of Santiago and Puerto Principe to Havana, Cuba, for duty as chief surgeon of the Division of Cuba.

Thomas W. Jackson, acting asst.-surgeon, from Pinar del Rio Barracks, Cuba, to New York City, thence to report by telegraph to the adjutant-general for further orders.

Millard Langfield, acting asst.-surgeon, former orders directing him to proceed from Omaha, Neb., to San Francisco, Cal., revoked.

Willard S. H. Matthews, major and surgeon, Vols., now at the Presidio of San Francisco, Cal., is relieved from further duty in the Division of the Pacific and will report for duty as attending surgeon and examiner of recruits at St. Paul, Minn.

Frank H. May, acting asst.-surgeon, from New York City to the Department of California.

Albert L. Miller, acting asst.-surgeon, now at Jefferson Barracks, Mo., is relieved from further duty in the Department of California, Porto Rico and assigned to duty in the Department of California.

BOARD OF EXAMINERS CONVENED.

A board of medical officers, to consist of Major Valery Havard,

surgeon, U. S. A.; Major William C. Gorgas, surgeon, U. S. A.; Major Jefferson R. Keane, surgeon, U. S. V.; and Capt. William W. Quinton, asst.-surgeon, U. S. A., is appointed to meet in the city of Havana, Cuba, May 1, 1900, for the examination of acting asst.-surgeons, U. S. A., who are candidates for admission into the medical department of the Army. The board will be governed in its proceedings by such instructions as may be communicated to it by the surgeon-general of the army.

NAVY CHANGES.

Changes in the Medical Corps of the U. S. Navy for the week ending April 7, 1900.

P. A. Surgeon J. C. Rosenblyth, ordered to the *Wilmington*, sailing from New York City, April 5, to join ship at Rio de Janeiro, Brazil.

P. A. Surgeon F. C. Cook, detached from the *Wilmington* and ordered to home by mail steamer.

P. A. Surgeon F. Urie, commissioned surgeon from October 25, 1899.

P. A. Surgeon W. M. Wheeler, commissioned passed assistant surgeon from May 27, 1899.

P. A. Surgeon D. N. Carpenter, commissioned passed assistant-surgeon from Oct. 24, 1899.

P. A. Surgeon E. L. Pleadwell, commissioned passed assistant-surgeon from Oct. 25, 1899.

P. A. Surgeon W. F. Arnold, detached from the naval hospital, Norfolk, Va., and granted leave for three months.

P. A. Surgeon G. D. Costigan, detached from the naval hospital, Chelsea, Mass., and ordered to the Boston Navy Yard immediately.

P. A. Surgeon D. N. Carpenter, detached from the Boston Navy yard and ordered to the naval hospital, Chelsea, Mass., immediately.

MARINE-HOSPITAL CHANGES.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital Service for the 7 days ended April 5, 1900.

Surgeon Eugene Wasdin, to proceed to Buffalo, N. Y., and assume command of the service.

P. A. Surgeon J. R. Stoner, relieved from duty at Buffalo, N. Y., and directed to proceed to St. John, N. B., for duty as medical inspector of immigrants.

P. A. Surgeon G. E. Young, granted two days' extension of leave of absence on account of sickness.

Asst.-Surgeon E. E. Decker, granted 29 days' leave of absence, on account of sickness from March 2.

Asst.-Surgeon Talliaferro Clark, on being relieved from duty at Tortugas quarantine, to proceed to New York City. (Stapleton) and report to medical officer in command for duty and assignment to quarters.

Asst.-Surgeon John McMullen, on being relieved from duty at Louisville, Ky., to proceed to Tortugas quarantine and assume command of the service.

Asst.-Surgeon G. M. Anderson, relieved from duty at Barcelona, Spain, and directed to proceed to Marseilles, France, for duty.

Asst.-Surgeon M. K. Gwyn, relieved from duty at Chicago, Ill., and directed to proceed to Louisville, Ky., and assume command of the service.

Asst.-Surgeon G. M. Corput, upon being relieved from duty at Marseilles, France, to proceed to Washington, D. C.

Asst.-Surgeon C. W. Vogel, relieved from duty at New York (Stapleton), and directed to report to Surgeon L. L. Williams, Immigration Station, New York, for duty.

Acting asst.-surgeon G. H. Altrec, granted leave of absence for three days.

Acting Asst.-Surgeon John T. Bullard, granted leave of absence for sixty days from April 3.

Acting Asst.-Surgeon S. B. Foster, granted leave of absence for one month from April 6.

Hospital Steward C. H. Woods, granted leave of absence for 15 days from April 6.

Hospital Steward W. F. Schlaar, granted leave of absence for 25 days from April 2.

APPOINTMENT.

Allan J. McLaughlin, of New Jersey, commissioned as assistant-surgeon.

CHANGE OF ADDRESS.

Dr. J. H. Terrill, from Wichita, Kan., to 285 Main St., Dallas, Texas.

Dr. A. L. Porter, from 1010 Harrison to Rookery Bldg., Kansas City.

Dr. G. H. Litsinger, from Kansas City, Mo., to Milford, Kan.

Dr. G. T. Honaker, from St. Louis, Mo., to Panther, W. Va.

Dr. W. J. Bauer, from Marengo to Promie City, Iowa.

Dr. D. M. Scanlan, from Chicago, Ill., to Lost Nation, Iowa.

Dr. W. M. McCoy, from Chicago, Ill., to Clinton, Iowa.

Dr. L. Sayre, from Indianapolis, Ind., to Lake Mills, Iowa.

Dr. J. L. Cook, from Keokuk to Calamus, Iowa.

Dr. E. C. Weir, from Iowa City to Vail, Iowa.

Dr. A. J. Peters, from Keokuk, Iowa, to Hillsdale, Ill.

Dr. W. W. Goodrich, from Des Moines to Mingo, Iowa.

Dr. J. B. Patrick, from Atlanta to Pembroke, Ga.

Dr. W. A. Brewster, from Augusta to Crescent, Ga.

Dr. F. W. Gale, from St. Louis to Marquand, Mo.

Dr. B. H. Lehrsman, from Chicago, Ill., to Pleasant, Miss.

Dr. S. M. Knox, from Augusta, Ga., to Antreville, S. C.

Dr. S. M. B. Smith, from Chicago, Ill., to Ft. Atkinson, Wis.

Dr. F. P. Knauf, Chicago, Ill., to Chilton, Wis.

Dr. E. M. Hurst, from Chicago, Ill., to Meridian, Ind.

Dr. B. H. Kerr, from Keokuk, Iowa, to Pleasant, Kan.

Dr. M. P. Dorsey, from Chicago to Amboy, Ill.

Dr. J. M. Byrne, from Augusta to Wyanosboro, Ga.

Dr. L. Halpert, from Augusta, to 565 W. Bay St., Savannah, Ga.

Dr. G. H. Bullington, from Keokuk, Iowa, to Pleasant, Kan.

Dr. O. H. Briston, from Indianapolis, Ind., to Lake Mills, Iowa.

Dr. H. L. Warwick, from Augusta to Claxton, Ga.

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Original Articles.

PERIPHERAL RESECTION OF FIFTH NERVE.*

THREE CASES WITH MICROSCOPIC EXAMINATION OF THE PORTIONS OF THE NERVES REMOVED AND REPORT ON THE LATER CONDITION OF PATIENTS.

BY W. W. KEEN, M.D., LL.D.,

PROFESSOR OF THE PRINCIPLES OF SURGERY AND OF CLINICAL SURGERY, JEFFERSON MEDICAL COLLEGE.

AND

WM. G. SPILLER, M.D.

PROFESSOR OF DISEASES OF THE NERVOUS SYSTEM IN THE PHILADELPHIA POLYCLINIC, ASSOCIATE IN THE PEPPER CLINICAL LABORATORY, UNIVERSITY OF PENNSYLVANIA. PHILADELPHIA.

DR. KEEN'S REPORT.

CASE 1.—*Resection of supraorbital and infraorbital nerves for tic douloureux.*

Mrs. A. K., aged 53, a patient of Dr. S. Weir Mitchell, first came to the clinic of the Infirmary for Nervous Diseases, Feb. 11, 1898. She had always been healthy and of her eleven children, six were living and well.

In October, 1894, she felt a sudden, slight tingling sensation at the internal angle of the right eye. This increased in severity and finally included the entire right face and anterior part of the scalp. She had to sit up, as lying down increased the pain so much. In 1895 she was very much better. In 1896, she had scarcely any pain at all, but on Feb. 4, 1898, it suddenly recommenced and she had suffered ever since. Along with the pain there were spasmodic twitchings of the muscles about the right eye, and of the face, as long as the pain lasted. On March 3, 1898, I removed the supraorbital and infraorbital nerves, the latter by the orbital route, dividing the nerve toward the apex of the orbit. On Jan. 9, 1899, she again reported at Dr. Mitchell's clinic. She had suffered no pain after the operation, for eleven months, then had a recurrence for two months, accompanying la grippe. In the last two weeks she had had another recurrence, but the pain was neither severe nor constant.

CASE 2.—*Resection of the infraorbital and inferior dental nerves for tic douloureux after ineffectual treatment by massive doses of strychnin.*

Mrs. M., Princeton, N. J., aged 62, first consulted me Dec. 1, 1898, at the instance of Dr. James H. Wikoff. Twenty years ago she had a very serious hemorrhage from a uterine myoma, and a sister died after a hysterectomy for the same trouble. For ten years she had been a great sufferer from hemorrhoids, attended with profuse hemorrhages. She also has a femoral hernia. Ten or fifteen years ago, without assignable cause, a sudden partial palsy of the left side came on, but yielded to treatment. For some time she has had a slight rise

of temperature toward evening, and has been more or less of an invalid. The uterine myoma still persists, but has given her no trouble of late. Three years ago, without assignable cause, she began to have excessive pain in the groove between the nose and right cheek. It has now extended over the whole of the cheek and the lower jaw and also to the ear. The pain is the characteristic pain of tic douloureux and is caused by eating, conversation, etc.

Desiring, first, to test the effect of strychnin, which in several cases had enabled me to avoid operation, I commenced with 1/20 gr. t. d., adding one pill to the daily dose, so that the first day she would take three pills: the second, four; the third, five; etc. When she reached six pills a day, she was to add one pill every other day until she had reached 1/2 gr. a day or until the pain had ceased. Up to the time when she was taking 7/20 gr. a day, no relief from the pain had been experienced, nor had any strychnin symptoms developed. Ordinarily I have found these symptoms develop slightly at first, so as to give warning, but in this case the onset was sudden. Stooping down to pick up something from the floor, her legs were suddenly violently extended and her body was thrown some ten feet across the room. She suffered no injury as her husband fortunately caught her. The medicine was immediately discontinued, and she decided on operation.

This was performed on Dec. 31, 1898. By a slightly curved incision at the lower border of the orbit, the nerve was exposed in the orbit as well as on the face and 3 cm. of the infraorbital resected. I then trephined the lower jaw and removed 5 cm. of the inferior dental, including the mental and incisor branches. The canal in the bone at both ends was plugged with some of Horsley's anti-septic wax. She made a typical, smooth recovery, her temperature only once reaching 100 F., and she went home on Jan. 13, 1899, two weeks after the operation.

Two days after her return she learned, by an operation on her husband, that he had an inoperable internal cancer. She nursed him through the operation and for some time afterward, when he died. She wrote me under date of Feb. 19, 1900, that after the death of her husband she was obliged to build another home and move into it in September, 1899. This involved considerable planning, anxiety and care. Up to that time she had been entirely free from the facial pain, but the moving caused great mental and physical strain, and a return of the pain followed for some weeks. Recently, she has also had another attack of about the same duration, but when she wrote she was entirely free from it. In each instance, however, she had taken cold and suffered from much irritation of the throat and from cough. The pain seems to have been limited entirely to the lower jaw, and was especially provoked by conversation or eating. She lost no sleep, however, and by keeping very quiet the pain lessened and finally disappeared. It came in spasms with a sensation "as if her jaw were in a vice

*Read in a Symposium on the "Fifth Nerve in Its Neurological and Surgical Relations," before the College of Physicians of Philadelphia, April 20, 1900.

and being twisted." Her relief from the pain, by the operation, was so great that she writes she would unquestionably seek relief again by another operation should it prove necessary.

Concerning the examination of her face made by Dr. Spiller, Jan. 10, 1899, after the operation, he says: "The anesthetic area begins about a quarter of an inch below the margin of the right lower lid. Complete anesthesia for touch, temperature and pain exists in the shaded area. (Fig. 1.) The anesthetic zone on the side of the face is sharply defined, as it is also in the median line of the face below the nose. It extends over the right ala nasi. Tactile sensation in the right nasal passage is much impaired. Tactile anesthesia is present on the inside of the lips, on the outer and inner surfaces of the lower gum, extending from the median line of the face to about the angle of the mouth. The upper gum appears to be anesthetic

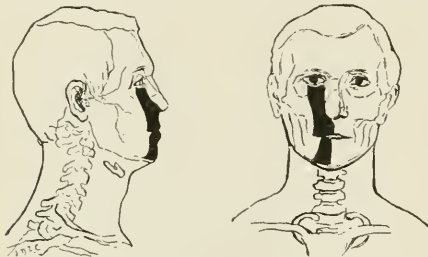


Figure 1.

to touch on its outer and inner aspects from the midline of the face to about the angle of the mouth."

CASE 3.—*Resection of infraorbital and inferior dental nerves for tic douloureux after failure of massive doses of strychnin.*

Miss N., aged 28, first consulted me in the early part of 1898, at the instance of Dr. Kinard, of Lincoln, Pa., for tic douloureux, limited to the infraorbital and inferior dental nerves of the right side. As in Case 2, I wished to test the effect of strychnin before proceeding to operation. She began the treatment under Dr. Kinard's direction on May 9, and continued it up to Jan. 26, 1899. She began with 1/40 gr. i. d., increasing one pill every day until she was taking 8/40 gr. As she then began to feel some of the effects of the strychnin, the dose was not increased, but she took eight granules a day for five months. The strychnin was then increased to nine, and after a week to ten, a day. After taking 10/40 gr. a day for two days, she complained that she felt very nervous and weak, and the arms and legs trembled. The number was then reduced by Dr. Kinard, first, to nine and then to eight granules up to January 26. Finding that the strychnin was inefficient, she then desired operation.

She entered the Jefferson Medical College on Jan. 27, 1899, when the following history was elicited: Her father and mother were both living and well, between 50 and 60 years of age; also nine brothers and sisters. She had the ordinary diseases of childhood, including diphtheria, and made good recoveries, but no other illness till the present trouble began. Menstruation began at 13, and has always been regular but painful; occasionally she had leucorrhœa. There was no evidence of any venereal trouble. Nine years ago, she began to have pain on the right side of the face. At first it occurred in brief paroxysms at long intervals, being apparently

caused by eating food which was either very hot or very cold, or by exposure to draughts of cold air. The pain began above the right ala of the nose, and was sharp and shooting in character. Gradually the paroxysms became prolonged and the pain spread over the entire right face, except the forehead, which has rarely been involved. For the last three years she has suffered almost constantly, though with slight lessening of severity for short intervals, but the pain has never disappeared entirely. The upper teeth on the right side were extracted three years ago and last spring the lower teeth, but without the least relief. When the pain is most severe she states that the sputum is tinged with blood and mixed with a slight amount of yellowish thick discharge, and that there is a very marked overflow of tears from the right eye. The urine was normal.

On January 29, Prof. H. A. Hare, at my request, examined her lungs and found an impairment of resonance on the right side. Respiration was so defective that nothing could be observed by auscultation. Examination of the right ear, by Dr. Klopp, gave a negative result. Dr. Jones also examined her mouth and throat and found only a slight catarrh. Dr. Jones informed me that he had examined her two years before and had then opened the antrum with a view of determining whether there was any antral disease, but found nothing. I transilluminated the antrum and found nothing abnormal.

Operation was performed on Feb. 1, 1899. The infraorbital and inferior dental were resected as in the preceding case. The portion of the infraorbital measured 2.5 cm. and of the inferior dental 5 cm. in length. After the operation, her temperature only once exceeded 99.8 F., and at the end of a week she was entirely well.

Under date of Feb. 28, 1900, she wrote that two months before she had a renewed attack of pain, but not so severe as before the operation. The attack was limited to the upper jaw, the lower one being entirely free. When the pain is severe in the upper jaw, she has pain in the right ear and she said: "The attacks are very easy to bear. I must say I had the best year this last year that I have had for long. I would accept another operation if I should find the need of it again."

Remarks.—The history of these cases is the usual history surgically that has been impressed on me by very many operations. The relief is scarcely ever permanent, but at the same time is so great that patients do not hesitate to accept a second operation in view of the great relief they have had from the intense suffering. In spite of only the transitory relief, I believe it is wise to do these peripheral operations until the mortality of Gasserian operations has been materially lessened.¹ For my reasons see a paper by Dr. Spiller and myself in the *Amer. Jour. Med. Sci.*, November, 1898. These peripheral operations ought to be done early before the disease has had time to invade the ganglion. Very early operations, say after a month or two of ineffectual medication, might even cure permanently.

The nerve is sometimes reproduced with surprising completeness. In two cases I operated on the inferior dental, for Dr. S. Weir Mitchell, on two successive days. After three years I had to operate again on one case and after six years on the other. In each patient I had removed three small buttons of bone from the lower jaw, 1 cm. in diameter, and chiseled away the intervening bridges of bone. The reproduction of the bone was so perfect that had I not done the operations myself I might even have doubted whether any operation had ever been done. In both I found a complete repro-

duction of the nerve of a size even larger than that found at the first operation. Both were resected again. The specimens were given to a pathologist, from whom, unfortunately, I never could obtain a report in spite of the very unusual and interesting character of the specimens. One of the patients has had slight recurrences, but never severe enough to require another operation. The other had quite a severe return of pain, which was to some extent relieved by the constant current. Finally she died without ever having required a third operation. In another patient on whom I recently operated for the second time, the first operation having been done by another surgeon, I trephined the inferior maxilla, but found no reproduction of the nerve whatever, though the bone was entirely reproduced.

One protest I must make. In nearly every case all the teeth have been extracted. I have never seen the slightest good result from this utterly needless sacrifice.

DR. SPILLER'S REPORT.

CASE 1.—My report of the nerves resected in this case, with illustrations, was published in a paper by Dr. J. K. Mitchell,² in 1898, and is reproduced here for the sake of completeness:

Many, possibly most, of the nerve-fibers of the infraorbital nerve, when separated from one another by teasing and stained by a 1 per cent. solution of osmic acid, are found to contain numerous black balls, approximately of the same size. These are nearly equidistant from one another, and are located along the edges of the fibers, leaving, as a rule, the centers free from such accumulations. (Fig. 2). When the focus of the lens is changed, so as to bring other portions of the fibers into view, black balls are apparently found within the centers, but these are probably along the superficial and deep portions of the fibers. The medullary sheaths are thus broken into numerous

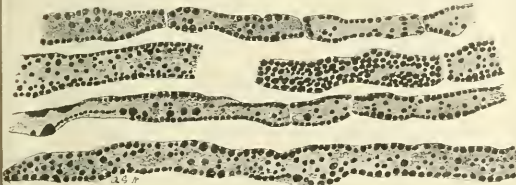


Fig. 2. Degeneration of the medullary sheaths in the form of minute balls stained black by osmic acid.

masses of nearly equal size, occupying the normal position of the myelin sheaths. It is exceptional to find masses of degenerated myelin of a size so large as is frequently seen in degenerating fibers. Similar lesions are found in the supraorbital branch of the fifth nerve. Inasmuch as these nerves were taken from the living subject, and placed immediately afterward in osmic acid, these myelin balls can not be regarded as artefacts, or as due to surgical intervention. Such intervention causes a breaking of the fibers into irregular masses, but probably not the fragmentation of the myelin into numerous balls.

Sections cut with the microtome and stained with carmin and Delafield's hematoxylin show more or less round-cell infiltration about the small vessels. The coats of the smallest vessels are not notably thickened, but one vessel of large size, found in some of the sections, presents a thick media and a somewhat proliferated intima. In some of the nerve-fibers pale purple bodies are found, which resemble the amyloid bodies, and lend some support to the view that the latter are degenerated nerve-fibers. Most of the nerve-fibers contain axis-cylinders, though in some these can not be seen.

The hematoxylin method of Weigert, used on transverse sections, reveals the presence of the myelin balls within the nerve-fibers in the same manner as the osmic acid shows them in longitudinal sections. They appear as a circle of beads about the axis-cylinder. The nerve-fibers in some bundles appear to be fewer than normal, though this may be due to

degeneration of the myelin and therefore imperfect adaptability to the hematoxylin stain.

CASE 2.—The blood-vessels, even the smallest, in the infraorbital nerve are thickened and the intima is greatly proliferated, considerably reducing the size of the lumen, but the proliferation of tissue is not confined to any one coat of the vessel. The elastic membrane is much thickened and, in some places, in one of the larger vessels three or more separate elastic membranes are seen. The nerve-fibers, when stained by ammonium-carmin or Weigert's hematoxylin do not appear to be much altered, although occasionally a slightly swollen axone may be seen. In pieces of the nerve teased in the fresh state and stained with osmic acid the disintegration of the myelin in the form of small black balls is found in a number of fibers, and in some nerve-fibers black balls of a little larger size exist. The description of the infraorbital nerve answers very well for the inferior dental.

This was a case in which the peripheral nerve-fibers were very slightly diseased, although the vessels accompanying the nerves were much thickened.

CASE 3.—Infraorbital nerve: Many of the medullary sheaths are greatly swollen, the axones in a number of nerve-fibers are absent, and these swollen fibers in transverse section appear somewhat granular. In some nerve-fibers the axones are very much tumefied. When stained with Weigert's hematoxylin many of the nerve-fibers in transverse sections appear unusually large, and some stain unevenly in shades of black and brown. These large swollen fibers are mingled with small nerve-fibers which stain faintly with the hematoxylin. In some of the nerve bundles the nerve-fibers are more nearly normal. The intima of the small vessels is proliferated. No very distinct round-cell infiltration is seen.

Inferior dental: This nerve is less diseased than the infraorbital. The intima in the small vessels is proliferated. The axones are distinctly swollen in a number of the nerve-fibers, but the great tumefaction of the medullary sheaths with destruction of the axones is not nearly so common as in the infraorbital nerve. Round-cell infiltration is not prominent.

In two cases of trifacial neuralgia, in one of which resection of the peripheral nerves was done by Dr. John B. Roberts, and in the other by Dr. W. J. Taylor, I have found the black balls of myelin described in the other cases. I have failed to find these black balls of myelin only in one of the cases studied by me, in which resection of the peripheral branches of the fifth nerve was done for the relief of tic douloureux. This was a case of Professor Keen's, in which the pain had existed for twenty years.

I have repeated the description of the nerves in Case 1 because of the important findings in this case. When this report was published lesions of this character had not been described. I have since seen this alteration in diseased ulnar nerve-fibers removed after the death of the patient, and this alteration may therefore occur in any diseased peripheral nerve. It is not an artefact because I have found it in several cases in which the nerves were placed in osmic acid immediately after they were removed from the living subject, and it is not due to any manipulation of the surgeon, because I have found it when the nerve was altered by disease and removed after the patient's death. Professor Obersteiner³ has referred to my findings, both in print and in a discussion at a meeting of one of the medical societies of Vienna.

A somewhat, but not exactly, similar condition has been described by Elzholz.⁴

Case 2 was a very favorable one for a test of the benefit to be derived from early peripheral operations. The nerves were very slightly diseased, and, as Professor Keen has shown, the operation has given relief.

The relief in Case 3, in which the nerves were so greatly altered, is also an evidence that resection of peripheral portions of the fifth nerve is a justifiable operation.

Very distinct disturbance of sensation in the distribution of the infraorbital and inferior dental nerves was found ten days after resection of these nerves in Case 2, and in my patient, who had formerly been under Dr. Mills' care, and in whom these nerves were resected by Dr. Roberts, the disturbance of sensation after the operation was in the same distribution. Sensation, however, is not always lost after resection of a branch of the fifth nerve, and if lost may soon be recovered, and the recovery is not always due to the regeneration of the nerve. An interesting paper illustrating the truth of this statement has been published by J. K. Mitchell.⁵ Quite a number of investigators believe that the facial nerve contains sensory fibers—a view which has been held especially by Frankl Hochwart. Some experimental work has been done to demonstrate the presence of these fibers. I quote from a paragraph in my chapter in "Progressive Medicine."⁶

Many writers (van Gehuchten says most writers) now describe the facial nerve as in part sensory and in part motor. Retzius and, more recently, v. Lenhossek, have shown that the geniculate ganglion is like the cerebrospinal ganglion, and that the central processes of its cells pass into the nerve of Wrisberg. Van Gehuchten finds, by the method of chromatolysis, that the facial nerve at its exit from the stylomastoid foramen undoubtedly contains a certain number of sensory fibers which arise in the geniculate ganglion. The nerve of Wrisberg is, therefore, the sensory root of the seventh nerve. Amabilino (cited by van Gehuchten) has formed a different opinion. He believes that the peripheral processes of the cells of the geniculate ganglion pass into the chorda tympani, and that none of these pass into the peripheral branches of the facial nerve. Van Gehuchten points out that Amabilino found about one-fifth of the cells of the geniculate ganglion normal after section of the chorda tympani, and he very pertinently asks where these cells send their processes if not into the peripheral branches of the facial.

A recent case reported by Biehl⁷ is further evidence that the facial nerve contains sensory fibers. A man was stabbed in front of the left ear and had, as a result of the injury, facial palsy with disturbance of sensation in the distribution of the seventh nerve. In this case an involvement of the fifth nerve was improbable.

Pain is not a rare occurrence in facial palsy from exposure to draught, and the explanation usually given is that the fifth nerve has suffered with the seventh. It is probable that in some cases the pain is due to disease of the sensory fibers within the seventh nerve.

Alteration of the peripheral branches of the fifth nerve has been detected in a number of nerves resected for trifacial neuralgia, but the cause of this alteration has not been determined. In two cases I found what appeared to be the explanation of this involvement of the nerve. One of the patients I examined told me that he had fractured his lower jaw, and that after he had entirely recovered from this injury he was attacked with diphtheria, following which pain began in the lower division of the fifth nerve. It seems possible that although the inferior dental nerve had recovered, it offered, as a result of the injury, less resistance to the poison of diphtheria than the nerve-fibers more commonly attacked in this disease; and therefore trifacial neuritis developed. In another of my patients the pain began

in the portion of the face which had been the site of erysipelatos inflammation. Here it seemed as though a neuritis had been started by the erysipelas.

It is curious that the right trifacial nerve is more commonly attacked than the left. I noticed this peculiarity in reading the reports of the cases of Professor Keen and others, and at Professor Keen's suggestion Dr. M. B. Tinker has made an examination of the literature to determine the frequency of involvement of the right fifth nerve. In 108 cases in Dr. Tiffany's table, with 24 additional cases collected by Dr. Tinker and the 3 cases reported in this paper by Professor Keen and myself, making 135 cases in all, the affected side is given in 72. In 58 the right fifth nerve was diseased, and in 14 the left.

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ENDOTHELIOMA OF THE GASSERIAN GANGLION; TWO SUCCESSIVE RESECTIONS OF THE GANGLION; FIRST, BY THE EXTRADURAL (HARTLEY-KRAUSE) OPERATION, AND, SECONDLY, BY AN INTRADURAL OPERATION.*

CLINICAL REPORT BY F. X. DERCUM, A.M., M.D.

PROFESSOR OF NERVOUS AND MENTAL DISEASES, JEFFERSON MEDICAL COLLEGE; NEUROLOGIST TO THE PHILADELPHIA HOSPITAL.

SURGICAL REPORT BY W. W. KEEN, M.D., LL.D.

PROFESSOR OF THE PRINCIPLES OF SURGERY AND OF CLINICAL SURGERY, JEFFERSON MEDICAL COLLEGE, PHILADELPHIA.

PATHOLOGIC REPORT BY W. G. SPILLER, M.D.

PROFESSOR OF DISEASES OF THE NERVOUS SYSTEM IN THE PHILADELPHIA POLYCLINIC.
PHILADELPHIA.

DR. DERCUM'S CLINICAL REPORT.

The following case, both because of the rarity of the affection from which the patient suffered and because of the interesting nature of the symptoms, is worthy of record.

Mr. X., a business man, 32 years of age, married, a native of Louisville, Ky., came under my care on Nov. 20, 1899.

Family History.—The father died at 68 years of age, of some affection of the heart. The mother is living and well at 60, also a brother and sister. The family history is negative as regards mental, nervous and other diseases.

Personal History.—The patient was rather delicate as a baby, suffered from various diseases of childhood, had an attack of scarlet fever which resulted in disease of the ears, but in youth he seemed to be rather healthy. Twelve years ago he was said to have had an attack of typhoid fever. Some ten years ago he suffered from a venereal sore which was believed to be syphilitic, and although he never presented any secondary symptoms, he was for some time at Hot Springs, Ark., under treatment. The physician at this place, so we were informed, thought he did not have specific disease. He had also

*Read in a Symposium on the "Fifth Nerve in Its Neurological and Surgical Relations," before the College of Physicians of Philadelphia, April 20, 1900.

acquired gonorrhoea on two occasions. When 20 or 21 years of age he went into business as a manufacturer and worked very hard, often day and night. He was a man of extremely nervous temperament, and was married in September, 1895. Subsequent to this time he complained greatly of severe shooting pains in his legs, and he occasionally walked with a limp. The pains were regarded as rheumatic, and he suffered from them in two successive winters. He had inflammation of the bowels in 1898 and was ill at this time some six or eight weeks. Subsequently he appeared to be well, very strong and energetic but for over a year past has complained of being tired at night and always wished to retire early. He would sleep heavily and without awakening during the entire night. General weakness became evident about this time and was very marked. At times he would have very severe headaches, especially in the mornings, but they would pass off after he had been up and around for an hour or two.

In February, 1898, he discovered a glandular swelling on the left side of the neck, about the size of an olive. It remained stationary for about eighteen months. Early in the summer of 1899 he began to lose in weight and to be extremely irritable and nervous. Various physicians who were consulted considered the glandular swelling tubercular, except one who thought it syphilitic and advised treatment at Hot Springs. He went there on July 1. About the time of his arrival he began to suffer from very severe pain over the left temple and over the left side of the top of the head. The swelling on the side of the neck also became painful; it had not pained him previously. It now began to grow and grew rapidly until it attained the size of a large egg. The pain in the temple was much worse in the evening and night, the patient not being able to sleep until about 4 or 5 o'clock in the morning. He took the baths and also had mixed treatment for seven weeks, while the swelling was painted with iodine. No relief whatever was obtained from this treatment. He then consulted Dr. Abbe, of New York, who removed a series of glands, varying in size from an olive down. These glands, as was subsequently learned from Dr. Abbe, were of a gray, even consistence, not unlike tubercle, but entirely without caseation. A microscopic examination was made at the College of Physicians and Surgeons of New York and endothelioma diagnosed. Dr. Abbe very kindly sent me a section of one of these glands and I had no difficulty in confirming the diagnosis. The pain in the side of the head subsequently assumed the character of trifacial neuralgia and grew steadily worse. He was treated ineffectually with large doses of the iodids and morphia finally had to be resorted to.

On November 1 Dr. Abbe operated on him a second time, now removing the infraorbital division of the fifth nerve. The pain continued, though it appears to have been for a time less marked in the distribution of this branch. His suffering was so great that he was transferred to a sanatorium. Here his treatment was also without relief.

During the period of development of the neuralgia he had some recurrence of the shooting pains in the legs. For two months he had been in the habit, according to his wife, of dropping off to sleep suddenly. For instance, while talking, he would suddenly fall asleep. This condition was for a time quite marked. The wife herself attributed it to the great loss of sleep at night, thinking that he simply fell asleep in this way during the day from sheer exhaustion.

When first seen by me, Nov. 20, 1899, he was evi-

dently suffering greatly from pain in the entire trigeminal distribution of the left side. The suffering was so terrible that he could not at this time be carefully examined. It was only after a certain amount of morphia had been administered on the following day that an examination could be made. Even after $\frac{1}{4}$ grain of morphia the pain was agonizing in character and constant, there being, according to the statement of the patient, not a single instant of relief. His expression, gestures and conduct evinced a degree of pain and suffering greater than I have ever before witnessed. The pain appeared to be most marked in the temple, the eyeball and the tissues about the orbit and the brow, less marked in the infraorbital distribution and least in the inferior maxillary distribution. The patient constantly kept the left eye covered by his left hand, and maintained a loud and almost ceaseless moaning and groaning. The suffering, as just stated, appeared to be most marked in the orbit and brow, though at times the patient said the greatest pain was present in the teeth of the upper jaw, more especially in the incisors. He often begged piteously for something to be done to the teeth to relieve them. The pain was accompanied by irregular recur-

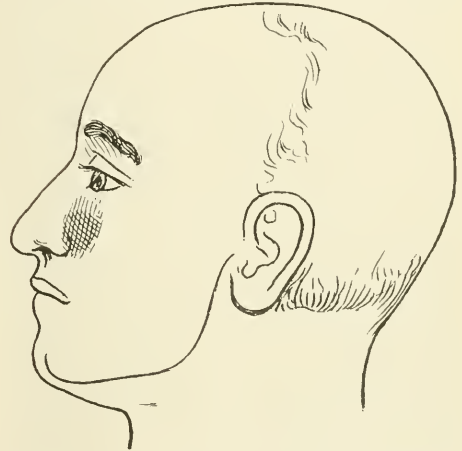


FIG. 1. Area of hypesthesia previous to first operation by Professor Keen. The dark patch represents the area in which hypesthesia was pronounced.

ring twitching of the zygomatic muscles. Occasionally this twitching also involved the elevators of the upper lip and of the angle of the mouth. Tested for sensation it was found that the entire area of the trigeminal distribution to the face was decidedly hypesthetic. This hypesthesia could readily be demonstrated over the left side of the nose, the left brow and forehead and over the left temple and cheek. It was especially pronounced over an oval patch in the infraorbital distribution. This patch, which appeared to have the infraorbital foramen as its center, was about $1\frac{1}{2}$ inches in its vertical diameter and 1 inch in its transverse. (See Fig. 1.) Sensation was everywhere sufficiently preserved for the patient to distinguish between a pin point and the head of a pin. Pressure sensation appeared to be everywhere well preserved. This was also the case with the temperature sense. The superficial pain sense could not be studied accurately as the patient declared all handling of the parts gave him pain. Distinct prickling of the skin, however, gave more decided demonstrations of pain than

a mere touch, and there can be no doubt that marked hyperalgesia was present. The conjunctiva was distinctly hypesthetic as compared with the conjunctiva of the opposite eye. The condition of the sense of taste on the left side of the tongue could not be satisfactorily determined. Movements of the tongue and the opening of the mouth so greatly increased the suffering of the patient that no test could be applied with satisfaction. The pain, it should be added, was referred by the patient not only to the surface but also deeply into the tissues.

The patient was excessively weak and, according to his own statements, had lost greatly in weight. He stood with some difficulty and when prevailed on to walk did so with a slightly staggering gait. When tested for station with feet apposed and with his eyes closed, he evinced a tendency to fall backward. These phenomena impressed me at the time as being rather the symptoms of extreme weakness than those of ataxia. When he was seated, the movements of the arms were tested and no ataxia of these members was revealed. The knee-jerks, however, were both absolutely lost. They could neither be elicited by the ordinary methods nor by efforts at re-enforcement. The general examination failed to reveal any sensory losses whatever, nor was there any sensory retardation. It should be added that the patient also suffered from an old cystitis which occasionally gave rise to considerable pain.

Prof. G. E. de Schweinitz made an examination of both eyes, with the patient in bed, his head and shoulders raised on pillows. The pupillary reflexes were normal. There was no failure in rotation of the eyes and no nystagmus. Each disc was somewhat anemic. There was neither congestion, neuritis nor atrophy. Both retinæ were normal, the retinal circulation also, and fields for white and red. In addition there was present chronic otitis media of the right ear. This was later confirmed by a detailed examination of the ears, made by Dr. Walter J. Freeman, who reported in addition that the membrane of the left ear was decidedly depressed and scarred but could readily be inflated.

The non-paroxysmal character of the neuralgia, its frightful severity and unvarying intensity, the deep-seated temporal pain, the nearly simultaneous involvement of all branches of the trifacial, the hypesthesia in the distribution of the fifth nerve, and the somnolency suggested to me both an organic cause and the Gasserian ganglion as the seat of the disease. Further, the remarkable result of the microscopic examination of the glandular masses, removed from the neck by Dr. Abbe, suggested the existence of a neoplasm within the cranial cavity. It would be extremely difficult to explain the presence of an endothelioma in the lymphatic glands of the neck on other grounds; and it therefore seemed to me a most important point to confirm the diagnosis as to the nature of the tumors removed by Dr. Abbe by a personal examination, and this, thanks to the kindness of the Doctor, I was able to do. On November 23, I called in Prof. W. W. Keen, with a view to a possible surgical operation directed to the Gasserian ganglion. Dr. Keen carefully examined the patient and was greatly impressed by the character of the pain, which differed, as he expressed it, from that in any case of trigeminal neuralgia he had before seen. On November 25, he was removed to Dr. Keen's private hospital, and on November 27 an operation was performed in which, as the Doctor details, he discovered and removed in large part a tumor occupying the position of the Gasserian ganglion. As far as could be determined, at the time, the foramen rotundum had become both divided and obliterated.

Much of the mass back of this and also over the foramen ovale and to some extent posterior to the latter was removed. The fragments of the tumor resembled fibrosarcoma in their microscopic appearance. They were handed to Prof. W. G. Spiller for microscopic examination. It was thought wise to discontinue the operation at this point. The patient promptly rallied, but on resuming consciousness at once complained as bitterly as before of pain. It was also evident that he was delirious, and delirium accompanied by great excitement continued for about ten days, during which it was impossible to make an accurate examination as to the sensory phenomena. He was excessively noisy and loud and almost incessant in his lamentations. Some quiet followed hypodermic injections of morphia, but the periods of relief thus secured were generally short and imperfect.

He made a good surgical recovery from the operation, and the delirium somewhat abated, but the pain continued with undiminished severity. He was examined on December 13 with the very surprising result that no change whatever in the sensory phenomena was observed,

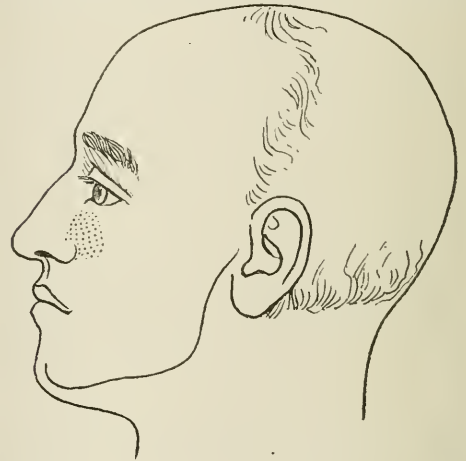


FIG. 2.—Area of hypesthesia after first operation by Professor Keen.

except some increase in the hypesthesia. The temple and the cheek were now decidedly more hypesthetic than before. (See Fig. 2.) This increased diminution in sensation could not, however, be claimed for the conjunctiva or for the brow. The patient was still everywhere able to appreciate touch, and he could for the most part distinguish a pin point from a pin head, though occasionally he failed to make this distinction—especially was this true over the oval patch of pronounced hypesthesia in the infra-orbital distribution discovered at the first examination. He could still everywhere readily distinguish between a hot and a cold spoon, and also between light and deep pressure. An examination of the sense of taste was again without definite result; the patient still complaining bitterly of the pain in his upper teeth and of great distress when any manipulation involving the mouth was attempted. He did say, however, that his food did not taste properly and that the left side of his throat was sore. The left masseter and temporal muscles were completely paralyzed. Some time after the operation a paresis of the left rectus externus was also observed. Prof. G. E. de Schweinitz again examined the eyes and

reported a complete paralysis of the left external rectus muscle, but no other changes.

The pain had evidently not been appreciably influenced by the operation. Professor Spiller further reported that he had found only a few ganglion cells in the fragments of the tumor which had been handed him, and after repeated consultations with Dr. Keen and also with Dr. Charles K. Mills, it was decided to again submit the patient to operation. The second operation was performed by Dr. Keen on December 26. The details and extent of this are described by Dr. Keen. Suffice it for me to say that the operation, as far as it was possible to judge, was most thorough and extensive. All accessible portions of the tumor, except that in relation with the cavernous sinns, were removed. In addition part of the inner end of the petrous bone, including the depression normally occupied by the Gasserian ganglion, was chiseled away and the anterior surface of the pons freely exposed.

As before the patient rallied well from the operation, but he again passed into a condition of confusion and delirium. He was as before noisy, and loudly and ceaselessly dwelt on his pain, which seemed to be unabated. As before, it was referred to the orbit and brow and to the upper teeth. It was not until four days elapsed that it was possible to make another sensory examination. It was then found that the increased hypesthesia noted at the first examination now involved the entire trigeminal distribution. It was, however, as before, merely a hypesthesia and not an anesthesia. The patient was still able to appreciate contact, still able to appreciate decided differences in pressure and, what I regarded as extremely remarkable, still able to appreciate differences in temperature. He readily distinguished, and always correctly, between a spoon dipped in hot and another dipped in cold water. The hypesthesia was as before most pronounced in the oval patch in the infraorbital distribution noted at the previous examinations. In this area the patient would at times fail to differentiate between simple contact and pin pricks, but total sensory loss did not exist. The hypesthesia of the left side of the face further was not sharply limited by the middle line, but merely seemed to grow less pronounced as the sound side was approached. For instance, he felt a pin point clearly on the right side of the nose and for some distance after the bridge of the nose had been well crossed over to the left side. This fact was also observed in the lips, the chin and the forehead. At the final examination the conjunctiva appeared to be profoundly hypesthetic but not anesthetic. It was difficult, however, because of the patient's lamentations and excitability, to conduct this portion of the examination satisfactorily. For the same reason and because of the intense pain which the patient was suffering, no attempt was made to study the sense of taste at this time. The above observations, as before, were verified repeatedly.

Subsequently little or no change took place in the patient's condition and his wound having healed by January 9, he left the city for his home, still complaining loudly and constantly of his pain, and still holding his hand over his brow. I have been informed that since his return home the pain has continued, and that he still requires morphia for its relief. The cornea is now absolutely anesthetic. The eye is immovable and blind and there is much difficulty in raising the upper lid. His general health is much improved though he is quite anemic and very thin. Recently another enlarged gland has appeared under the jaw on the left side.

Remarks.—This remarkable case is interesting first be-

cause of the persistence of sensation after undoubted extirpation of the Gasserian ganglion, and secondly because of the rarity of tumors involving this structure. The persistence of sensation would perhaps at first sight suggest that the ganglion and its branches had been imperfectly removed, but no one present at the time of the operation could doubt the accuracy of the anatomic verification nor the thoroughness with which the work was done.

Persistence of sensation, however, both after removal of the branches and even after extirpation of the ganglion is not unknown. Dr. John K. Mitchell¹ has reported two most interesting cases, in the first of which portions of the supraorbital and supratrochlear nerves were removed by Dr. Keen. Subsequently some degree of anesthesia was present for touch and pain, but it was noticed that the loss of sensation was less complete than might have been expected and seemed to be absolute only in an oval area at the outer canthus of the eyelids and of the upper lid. In the second patient Dr. Keen resected the supraorbital and the infraorbital nerves. A subsequent examination revealed an even less degree of loss of touch, pain and heat sense than was present in the first case. "Indeed," says Dr. Mitchell, "it could hardly be said that there was more than slight delay or impairment of perception anywhere in the supraorbital, nasal, palpebral or labial branches." When the patient was discharged after the ninth day there was neither slowness nor impairment of sensation for any form of stimulation. "The touch of the finest filament of thread was instantly felt and correctly located everywhere on the cheek, temple, nose, eyelids and upper lip." Dr. Mitchell also reports his findings in a case in which Dr. Keen had removed the Gasserian ganglion: "After the removal of the ganglion the patient's mental condition was such for nine or ten weeks that no study of the sensation could be made but when it became possible there was no absolute anesthesia to be found except between the margins of the wound. The touch sense was everywhere preserved in some degree, the pain sense was but slightly less in degree than before the operation." "The mucous membrane of the lips and cheek of the right side and of the right side of the tongue was also partially anesthetic." On the right side the sense of taste was entirely lost. In explanation of these remarkable findings, Dr. Mitchell suggests the presence of sensory fibers in the facial nerve, and cites the statements of Turner and Ramon y Cajal as to the relations of the facial nucleus to the sensory trigeminal root and to the *substantia gelatinosa*. He also cites Frankel-Hochwart's results as to the evidence of slight sensory losses present in some cases of paralysis of the facial nerve. The thought also suggests itself to me that in a case like the present, in which the Gasserian ganglion is slowly and gradually involved, that perhaps a *gradual* substitution of function may take place through the facial nerve.

The persistence of the pain subsequent to the operation is perhaps to be referred to degenerative changes in the sensory root of the fifth nerve, and perhaps also to changes in the cerebrum. The projection of the pain to the surface is analogous to the psychic projection of pain and other sensations beyond the stump of an amputated limb.

To my knowledge but 2 tumors involving the Gasserian ganglion have thus far been reported; 1 by Hagelstam² and one by Trénel.³ In Hagelstam's case, which came to autopsy, there was present a tumor, an endothelioma, of about the size of a walnut, situated in the left, middle cerebral fossa. The dura mater and Gasserian ganglion were completely involved in the growth, which had

in part perforated the underlying bone and penetrated into the posterior portion of the nasopharyngeal cavity. During life the patient had complained of constant pain over the entire left half of the face and over this area and for some centimeters upward on the hairy scalp, sensibility both for pain and touch was lost except in the area of distribution of the great auricular nerve. Over the cornea and the conjunctiva the sensibility was diminished. The sense of taste on the anterior third of the tongue to the left of the median line was lost for bitter and acid substances and for salt and sugar. The temporal muscle appears to have been atrophied. No muscular contractions could be elicited by the strongest currents. The masseter muscle felt firm and hard, but could not be made to contract to the faradic current and the jaw could only be separated for one centimeter.

In Trénel's case there was present an angiolithic sarcoma. It had involved and penetrated the peripheral portions of the right Gasserian ganglion. On microscopic examination, the latter, however, still presented nerve-cells of normal aspect. During life there had been present profound hypesthesia if not complete anesthesia of the right side of the face. The patient also presented marked mental depression, was difficult to examine and the limits of the sensory loss could not be accurately determined. No atrophic nor circulatory disturbances were noted in the eye.

Two other cases have been reported in which the Gasserian ganglion, though not directly involved, suffered from the pressure of a tumor. In one of these, reported by Krause,⁴ there was a large cholesteatoma which filled the third ventricle and also involved the adjacent parts, such as the chiasm and sella turcica. The tumor was found to be entirely within the dural sac and there was no involvement of the Gasserian ganglion whatever. The patient had suffered for sixteen years from a persistent and most terrible trigeminal neuralgia. There had never been present headache, giddiness, vomiting, irregularity of the pulse nor any other cerebral symptoms. An examination of the eyes by one of the most distinguished ophthalmologists had also failed to reveal any abnormalities. As he regarded the symptoms sufficient to establish the intracranial seat of the affection, Krause decided to remove the Gasserian ganglion, although peripheral nerve operations had not yet been attempted. The removal was followed by complete relief of pain. However, about two weeks after the operation, headache made its appearance and cerebrospinal fluid began to trickle from the point of drainage. Notwithstanding the insertion of a drainage-tube and other surgical measures, fever set in and the patient died about four weeks after the operation. It is remarkable that in Krause's case nothing could be discovered of the tumor at the time of the operation, but this is no doubt to be explained by the fact of the complete intradural situation of the growth. Krause explains the neuralgia from which the patient suffered by compression of the Gasserian ganglion and its roots. He also considered it probable that the tumor began at the upper edge of the petrous bone: this bone itself was entirely normal.

Another case was reported by Homen,⁵ in which a tumor, an endothelioma of the dura mater, had pressed upon and flattened the Gasserian ganglion and its branches. In this case there had been present toothache in the left upper jaw, intense pain and sensations of cold in the entire left half of the face and complete anesthesia, the latter also involving the forehead, the anterior part of the parietal and the temporal regions. The conjunctiva was entirely without sensation, much in-

jection, somewhat swollen and the reflexes were absent. The cornea was cloudy, with ulceration on its inner edge. The mucous membrane of the nose and of the left half of the tongue was anesthetic. The patient appeared to be deaf in the left ear. In addition the entire left half of the face was sunken and atrophic and the left angle of the mouth somewhat depressed. In other words, there was in Homen's case, in addition to the neuralgia and anesthesia, a hemifacial atrophy. Although the ganglion itself was not involved in the growth, a microscopic examination of the peripheral portions of the trigeminal nerve revealed a far-advanced degenerative atrophy of all its branches. This was also the case with the roots of the trigeminal nerve.

DR. KEEN'S SURGICAL REPORT.

I first saw Mr. X. with Dr. Dercum on Nov. 23, 1899, and learned his earlier history. The case at once impressed me as different from an ordinary tic douloureux. As my notes taken at the time state, the pain was not that paroxysmal darting one we see in tic, but a severe and constant aching pain. In view of the removal of the submaxillary endothelioma by Dr. Abbe, and of a later resection of the infraorbital nerve, without any relief, I suspected that there was probably an endothelioma within the skull, involving the ganglion, and that any extracranial operation would be useless. After talking the matter over with Dr. Dercum, we decided on operation on the ganglion.

First Operation.—Nov. 27, 1899, the usual Hartley-Krause operation was done. As soon as the dura was exposed it seemed to be more tense than usual. When I separated it from the middle fossa of the skull, as I approached the median line, I found that it became extremely adherent, much more so than I had ever before observed. As a result of this it was extremely difficult to find the foramina rotundum et ovale. As soon as I reached the vicinity of the ganglion I appreciated that there was a hard, not very irregular, mass of considerable size occupying approximately the site of the ganglion. The dura, when lifted from the base of the skull, could be rolled over a mass about as thick as the forefinger, and I was now thoroughly convinced that we had to deal with a new growth. After much trouble I finally found the seat of the foramen rotundum, but instead of the usually large opening, there were two small depressions in the bone, separated by a bony bridge. Whether they were complete foramina could not be determined, as no probe would pass through these small openings. No trace of the second division passing through these minute foramina could be found. The foramen ovale, however, was found and the third division passing through it, though both the foramen and the nerve were smaller than usual. Partly with the scissors, partly with the gouge, and partly with the Allis dissector, I was able to remove a mass estimated to measure 3.5 by 1.5 cm. I was not able to remove it as an entire mass but piecemeal. It extended from the cavernous sinus, which as far I could judge, formed its inner extremity, to the outer extremity of the foramen ovale. It stopped short of the foramen spinosum, for the middle meningeal was found pulsating and was tied, lest in the removal of the growth I might possibly divide it and be embarrassed by serious hemorrhage. The removal of the mass involved a large opening in the dura, through which a considerable amount of cerebrospinal fluid escaped. I was then confronted with this problem:—in order to remove the inner portion of the tumor, it would be necessary deliberately to open the cavernous sinus. After consultation with Drs. Taylor, Dercum

and Spiller, I decided not to do so, on these grounds: If the tumor were malignant, there were unquestionably other remnants left elsewhere by which it would be reproduced and the removal of the wall of the sinus would be useless, and if it were not malignant, the removal of the major portion of the tumor would probably be followed by the disappearance of the remainder. Moreover, the removal of the outer wall of the sinus would have involved, in all probability, destruction of the third and fourth nerves themselves, thus producing an extensive ophthalmoplegia and in addition to this there would have been also a possibility of injury of the sixth nerve and of the carotid artery. The fragments removed were handed to Dr. Spiller. The osteoplastic flap was replaced and the wound closed, a small gauze wick being passed under the posterior superior angle between the bone and the dura, as a drain. The operation lasted nearly 2½ hours. He was placed in bed in a very satisfactory condition.

From the surgical point of view, his physical recovery was all that could be desired. The day following the operation, his temperature rose to 100 F. With that exception it was never above 99.4 F. The stitches were all removed on the sixth day, the wound being entirely healed. On the third day I removed the stitches by which the eyelids had been closed at the time of operation, and after careful disinfection I placed a Buller shield over the eye. This was removed night and morning and the eye washed with warm boric acid solution. No ocular disturbances followed the operation. The Buller shield was removed after twelve days. The patient left the hospital on the ninth day after operation.

From the mental standpoint, however, things were quite different. The operation was followed by a traumatic insanity, amounting almost to acute delirium, so that the patient had to be watched very carefully lest he do himself or others harm. A part of this I attributed to the withdrawal of his morphin, which was rapidly reduced and by the sixth day was cut off entirely. Various hypnotics were tried and did some good. No reliable examination to determine the sensibility of his face could be made at this time. He, however, complained constantly and bitterly of pain in the head and the left side of his face, especially in the upper teeth. His mental condition, however, gradually improved and by about December 12, the fifteenth day, he was fairly clear. Another complication also was a great deal of vesical pain, the result of stricture, which I dilated with great benefit. As the pain steadily continued and, according to his assertion, was even worse than before, after consultation with Dr. Abbe, it was determined to operate again.

Second Operation.—Dec. 26, 1899, Dr. Abbe was kindly present and, with Dr. Taylor, assisted me in the operation. The former osteoplastic flap was turned down. The bony portion of the flap was in a few minutes caught by a gauze sponge and with but little force was torn loose from the flap. I did not replace it. The dura was then lifted up as at the first operation, and without serious hemorrhage. Dr. Abbe confirmed my observations as to the existence of the foramen ovale and the blocking up of the foramen rotundum. Between the two we found a third opening in the base of the skull, which we judged to be the result of the gouging of the first operation. A moderate blood clot occupied the site of the former operation and a considerably thickened mass of tissue corresponding to the old tumor could be felt. We then decided to open the dura and attack the tumor from within. This was opened by an incision

a little smaller than that in the bone. As soon as the flap of dura was turned down, I noticed on the inner surface of the dura quite a number of small granulations like miliary tubercles. They were about 1 to 2 mm. in diameter, and were apparently clear and translucent. There were one or two doubtful little granulations on the pia, but on the flap of dura turned down, there were, I judge, forty or fifty sprinkled over it. Later some others were seen on the dura lining the base of the skull, but much less numerous than those on the flap. Three of these little granulations were excised and given to Dr. Spiller. The pia was a little clouded along the vessels, but elsewhere was perfectly clear. The brain was now lifted up by a broad brain retractor and a very satisfactory view of the base of the skull obtained. As soon as the site of the Gasserian ganglion was disclosed, I at once saw the opening in the dura, as large as the end of the thumb, caused by the first operation. It was partly filled up by a translucent gelatinous mass which resembled, to the eye, a sarcoma having considerable consistency. Along side of it was a considerable mass of blood clot and debris. All of this was finally gouged out and there was left a cavity so large that an ordinary, round, gauze sponge was easily packed into it. The site of this cavity was the inner end of the petrous bone. The carotid was not seen. The ridge along which runs the superior petrosal sinus had been destroyed by the tumor. I then sought for the pons and, on lifting the brain a little further, there came very readily into view the opening of the tentorium and the pons at a lower level. A considerable amount of cerebrospinal fluid welled up from the spinal canal and mingled with the small amount of blood which escaped. This required constant sponging to keep the operation field clear, but there was no difficulty in determining the facts. The temporosphenoidal lobe was slightly lacerated by my retractor, but not to any notable extent. Having apparently done all that was possible, the dura was closed with continuous catgut suture and the external wound with interrupted silkworm gut suture. A small extradural gauze wick was introduced as a drain and to arrest the hemorrhage from a small blood-vessel on the surface of the dura. The operation lasted an hour and a quarter, and he suffered very little from the shock. The temperature after the second operation fluctuated a little above and a little below 100 F. The wound healed by first intention, except at the point of drainage, where a little blood and then bloody serum escaped for about ten days. The patient went to his home in Louisville on January 9, the wound being entirely healed.

Following this operation, after two or three days, during which he was rather dull and stupid, there was also very considerable traumatic insanity. This delirium, however, was not as prolonged nor as severe as that which followed the first operation. He had recovered almost entirely from it within a week.

Dr. Walter J. Freeman examined his ears, as he had suffered from aural discharge for a long time, and reported that the left membrane was retracted and scarred, the diminution in the degree of hearing being exaggerated by the collapsed membrane. On the right the membrane was absent and there was free discharge. He has been treated for the discharge from his ears on and off since he was a child. The Doctor reported as follows: "I do not know what efforts have been made to stop the discharge, but where it is long continued I would rather suspect involvement of the bone. The only thing which promises relief is to open the mastoid freely down to the middle ear and remove the diseased bone. I do not,

however, think there is any need for operation in his case at present. His marking was benefited by inflation, but there was no marked increase. Indeed, the condition of his ears is too bad for us to look for any great benefit in this direction."

Remarks.—The present case is the first case of tumor of the Gasserian ganglion reported in the United States, and is, so far as I can learn, the third tumor ever reported. It is the first case that has ever been operated on. The operative technique was very satisfactory and his recovery from both operations of so serious a character most gratifying. The view of the base of the brain at the second operation was the most extensive I have ever seen.

DR. SPILLER'S PATHOLOGIC REPORT.

From the William Pepper Laboratory of Clinical Medicine
(Phoebe A. Hearst Foundation).

The tumor consists of cells forming long columns, or more irregularly-shaped masses, and at some parts a plexiform arrangement of these cells is seen. In some places the tumor cells are very numerous and the nuclei are small and round, so that the growth resembles a round-cell sarcoma in these portions. The cells which form the long columns have chiefly elongated or oval

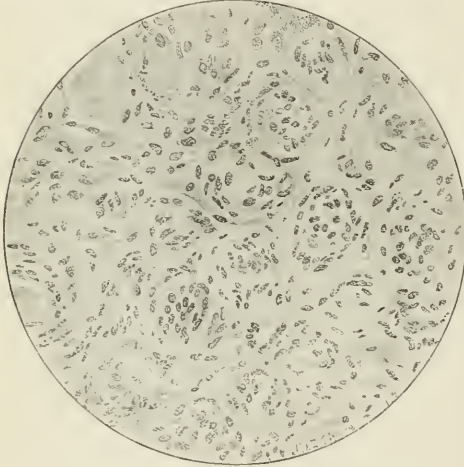


FIG. 3.—Oc. 3. Ob. 7. A portion of the Gasserian ganglion in which the nerve-cells have almost entirely disappeared. A concentric arrangement of the nuclei may be seen in different parts of the field, seeming to indicate that the cells of the capsules have proliferated and filled the spaces left by the destruction of the nerve-cells.

nuclei, and these stain deeply, but at some parts of the tumor the columns are formed of cells with large oval nuclei which take the stain less intensely. The tumor is, in places, rich in fibrous tissue, and this latter appears to consist in part of empty nerve sheaths, the nuclei of which have undergone great proliferation. Many of these nuclei are long and narrow, although some are oval. The tumor is not very vascular.

The Gasserian ganglion is invaded by the new growth, although some parts of the ganglion are relatively free from tumor cells. The nerve-cells within the ganglion are not so numerous as in normal ganglia, and this decrease in number is more noticeable at some parts than at others. Some of the nerve-cells are more shriveled than can be explained by the method of hardening (Müller's fluid), and the nuclei of the capsules about

some of the nerve-cells are unusually numerous, indeed in some parts the nerve-cells seem to have disappeared while the cells of the capsules have proliferated and filled the spaces left by the destruction of the nerve-cells. (See Fig. 3.) This explanation is suggested by the concentric arrangement of nuclei seen in certain parts of the ganglion.

In certain parts of the tumor a few medullated nerve-fibers are found, but these are greatly degenerated and empty nerve sheaths are more numerous than medullated nerve-fibers. When these apparently medullated nerve-fibers are examined more carefully they are seen to consist of separate blocks of myelin and are therefore greatly degenerated. Professor Keen was able to positively determine the third division of the ganglion, and this division was kept separate from the pieces of tumor removed. Most of the nerve-fibers in this division are destroyed. (See Fig. 4.) Within the tissue known by the presence of nerve-cells to be a part of the ganglion a medullated nerve-fiber can only occasionally be found, and even these are much degenerated. As this portion of the tissue was hardened in Müller's fluid alone, without the addition of formalin, the failure to detect numerous medullated fibers can not be explained by the technique employed.

At the time of the second operation small nodules a little larger than the head of a small pin were found on the inner side of the dura, somewhat resembling miliary tuberculous growths. They were slightly larger than the tubercles usually seen in cases of miliary tuberculosis of the brain, and they grew from the inner surface of the dura and were not in the cerebral pia along the blood-vessels, where miliary tuberculous growths are more commonly found. These minute nodules of the dura seemed to me to be related to the tumor of the Gasserian ganglion, although they were on the inner side of the dura and in no direct connection with the large tumor mass. I expected to find that under the microscope they would have the same structure as the large tumor of the ganglion. This proved to be the case, as one of these minute nodules examined is unquestionably an endothelioma well defined from the surrounding tissue of the dura. (See Fig. 5.) A small piece of dura removed with this nodule was also studied. Its inner surface showed accumulations of cells, some with round and some with oval nuclei, and two of these accumulations examined were separated from one another by nearly normal dural tissue.

The microscopic study of the tissue removed by Professor Keen shows that the growth is an endothelioma invading the Gasserian ganglion, destroying many of its nerve-cells and causing almost complete degeneration of the medullary sheaths of the nerve-fibers.

The tumor is unquestionably an endothelioma, although in some parts the structure is not entirely typical of this form of growth. Endothelioma, according to Birch-Hirschfeld,⁶ belongs undoubtedly to the connective-tissue tumors, and in some cases a sharp distinction can not be made between it and sarcoma. When the formation of endothelial cells occurs with proliferation of the stroma, it is doubtful, he thinks, whether such a tumor can be classed with the endotheliomas, and it should more properly be called an endothelsarcoma; when the fibrous tissue is excessive it may be called endothelioma fibrosum.

Ziegler⁷ says that the alveolar, tubular or plexiform arrangement of the endothelioma is very distinct only in the early stage of tumor formation, and that in later stages the proliferation of connective-tissue cells makes

the tumor resemble a sarcoma. Endothelioma can not therefore be sharply separated from sarcoma.

The tissue removed from the patient is so typical in many places of endothelioma that the growth may be called an endothelioma, although at parts considerable accumulations of round nuclei are found, and at other

flattened like endothelial cells, but in man they are quite large and rich in protoplasm and the nuclei are large and round or elliptical. Von Lenhossék at one time believed that a lymph case existed about the cells of the spinal ganglion, but in his study of ganglia removed from an executed man soon after death and hardened



FIG. 4.—The third division of the Gasserian ganglion almost completely degenerated. The black dots and lines indicate the few normal nerve-fibers remaining.

parts much fibrous tissue consisting partly of empty nerve sheaths. In the small nodule removed from the dura the typical structure of endothelioma is seen.

The proliferation in some parts of the ganglion of the nuclei of the cells in the capsules about the nerve-cells is an interesting observation. We might expect these cells to proliferate in an endothelioma of the ganglion. The capsules of the nerve-cells of the spinal ganglion, according to v. Lenhossék⁸—and the same is true of the cells of the Gasserian ganglion—consists of connective

rapidly, he found that a pericellular space does not exist. Whether the cells lining the cell capsule are to be regarded as endothelial or not seems undetermined. Their proliferation in an endothelioma might occur whether the cells resemble endothelium or epithelium.

The great degeneration of nerve-fibers of the fifth nerve and the pressure caused by the tumor explain the intense pain felt by the patient, but it seems surprising that objective sensation in the face could have been so well preserved when the medullated fibers were so greatly degenerated. Axis-cylinders deprived of medullary sheaths may have existed, although such naked axis-cylinders are always difficult to detect.

In two excellent papers on endothelioma that have recently appeared (Kelly,⁹ Sailer¹⁰), in which the literature is carefully considered, no mention is made of military endothelioma, and Sailer says that endothelioma of the dura is almost invariably benign and rarely gives rise even to pressure symptoms. Dr. Kelly and Dr. Sailer inform me that in their study of the literature on endothelioma they have found no mention of the occurrence of numerous small endotheliomas. Our case of tumor of the Gasserian ganglion caused what may be regarded as numerous metastatic growths and—even more uncommon—military endotheliomas. I have also had a case of endothelioma of the cerebral dura in which pressure symptoms were very marked.

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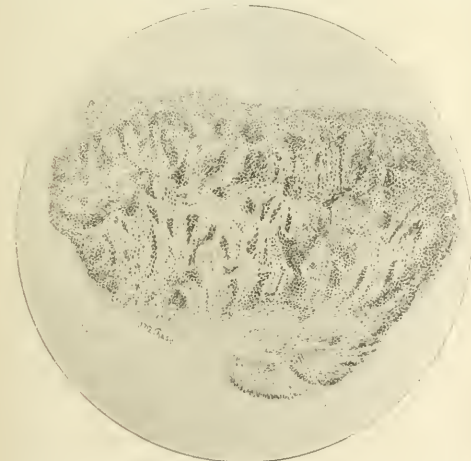


FIG. 5.—One of the military endotheliomas on the inner surface of the cerebral dura.

tissue which passes into the sheath of Henle of the axis-cylinder process. This capsule, especially about the larger cells, presents a laminated structure consisting of two or three layers and containing small flat or elongated nuclei. The inner surface of the capsule is lined with one layer of epithelium. In many animals the cells are

ACCORDING to the sanitary corps of the War Department the population of the city of Manila is 150,000.

METHOD OF EXPOSING THE GASSERIAN GANGLION: REMOVAL OF THE SUPERIOR MAXILLARY NERVE.*

BY GWILYM G. DAVIS, M.D., M.R.C.S., ENG.

SURGEON TO THE EPISCOPAL, ST. JOSEPH, AND ORTHOPEDIC HOSPITALS.
PHILADELPHIA.

This patient, about 60 years of age, is brought before you to illustrate certain methods of procedure in operating on the Gasserian ganglion. He was affected with neuralgia confined almost entirely to the superior maxillary nerve. For this condition several operations had been done on the face, but the pain having returned I performed Carnochan's operation on Meckel's ganglion. An opening was made in the anterior wall of the maxillary sinus, the posterior wall was chiseled through and by means of hooks and curettes the ganglion was broken up and removed as much as possible. He remained free from pain for three or four months and then had a return. The question arose as to whether an attack should be made on the Gasserian ganglion itself or on the superior maxillary nerve within the skull. The removal of the ophthalmic branch with the ganglion is now, I believe, avoided when possible, and as both it and the inferior maxillary divisions were free from pain I decided to limit my interference to the superior maxillary nerve.

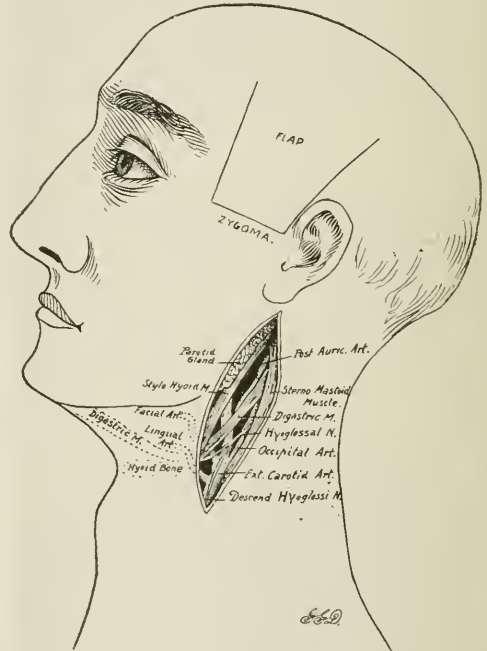
The main difficulties experienced in the operation have arisen from the hemorrhage encountered, and it was to this question that my attention was mainly directed. The bleeding in cutting the flap is considerable, as is also that from the middle and small meningeal arteries and the veins, including the cavernous sinus, in the region of the ganglion. Any bleeding from the sinus was obviated by not interfering with the ophthalmic nerve. To control the arterial bleeding it was decided to ligate the external carotid artery. This procedure was, I believe, suggested by Dr. Fowler.

In ligating the external carotid artery the ligature was placed around it just above the digastric muscle. (See illustration.) The incision was placed behind the angle of the jaw along the anterior edge of the sternomastoid muscle. This was pulled backward and the parotid gland pushed forward. The veins contributing to form the external jugular were pulled forward and the oblique fibers of the digastric muscle came into view: a little parting of the tissues then enabled one to see the hypoglossal nerve below the muscle and winding around the occipital artery to its outer side; to the inner side, coming from the trunk of the external carotid, were the commencement of the facial and lingual arteries. The ascending pharyngeal artery is posterior and may not be seen. Just above the digastric muscle is seen the stylohyoid muscle, and the posterior auricular artery, comparatively small, may be seen winding along the upper edge of the digastric muscle. The stylohyoid muscle was pulled upward, the digastric downward, and the ligature of catgut placed between them on the external carotid artery. This allowed the blood still to ascend to the scalp through the occipital and posterior auricular arteries.

To cut the usual Hartley-Krause horseshoe-shaped flap with its base on the zygoma would be to court sloughing of the flap if the main blood-supply, through the temporal artery, was cut off by ligation of the external carotid artery. Necrosis of the bone and even

sloughing of the flap itself have been known to occur. To avoid this a flap of the shape of a truncated cone was cut with its base upward and small end downward. Two longitudinal cuts were made upward, one from the junction of the anterior edge of the ear and the zygoma and the other from the junction of the anterior and middle thirds of the zygoma; these were joined by a transverse cut along the zygoma. This flap embraced the skin and superficial fascia down to the temporal aponeurosis.

The temporal muscle and aponeurosis was then cut in the lines of the two lateral incisions, but the transverse cut was made high up near the temporal ridge. This muscle, having been thus loosened above, was pushed down beneath the zygoma. The skull was opened by a trephine and the opening enlarged by the rongeur forceps. In biting away the bone the middle meningeal artery was torn but gave rise to no troublesome bleeding. The dura mater and brain were then lifted and the supe-



rior maxillary nerve exposed as it ran from the Gasserian ganglion to the foramen rotundum. Grasping the nerve as it entered the bone, with a hæmostatic forceps, it was pulled upward. With another forceps it was grasped closer to the ganglion and twisted loose from it. The bone was not replaced, but the temporal fascia and muscle were drawn upward and sutured in place by catgut. The flap was then brought down and sewed in position.

The bleeding during the operation was at no time troublesome. As to the subsequent course, the wounds healed by primary union; there were no circulatory disturbances. The opening in the skull is closed by firm fibrous tissue and the pain has disappeared. The non-replacement of the bone was suggested by Professor Tiffany, and this case demonstrates that the brain is sufficiently protected without it.

*Read in a Symposium on the "Fifth Nerve in its Neurological and Surgical Relations," before the College of Physicians of Philadelphia, April 20, 1900.

A METHOD OF TOTAL EXTIRPATION OF THE GASSERIAN GANGLION FOR TRIGEMINAL NEURALGIA.*

BY A ROUTE THROUGH THE TEMPORAL FOSSA AND BENEATH THE MIDDLE MENINGEAL ARTERY.

BY HARVEY CUSHING, M.D.

ASSOCIATE IN SURGERY, THE JOHNS HOPKINS UNIVERSITY, BALTIMORE.

Of the many diseases which, on therapeutic grounds, are supposed to occupy a border-line position between the provinces of the physician and surgeon, perhaps no one more than intractable epileptiform neuralgia illustrates so well the dictum of that renowned Philadelphian and friend of many doctors, Benjamin Franklin, to the effect that "he is the best physician who knows the worthlessness of the most medicines."

Granting the premise in all cases of true tic douloureux, the neuralgia quinti major of Henry Head, in which all three divisions of the trigeminal nerve are affected, that surgical measures alone can with any degree of certainty be depended on to afford relief from this horrible affliction and that the removal of the Gasserian ganglion must ultimately be contemplated, it is to be regretted that this final procedure should generally be regarded as one hazardous in its performance and uncertain in its permanent effects. Two factors may be held responsible for the ill repute in which the ganglion operation at present stands; in the first place the considerable attendant mortality, ordinarily placed at 20 per cent., and secondly the impression which is prevalent regarding the possibility of recurrence of the neuralgia, an impression which has been occasioned by the reports of cases in which incomplete operations have been performed with a subsequent return of pain.

Almost without exception descriptions of the operation relate in appalling fashion the severity of the hemorrhage which has ensued during one step or another of the procedure, and which has in most instances precluded the possibility of a total extirpation. Granting an equal familiarity with the surgico-anatomic relations of the ganglion semilunare, especially those referable to its dural envelope, the successful accomplishment of its removal, whatever the method employed, will depend entirely on the degree with which an operator may avoid a bloody wound, since a clean dry field is almost a *sine qua non* for the manipulations, which even on the cadaver offer considerable difficulty. The objective point of the operation is necessarily located at the bottom of a close-walled operative well whose depth varies from 5 to 8 cm., and blood-staining even in comparatively slight amount will obscure the ganglion and be incompatible with its complete removal. Consequently, under circumstances which have demanded that the operation be conducted in two or three sittings with periods of tamponade of from two to five days, with possible preliminary ligation of the carotid and almost without exception leaving wounds which have required drainage, there is little occasion for surprise that many operators have contented themselves with division of the second and third branches—N. maxillaris and N. mandibularis—and random removal of the adjoining portion of the ganglion with the aid of blunt hooks or the curette. It has been a not infrequent experience at the hands of those who

have been careful enough to submit to histologic examination the tissues removed, under such circumstances, from the supposed site of the ganglion, to find that no ganglionic structure whatever was demonstrable, and that recurrences should be recorded in such instances is no occasion for disparagement of the operation.

Apparently, heretofore in but few cases, notably by Keen¹ and Krause,² in Coelho's³ case and in a few others, has the ganglion been removed *in toto* and as a recognizable entity worthy of histologic study. Relative to photographs of the ganglia removed by Krause and Doyen,⁴ Marchant⁵ has commented on the necessity of microscopic examination of the tissues removed in confirmation of their presumed ganglionic character. The experience of finding no ganglionic elements in such material has occurred even to operators as skillful as Dr. Keen.⁶

Whether after complete extirpation of the ganglion a continuance or recurrence of painful stimuli of the central system of neurons may follow, must remain a matter of temporary uncertainty, since observations on such conditions have only held over a period of very few years. It is certain, however, from physiologic knowledge of the process of nerve repair, that there can be no peripheral regeneration of the lower system of sensory neurons after the ganglion has been removed, such regeneration as always occurs after division or evulsion of the individual roots and possibly after incomplete removal of the ganglion itself. Experimental evidence,⁷ in the case of the spinal cord, goes to show that division of the central axons of peripheral sensory neurons does not preclude the possibility of physiologic regeneration between a spinal ganglion and the cord. This same principle is applicable to the cerebral sensory ganglia, and in consequence by analogy with the spinal cord it is evident that the simple division of the sensory root of the fifth nerve—N. trigeminus—which procedure has been proposed as an alternative for the removal of the ganglion itself, would be inefficient. The degenerative changes found by Dr. Spiller in the sensory root of one of my cases has aroused a suspicion of possible recurrence of the pain; in this case, however, one in which there was a return of neuralgia a few weeks after two earlier peripheral operations, there has been no sensation of pain whatever since the operation nine months ago. (Cf. Case 1.)

In view of the foregoing data, I believe that it may with propriety be stated:

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2. Krause, Fedar: Die Neuralgie des Trigemini nebst der Anatomie und Physiologie des Nerven. Leipzig, Verlag von F. C. W. Vogel, 1896.

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4. Doyen, E.: L'extirpation du ganglion de Gasser. *Archives provinciales de Chirurgie*, T. iv, Juin, 1895, p. 429.

5. Marchant, Gérard et Henri Herbert: De la résection du ganglion de Gasser dans les névralgies faciales rebelles. *Revue de Chirurgie*, T. xvii, 1897, p. 287. These writes say in a foot-note, p. 295: "Nous aimerions malgré tout, voir figurer, dans ces observations, à côté de la photographie, le résultat de l'examen histologique. Un ganglion arraché, tordu ou broyé par les mors de la pince est en général assez altéré dans sa forme et peut donner lieu à de certaines illusions. Nous ne pouvons nous empêcher de penser que dans un cas (Dengetiers, *Société de Chirurgie*, 15 juillet, 1896), ou, d'après son aspect, la partie enlevée ressemblait tant bien que mal à un ganglion, l'examen histologique le plus consciencieux n'a pu déceler la présence d'aucune cellule ganglionnaire. Il en fut de même dans deux cas de Keen."

6. Keen, W.W.: Remarks on Operation on the Gasserian Ganglion with the report of five additional cases. *Am. Jour. of the Med. Sci.*, Jan., 1896, Vol. cxi, p. 59. Case 2.

*Presented at a meeting of the College of Physicians of Philadelphia, April 20, 1900. The subject was illustrated by dissections and photographs of cases. In the present communication the operative procedure alone is discussed. The description of cases with the anatomic and physiologic questions relative to them will be published subsequently.

1. That the probability of non-recurrence bears a direct relation to the degree of entirety with which the ganglion has been removed.

2. That the satisfactoriness of the operation is commensurate with the degree of preservation of the ganglion during its removal and the consequent possibilities of a histologic identification of its elements.

3. That the evolution of the operation must be in the direction of avoidance of hemorrhage which will interfere with the manipulations necessary to successfully liberate the ganglion.

OPERATIVE METHODS IN GENERAL.

A variety of methods more or less familiar have been proposed, by means of which the ganglion may be approached, the two most widely quoted being associated with the names of Hartley and Krause and of William Rose. The fact that Rose, in his original operation,⁸ excised the superior maxilla in order to reach the ganglion only emphasizes the terrible nature of the malady which made justifiable such a mutilating procedure undertaken for its relief. In the subsequent development of the operative method by what is known as the *pterygoid route*, which Rose⁹ and his followers have adopted, the ganglion is approached from below by a trephine opening at the roof of the zygomatic fossa. If for no other reason than that the ganglion can hardly be removed *in toto* from such a situation, this route should be abandoned, and its uncertainties are evidenced by descriptions of methods by which this structure may be broken up with a curette and thus destroyed.

The methods proposed by Doyen,¹⁰ Quénu,¹¹ Poirier¹² and other French surgeons with an approach by what is known as a combined *temporo-sphenoidal route*, also possess some of the disadvantages of the method of Rose, for though the exposure is better, the ganglion is approached from below through the bloody area of the pterygoid plexus with necessary ligation of the internal maxillary artery, and after location of the inferior maxillary nerve—*N. mandibularis*—the roof of the zygomatic fossa is rongeuared away to the foramen ovale and an attempt made to remove the ganglion by using this nerve as a guide to its position. Personal experience with this operative method, though limited to the cadaver, has demonstrated that it is exceedingly difficult to remove the ganglion from this situation in a satisfactory degree of preservation, and furthermore, as will be seen, the blood-supply to the ganglion is almost entirely from below and is especially abundant in the neighborhood of the foramen ovale, consequently the difficulties of this method during life must be considerable. Jacob¹³ has recently described an operation in which the infraorbital branch—*N. infraorbitalis*—of the superior maxillary nerve is first located at the floor of the orbit, the skull trephined and the ganglion approached and identified by means of this nerve in much the same way that the inferior maxillary nerve is utilized in the last described procedure, but inasmuch as these nerves are accessible

and plainly recognizable within the skull, it seems unnecessary to demand any such preliminary extracranial sign-post to the seat of operation.

The fact, however, that French surgeons since Doyen have clung to the temporo-sphenoidal route, gives evidence that its possibilities are deserving of consideration, but inasmuch as the great majority of operators have followed the lead of Hartley¹⁴ and of Krause¹⁵ by way of the temporal fossa to the ganglion, doubtless their method should be considered as fraught with less danger and as offering better chances of a successful outcome than any other heretofore described, and it is noteworthy that practically by this method alone in an occasional instance has it been possible to completely extirpate the ganglion. There are many difficulties arising, chiefly from hemorrhage, which those who have seen or attempted this operation of Hartley and Krause will remember but too vividly. In the first place, the Wagner osteoplastic flap in the temporal region must be so taken that it includes the sulcus arteriosus in the anterior inferior angle—*angulus sphenoidalis*—of the parietal bone which lodges the middle meningeal artery, and consequently the vessel, owing to the frequent depth of the sulcus, is quite commonly lacerated and is the occasion of delay long before the real operative seat is reached. Again, when the ganglion is approached, the operator is so far—measuring on the curve of the skull—from the *caelum Meckelii* in which the ganglion lies, that an amount of elevation of the brain and underlying dura is necessary, which is incompatible with the preservation of the artery at its lower fixed point, namely, at the foramen spinosum. Hence Krause finds it essential to attempt a preliminary double ligation of the vessel after its emergence from this foramen. This is a difficult procedure, and is not uncommonly unsuccessful, and hemorrhage from the meningeal under any circumstances is an unpleasant thing with which to deal.

Disadvantages other than the obligation of dealing with this arterial bugbear arise from the necessary degree of retraction which is essential for a satisfactory exposure of the deeper parts of the ganglion when this high temporal method is employed. On one occasion, in a left-sided case, a consequent aphasia was noted and in most of the earlier operations undertaken by this method no attempt was made to remove more than the outer portion of the ganglion. Had it been deemed necessary on all occasions to expose and liberate the sensory root proximal to the ganglion, I am certain that the employment of this high temporal route would have been found frequently impossible and always attended by grave difficulties.

Even by the method which I have used, in which there is required but slight elevation of the brain, there has been invariably an associated retardation of the pulse. This is illustrated by the accompanying ether chart, which presents characteristics almost identical with that seen on all four occasions in which I have operated.

Victor Horsley¹⁶ has proposed and carried out an operation by this route in which the dura is immediately opened and the temporal lobe itself retracted, leaving the dura covering the middle fossa in place against the

7. Baer, Dawson, and Marshall: Regeneration of the Dorsal Root Fibers of the Second Cervical Nerve within the Spinal Cord. *Jour. of Exp. Med.*, Baltimore, Vol. III, 1899, No. 1.

8. Rose, Wm.: Removal of the Gasserian Ganglion for Severe Neuralgia. *The Lancet*, Nov. 1, 1890, Vol. II, p. 914.

9. Rose, Wm.: The Lettsonian Lectures on the Surgical Treatment of Trigeminal Neuralgia. Lecture II. *The Lancet*, Feb. 6, 1892, Vol. I, p. 295.

10. On Extirpation of the Gasserian Ganglion. *Ref. Annals of Surgery*, Vol. xxiii (1896), p. 69.

11. Quénu et Sillieau: *Bull. Ac. Med.*, 10 Jan., 1894; indorsed by *Tschonowitch*, *Centralblatt für Chir.*, 24 März, 1900, S. 322.

12. Poirier, P.: Resection du Ganglion de Gasser; arrachement profondu de la trifurcation. *Grz. d. Hôp.*, Par., 1890, lxxix, 808-810.

13. Jacob, O.: Un procédé de resection du ganglion de Gasser. *Revue de Chir.*, T. lxx, (1899), p. 29.

14. Hartley, Frank: *New York Med. Jour.*, March 19, 1892. Subsequently—*Intracranial Neuroctomy of the Fifth Nerve*. *Annals of Surg.*, Vol. xvii, 1893, p. 511.

15. Krause, Fedar: Resection des Trigeminaux Innerhalb der Schädelsöhle. *Verhandlungen der Deutschen Gesellschaft für Chir.*, Berlin, June, 1892, p. 109.

16. Horsley, Victor: The Various Surgical Procedures devised for the relief or cure of Trigeminal Neuralgia. *British Med. Jour.*, Vol. II., 1891, p. 1249.

bone. Few operators could handle the brain thus freed of its support without injury, and after considerable experience with the removal of the ganglion from above, even when the calvarium and brain have been removed, I have found that greater difficulties are encountered, in spite of the exposure, in freeing it from the dural envelope than will be met with when the approach is from the side, as in the operation to be described.

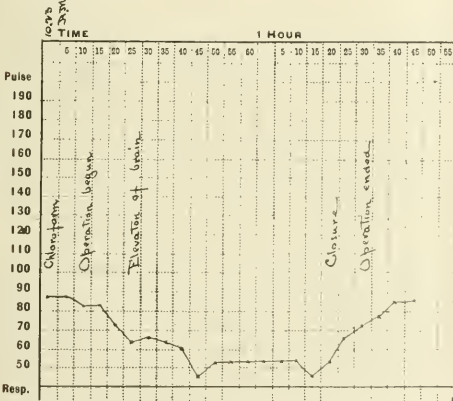
THE DIRECT INFRA-ARTERIAL METHOD.

The method of enucleation which the writer, with some hesitation, proposes to describe makes use of the paramount advantage of the Hartley-Krause operation, namely that of exposure of the ganglion by the temporal route. The trephine opening through the fossa temporalis, however, is sufficiently low so that the extradural manipulations may be conducted underneath the arch made by the middle meningeal vessel, which is retracted with the dura and yet remains uninjured at its two fixed points, namely, at the foramen spinosum of the temporal bone and at the sulcus arteriosus of the parietal. Under this arch with but slight elevation of the temporal lobe the entire ganglion and its sensory root may be exposed. The method may be said to give the maximum of exposure with the minimum of cerebral compression and injury of blood-vessels. The operation, therefore, differs only in its details from that proposed by Hartley and Krause; it is, however, upon detail that the success of this, supposedly one of the most delicate of surgical procedures, depends.

As commonly described, the dura splits and encloses the ganglion in a double layer as it lies in the cavum Meckelii. This fibrous envelope is closely adherent to the ganglion, and experience has shown that the point at which the layers are most easily separated is at the area of dural attachment about the superior maxillary nerve, where it enters the foramen rotundum. This is the first point at which the simple elevation of the dura is resisted and, by careful blunt dissection, working between this point and that of its second attachment at the foramen ovale, it is found to be a comparatively easy matter to split the enclosing envelope between these two points and to elevate the upper layer of the ganglionic sheath, leaving the ganglion entirely exposed and lying attached to the basal layer of its sheath in the ganglionic fossa. There is, however, in addition to the thick dural layer of the envelope thus elevated, a second, thinner layer of transparent fibrous tissue which overlies and is attached firmly to the ganglion, extending backward over the sensory root—N. trigeminus—but which does not cover the three peripheral divisions as does the rest of the sheath. An attempt has been made to show this second layer in Fig. 2, after its separation from the ganglion, and I am ignorant as to whether this has been heretofore described. After elevation of the main dural sheath and exposure of the three peripheral branches this thin second layer is left intimately adherent to the ganglion, binding it and the sensory root to the underlying tissues. I believe this to be the chief obstacle to evulsion of the ganglion *in toto*, as it is ordinarily attempted.

The importance during the operation of leaving the ganglion attached to the underlying portion of its sheath, and of not elevating it until the final step, is due partly to the fact that it is much less difficult to free it from the underlying surface of dura and bone below than from the elastic cerebral surface, as will be emphasized later, and furthermore because the blood-supply of the structure comes almost entirely from beneath. The chief supply ordinarily comes from a branch of the meningeal soon after its entrance into the skull, and consequently the third division—N. mandibularis—is often the most bloody one to liberate. A small branch usually comes from the carotid and passes over the sixth nerve—N. abducens—to the under surface of the ganglion. Another common branch is a small radicle of the ophthalmic to the first division; another by way of the foramen ovale is the lesser meningeal, and occasionally a branch appears through the foramen rotundum from the internal maxillary artery.

Relative to the middle meningeal artery, it not infrequently happens that the vessel communicates with the lacrimal artery by an anastomotic branch through the outer angle of the sinus sphenoidalis. Occasionally the latter artery may derive, in this way, its main origin from the meningeal, or vice versa the meningeal from the lacrimal. Under these circumstances it can be seen



Either chart of Ganglion Case, showing "five minute" pulse-rate during operation, in illustration of compression pulse due to slight elevation of temporal lobe.

Anatomic Notes.—There are certain anatomic features which must be taken into consideration in this particular operative method, or indeed in any method: in the first place, concerning the dural envelope which encloses the ganglion as well as the intracranial portion of its three peripheral branches.¹⁷

17. It is superfluous to say that an operation on the ganglion by any route should not be undertaken without perfect familiarity with its anatomic relations, and it is important that this familiarity should be gained by way of the particular method of approach selected. Only after a great number of operations at the autopsy table can one satisfactorily train his reflexes to appreciate the degree of force which it is necessary to apply at the edge of the ganglionic dural sheath in order that it may be split and the ganglion exposed by lifting away its superior covering, and similarly the force which may be applied in the subsequent elevation of the ganglion and its four branches from the underlying dura to which it has been left attached. For this procedure the only instrument which is requisite is a blunt dissector of proper shape, and in the possibilities offered by the one selected, the operator should train himself. Only after repeated operations on fresh cadavers possessing skulls of various indices did the writer feel justified in dealing with the

ganglion at the operating-table and confident of removing it *in toto*. To satisfactorily free the entire ganglion is a delicate procedure and familiarity with the crackling sensations imparted to the hand while liberating it from its dural envelope can not be overvalued. I know of no operation which could be undertaken without such preliminary experience with equal rashness. I have found the experience gained from practice on ordinary anatomic material to be unsatisfactory. The toughening of the dried dura and altered consistency of the ganglion and brain imparts, through the dissecting instrument, sensations markedly different from those which are given by fresh tissues. I have performed this particular operation on autopsy subjects about thirty times, and have removed the ganglion in a number of other ways, invariably in a much less perfect state of preservation. It is extraordinary how much easier it is to remove the ganglion through an opening in the temporal fossa by this method than it is through an open calvarium after the brain has been removed.

that the vertical extent of the arch under which we must work is somewhat narrowed. Such an anomaly was met with in Case 4 of my series; it nevertheless did not seriously encroach the field of view.

Another factor may occasionally interfere with the view of the ganglion, one which has been encountered especially in skulls with a broad cephalic index, and this is the more embarrassing since the ganglion in such brachycephalic cases may lie from 1 to 1½ cm. deeper than usual. This obstruction consists of a bony prominence which, in slight degree, is present in all skulls, but at times is sufficiently developed to partly hide the ganglion when viewed from the side and to ward off the curved blunt dissector in its approach to the ganglion. This process, apparently unnamed,¹⁸ is more or less developed in all skulls and is roughly indicated by the elevation at the lower rim of the operative foramen in the drawings that accompany this paper. The process is situated to the outer side and slightly anterior to the foramen ovale on the greater wing of the sphenoid between the row of sphenoidal foramina and the sutura sphenosquamosa. In Case 2, a patient with a markedly brachycephalic skull, it was necessary to chisel off the top of this prominence before the ganglion could be attacked. A similar and still more developed bony projection renders the ganglion operation in dogs almost impossible.

Underlying the lower sheath of the ganglionic envelope posteriorly there is usually to be made out a dense triangle of fibrous tissue which partly covers the foramen lacerum and under the anterior edge of which the carotid artery emerges. Over the artery and close to the edge of this ligamentous structure, and consequently near to the inner edge of the ganglion, the sixth nerve—N. abducens—passes. It is in this situation, on account of the diminished likelihood of injuring the sinus cavernosus, which is only expressed farther forward, that I have preferred to attack the ganglion and its sensory root when it becomes necessary during the process of liberation to pry the structure outward in order to free the attachments of its inner border. I have been able in this way to avoid injury of the sinus and to remove the first division—N. ophthalmicus—by freeing it from behind forward, though I have invariably caused a paralysis—fortunately only temporary—of the sixth nerve. Injury to the sinus, however, is not such a calamity as is usually presumed. An interpretation of its character is given in Spalteholz' *Handatlas der Anatomie* (Zweite Auflage, 1899, Bd. ii, S. 397 und 441), which is much less startling to an operator than the manner in which it is usually depicted as resembling the other cranial sinuses.

DESCRIPTION OF THE OPERATION WITH DISCUSSION OF THE VARIOUS STEPS.

1. *Formation of muscle flap and exposure of the temporal fossa.*—A horseshoe-shaped skin incision is made in the temporal region, its base about 4 cm. in breadth, corresponding to the zygomatic arch, and its convexity reaching about 5 cm. above it, but slightly higher than the level of the pinna of the ear. (Cf. Fig. 3.) The incision, therefore, needs to be much lower and may be considerably smaller than that for the Wagner osteoplastic procedure as adopted by Hartley and Krause. This skin flap is turned downward, some branches of the temporal artery being divided in the process, until the underlying temporal fascia is exposed well on to its attachments to the zygomatic arch and the posterior or temporal border of the malar bone. An in-

cision is then made through the temporal fascia concentric with and just inside of the skin incision, and at the base of the skin flap it is carried along the middle of the outer surface of the zygomatic arch through the periosteum down to the bone. The periosteum is then elevated from the bony arch, leaving the masseteric attachment at its lower edge uninjured, and the zygomatic processes of the malar and temporal bones (Cf. Fig. 1) are divided with heavy forceps as in the resection of a rib. An incision concentric with the skin incision is then carried down through the temporal muscle, and the muscle is scraped away from the bony wall of the temporal fossa, to which it has no attachment in this situation, and retracted downward together with the resected portion of the zygoma and into the space which this bony arch formerly occupied. (Cf. Fig. 3.) In this way the lower portion of the temporal fossa of the skull, as far down as the attachment of the external pterygoid muscle below the infratemporal crest, is well exposed.

Discussion of Step.—The one deformity consequent to the operative method via the temporal route follows upon the incision through the temporal fascia, namely, the division of the branches of the facial nerve which supply the occipito-frontalis muscle. As a result, there is a post-operative inability to elevate the eyebrow on the affected side. This paralysis, however, is not apparent during expressional rest except in old individuals in whom there may be some resultant smoothing out of the cutaneous wrinkles on that side. This deformity is well shown in the photograph of one of Krause's patients. (Op. cit. S. 44, Abbildung 14.) I have found that it is necessary to temporarily resect the zygoma in order to satisfactorily retract the temporal muscle. A downward displacement of the bone, of only a centimeter or two, is all that is required to make room for the muscle, which otherwise would arch up over the zygoma and prevent proper exposure of the lowest portion of the fossa temporalis. It is easier to preserve than to detach the bony fragment, on account of the firm attachment of the masseter. This is not a necessary detail, however, and perhaps it would be advantageous to remove it. A new zygoma in one of my cases has reformed after excision, and possibly in this case there is less post-operative deformity since the atrophy of the temporal and masseter muscles shows less plainly than in the other cases in which the arch of the replaced zygoma seems unduly prominent on account of the sunken fossa above and below it.

2. *Exposure and elevation of dura as far as the ganglionic sheath.*—With a mallet and gouge, a small trephine opening is made through the most prominent portion of the exposed great wing of the sphenoid, and with rongeur forceps this opening is enlarged to a diameter of about 3 cm., its lower margin being carried well down and possibly including the ridge between the temporal and zygomatic fossa—the crista infratemporalis. The uninjured middle meningeal artery runs on the dura thus exposed, across the opening in the bone as the diameter of its circle. (Cf. Fig. 1.) The dura, with this vessel, may then be easily lifted, almost bloodlessly, from the base of the middle fossa until the first point of firm dural attachment at the foramen ovale is reached.

Discussion of Step.—It has seemed unnecessary to the writer to attempt to make an osteoplastic flap even were it possible to deal with it in this deep situation, for the reason that the opening to be made through the skull is so small and after-closure of the wound so well protected. It is possible, indeed, that new bone is subsequently formed to cover the defect, since the slight pulsation of the flap which is apparent for some time after the operation ultimately disappears. It is well to make the first opening in the bone at the upper part of the proposed area of removal, since, it is easier to bite away the bone with the rongeur forceps in a downward direction, and furthermore, because as the base is approached the sphenoidal wing becomes much thicker—occasionally 5-6 mm.—and consequently is less easily penetrated with the mallet and chisel. Care must be taken in the use of the gouge, since the bone is at times exceedingly thin and one or two strokes with the mallet will carry the instrument through. Additional

18. One might presume to call this the *processus fasciæ cerebriis ossis sphenoidalis* according to the His nomenclature.

care is necessary for the middle meningeal artery is usually exposed by the first small opening in the skull. It ordinarily runs beneath the most prominent part of the wing of the sphenoid and squamous portion of the temporal bones, which have been uncovered, and this is naturally the point selected for the primary opening.

It is important in view of preservation of the ganglion and avoidance of possible injury to the deeper vessels that no fragments of bone be allowed to fall down between the skull and dura, since at a later stage of the operation, when it is necessary to firmly press pledgets of gauze against the ganglion to check the bleeding from its underlying arterioles, these spicule may, as occurred in one of my cases, be firmly driven into its substance. By a similar accident one of them might be driven into the sinus. Occasionally the prominence, which has been described above, as present on the floor of the fosse, may be of sufficient size to later interfere with a satisfactory approach to the foramen ovale. This may then be chiseled off or the floor of the fossa rongueured away so as to include it. In the drawings, I have not made the trephine opening quite low enough. It should be carried down so as to include the crista infratemporalis, which therefore should not be shown preserved as in Fig. 1.

3. *Elevation of dura with meningeal artery and exposure of upper surface of ganglion.*—By careful blunt dissection with the proper instrument, and by working at the dural attachment about the foramen rotundum and in the line between this point and the foramen ovale, where it is again firmly attached, the edge of the dural envelope which encloses the ganglion and its peripheral intracranial branches may be split, and by careful elevation the entire upper surface of the stellate structure be exposed well back on to the sensory root, the ganglion being left in its bed still adherent to the underlying portion of the envelope.

Discussion of Step.—This procedure should be attended with but little hemorrhage, since the blood-supply, as heretofore stated, is from below. It is of importance that *the ganglion should not be elevated in this maneuver*, since it is advisable to postpone what degree of hemorrhage is unavoidable as long as possible, and furthermore because it is much easier to elevate the overlying dura sheath from the ganglion if its attachments to the unyielding base have remained uninjured. This entire procedure is carried on under the arch made by elevating the temporal lobe and its overlying dura and artery. A simple spatula of about 2¼ cm. in width, which can be bent at the proper angle, makes the most satisfactory retractor for these structures. (Cf. Fig. 3.)

4. *Liberation and extraction of ganglion and its branches.*—After the exposure of the upper surface of the ganglion and before division of any of the peripheral branches, these three nerves with the ganglion and trigeminal root should be liberated from the attachments to the base. (Cf. Fig. 2, right side.) This is readily accomplished by working with the blunt dissector in the crotches between the second and third divisions and also along each side of the nerves. After the ganglion and the second and third divisions have been liberated and can be lifted up by the dissector, it is necessary to free the superior and internal edge of the trigeminal root and first division. It is well to conduct these manipulations as near as possible to the sensory root, since that is the safest point and one at which there is less likelihood of injuring the cavernous sinus and sixth nerve. The ganglionic structure may thus be completely liberated (as shown in Fig. 2) without division or laceration of a single branch. With a firmly locking pair of hemostatic forceps—I have used Kocher's—the structure may then be grasped just back of the site of the true ganglion on the trigeminal root; the three peripheral divisions are in turn held up with a blunt nerve hook and divided with scissors close to their foramina; the sensory root is then evulsed by means of the previously attached pair of forceps.

Discussion of Step.—This part of the operation is the most difficult and the one in which preliminary training on the cadaver is found most essential. The degree of force necessary to separate the ganglion without injuring it, for if lacerated or torn away from its roots its extraction becomes most uncertain, can only be learned by experience which should hardly be gained at the expense of the patient. The operator's reflexes should have become familiarized with the crackling sensations imparted to the hand on separating the adhesions at one point or another during the process of liberation. The bleeding which follows on the maneuver, especially about the foramen ovale, is sometimes very annoying but ordinarily may be checked in a few minutes by the pressure of a pledget of gauze. It would naturally be supposed that the proximity of the meningeal and its fixed point at the foramen spinosum would be an embarrassment, especially when an attempt is made to liberate the third division by insinuating the elevator under the posterior border of the nerve—N. mandibularis—between it and the artery. This I have not found to be the case.

I do not see how the third and fourth nerves can be injured in this procedure; the sixth, however, lies very near the ganglion, has always been seen and, I must confess, injured in each of my four cases. This, however, has fortunately occasioned only temporary symptoms, the resulting internal strabismus having disappeared in each case in the course of a few weeks. In one instance I felt certain that I tore the nerve across; if so it must have regenerated. There has also resulted in all of my cases a temporary paralysis of the sympathetic with contracted pupil. This has invariably disappeared much earlier than the motor paralysis of the abducens. As stated above, it is well in the liberation of the first division—N. ophthalmicus—to free the nerve at the ganglionic end and to strip it out from behind forward if it is desired to remove it at all, else the cavernous sinus may be injured. This accident, however, is by no means such a calamity as it is credited with being. The sinus is not an open canal, as usually believed, but made up of compartments in which local thromboses may occur readily and promptly, and thus hemorrhage be controlled by a few moments of pressure. Bleeding from the small ganglionic arteries about the foramen ovale may be much more annoying. On one occasion I accidentally plunged the dissector directly into the sinus anterior to the ophthalmic border of the true ganglion. The profuse momentary hemorrhage ceased after a few moments of pressure with some gauze. The trigeminal sensory if properly extracted invariably comes away from the pons where it is loosely attached. I have never seen any evidence of shock consequent upon this procedure such as Horsley describes in his single case.

5. *Closure and Dressing.*—The zygoma and flap of skin, muscle and fascia are replaced. The zygomatic arch in my first case, as stated, was removed, and in one of the later ones wired in position. This is an unnecessary detail inasmuch as the masseter is paralyzed and the resected portion of the bone when replaced remains in position. The temporal muscle and fascia are secured in place by fine interrupted sutures at the upper curve of the incision, and a few sutures are taken in the divided periosteum and fascia over the replaced zygomatic arch. In applying the dressing the eye is covered by a large sheet of rubber protective which bridges across from the nose and forehead to the malar prominence of the cheek and prevents the pressure of the bandage against the eye. In none of my four cases has the wound been drained, and in none has there been failure to obtain healing by primary union; the resulting scar has been very slight (Cf. Fig. 4), and in one instance hardly to be detected. An unsightly scar, such as is shown in many photographs of cases, would almost deter a surgeon from the operation.

I have not found it necessary to suture the lids as has been advocated, in treatment of the eye. In fact, I should think the local reaction resultant to this procedure would be detrimental in case there was an ensuing keratitis, which apparently is at times unavoidable. The simple protective method which has been used is shown in the accompanying photograph of one of the patients.

The eye is thus kept moist, protected from dust and the patient may deemly see through the covering. A Buller shield answers the same purpose.

It is not the writer's intention on this occasion to take up the physiologic aspects of the four cases which have been operated on, nor to report the histories in any de-

trigeminal area, the consideration of the post-operative areas of sensory anesthesia, the discussion of the so-called trophic changes consequent on removal of the ganglion, and similar topics, must be left to a subsequent communication in spite of the fact that they doubtless represent the most interesting side of the Gasserian ganglion question, and one which is second only in importance to its pathologic aspect. The photographs show that in each



Fig. 4. Photograph of Case 4, taken on the tenth day in illustration of a method of protecting the eye.



Fig. 5. Specimen from Case 1. (Dr. Spiller). Photograph was taken from the fresh tissue and consequently shows points of high light. The first division (I, N. ophthalmicus) was removed as a separate piece after extraction of the ganglion and other branches. The tissue was placed in Muller's fluid one half hour after removal.

tail, except in so much as they may be of value in interpreting the pathologic lesions, to be described by Drs. Barker and Spiller. The physiologic question relative to disturbances of taste and of secretory activity in the

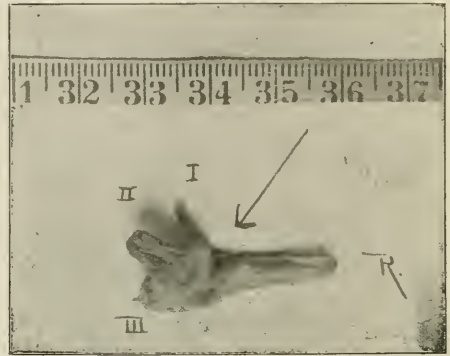


Fig. 6. Tissues removed from Case 2. (Dr. Spiller). The arrow indicates the direction of application of the evulsing forceps, whose imprint shows upon the ganglion. Photograph taken from specimen after hardening in formalin, and high lights as in Fig. 5, from reflection of fresh tissues do not appear.

instance the ganglion and intracranial roots have been completely removed and the resulting anesthesia has been absolute over the entire area of trigeminal sensory distribution in consequence. The completeness of the post-operative anesthesia may be regarded as an index of the totality of the extirpation.



Fig. 7. Specimen from Case 3. (Dr. Spiller). The arrow points to the line of impress of the evulsing forceps. The third division (N. mandibularis) is considerably lacerated as an unsuccessful attempt was made to evulse this from the foramen ovale instead of dividing the root as usual. Shreds of the motor root can be seen distinct from the rest. The first division (N. ophthalmicus) was torn away from the ganglion during its elevation and was removed from the wall of the sinus after extraction of the ganglion. Photograph taken after hardening in formalin.

It will be noted that the ganglia of the first two cases examined by Dr. Spiller were removed during a period

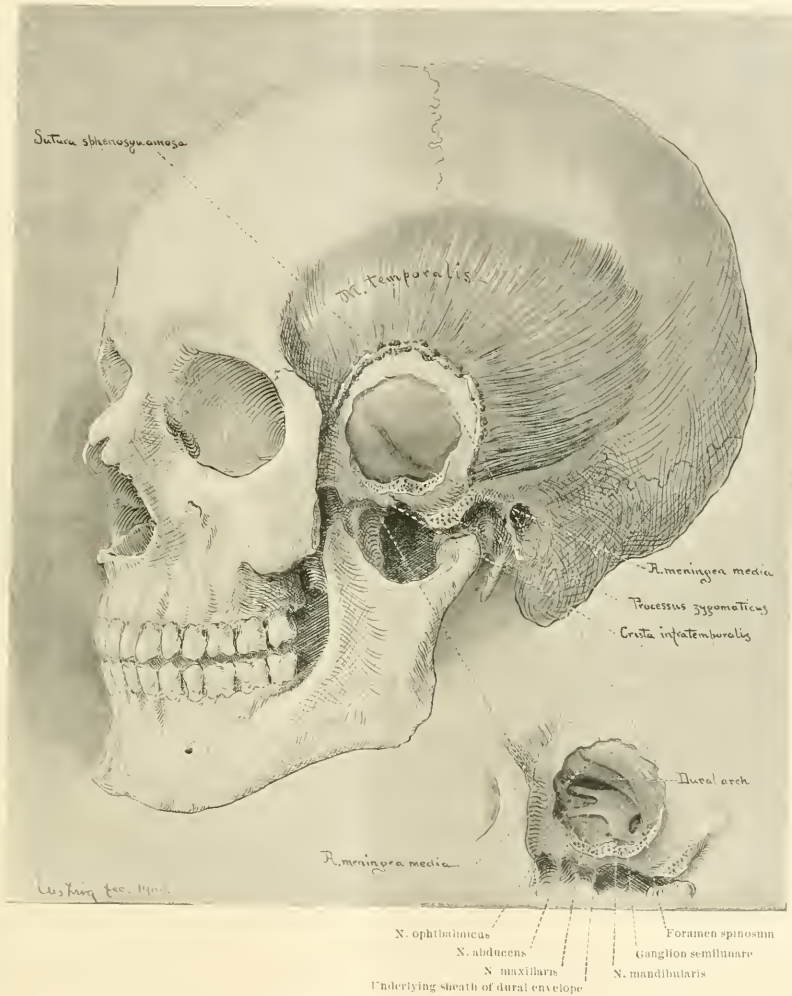


FIG. I.—Showing relations of the middle meningeal artery to the operative foramen before and after elevation of the dura and exposure of the ganglion.

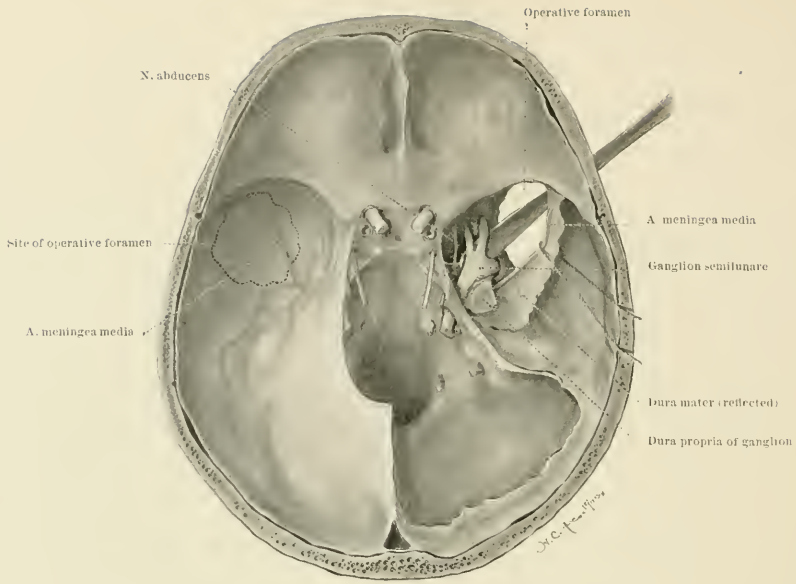


FIG. II.—Showing on the right, after reflection of the dura, the ganglion and its intracranial branches liberated from their dural envelope and elevated by the blunt dissector introduced through the operative foramen; on the left, the dura in situ and the relation of the operative foramen to the ganglion and middle meningeal artery.

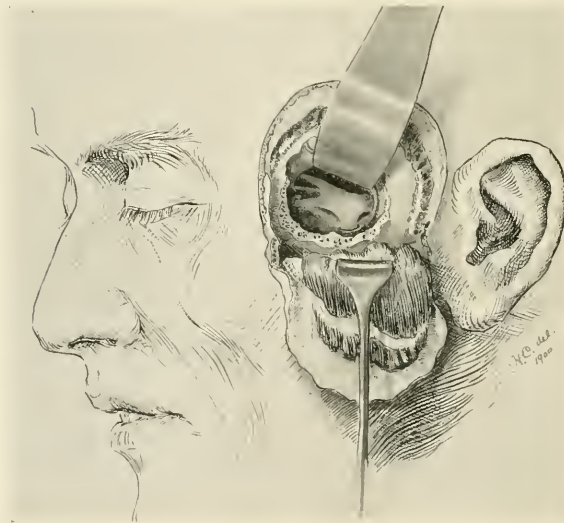


FIG. III.—Sketch from cadaver of the field of operation, showing situation of the incision, retraction of temporal muscle over displaced zygomatic arch, osseous foramen and final exposure of ganglion under meningeal arch.

of extreme exacerbation of the neuralgia. In Dr. Barker's cases the operation was performed during a period of comparative freedom from pain. Brief summaries of the histories preceding the operative period are as follows:

CASE 1.—James W., 63 years of age, entered the hospital Aug. 2, 1899. He had been a sea captain by profession until the onset of his right-sided neuralgia, from which he had suffered for ten years. The pain occurred originally in the third division of the trigeminus. In July, 1896, and again in June, 1897, two peripheral operations with evulsion of the infra-orbital and inferior dental nerves had failed to give him more than a few weeks of respite from pain. For the two years before entrance he had been hed-ridden, and his sufferings had had no remission. At the time of operation his extreme paroxysms occurred every minute and a half on an average, and with only slight relief during the intervals. His chief point of radiation of pain was just below the outer corner of the mouth. From there the pain spread into the territory of all three divisions of the N. trigeminus during the paroxysms, to terminate at a point near the parietal eminence. The ganglion is shown in the accompanying photograph (Fig. 5).

CASE 2.—W. E., 55 years of age, entered the hospital Dec. 17, 1899. He had been a business man until neuralgia interrupted his activities. He had suffered from pain, which appeared primarily in the distribution of the infraorbital branch, for twelve years. In 1892 the infraorbital nerve was evulsed,

moved. After relief for eight months the pain returned—November, 1899—with renewed vigor. The paroxysms at the time of entrance were not frequent nor very severe. The pain spread downward from the supraorbital division into the territory supplied by the second and third branches. The patient was operated on during this interval of comparative freedom. The ganglion is shown in Fig. 7.

CASE 4.—Elizabeth R., 60 years of age, had suffered for seven years from left-sided tic-douloureux, which originated in the superior maxillary branch of the trigeminal nerve, and was attributed to exposure. The definite point of origin of her paroxysms had always been situated near the ala of the nose. In August, 1897, 5 cm. of the infraorbital nerve was evulsed (Cushing) from the floor of the orbit. The nerve histologically showed the usual degenerative changes. Relief ensued for sixteen months, after which interval, with the return of pain the first and third divisions became invaded. In June, 1899, the regenerated nerve from the same situation was again evulsed (Mitchell) with subsequent relief for only four months. In January, 1900, the ganglion and roots were removed *in toto*, though with considerable difficulty and not in a good state of preservation. (Cf. Fig. 8.) The operation was performed during a period of comparative freedom from pain.

(This Symposium will be concluded next week.)

MEDICAL ETHICS AND MEDICAL JOURNALS.*

BY P. MAXWELL FOSHAY, M.D.
EDITOR, CLEVELAND JOURNAL OF MEDICINE.
CLEVELAND, OHIO.

To most of us the average paper concerning our intra-professional relations is somewhat tiresome. In many quarters the dignity of medical ethics has been most loudly preached by those lacking experience in its practice. It is little to be wondered at, therefore, that the subject is not a popular medical society topic. Despite this acknowledged fact, I have determined to present some desultory thoughts concerning a subject that seems to me to be so important to the welfare of medicine as to deserve most earnest consideration. Duty may not be shirked because it is unpleasant.

Physicians are to-day face to face with many vital questions that can not be indolently ignored. Sapping professional honor to its very vitals is the matter of the giving of commissions for referred cases by the specialist to the general practitioner, involving as it does the points as to whether medicine is a profession or a trade, and as to whether our patients are sentient beings or mere purchasable and transferable commodities. From this and other problems the present paper turns to some consideration of the shocking abuses that have sprung up in the realm of medical journalism. Even as the specialist, from greater opportunity, is permitted to assume the possession of superior knowledge and experience in his chosen branch, so may, perchance, the medical journalist be permitted to offer some expert testimony as to the evil tendencies that he is forced constantly to observe.

The profession is not alive to the damage that it is suffering in the eyes of the world by reason of the present degradation of American medical journalism. As people, races and communities are judged by their literature, so is the profession of medicine perforce judged in large measure by its books and its journals, especially the latter, because it is presumed that they more accurately reflect the sentiment of the average readers. Admittedly the topic is not new, but honest facts will bear resting.

There are now published in this country some 250 medical journals of all kinds. Does the profession demand so many? If not, why are they issued? and how do they live? Many—including some of the best known—are owned by great publishing houses that are frankly

*Read, by invitation, before the Northwestern Ohio Medical Association, Dec. 7, 1899.

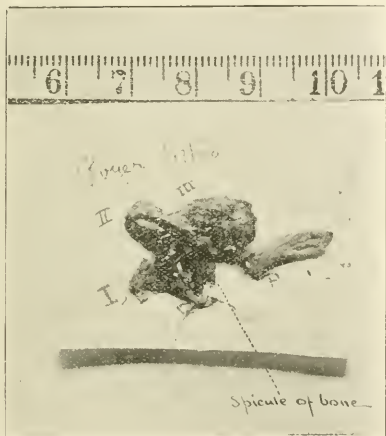


Fig. 8. Specimens from Case 4. (Dr. Barker). A splenic bone is shown driven firmly into the ganglion, which was not removed in a good state of preservation. The sensory root (R), (N. trigeminus) tore away from the ganglion during extraction and was subsequently removed. Photograph taken after hardening in formalin.

with relief for several months. On the return of pain, the inferior dental became involved, and subsequently the supra-orbital region and pain finally extended to the territory innervated by the ophthalmic nerves. His sufferings for several months before entrance were such that he had been in confinement and, on admission to the hospital, he was practically maniacal. His chief pain point from which the paroxysms radiated was situated in the right nasolabial fold. His sufferings were continuous, with exacerbations every few moments, or consequent on the slightest peripheral stimulus. The ganglion and branches are shown in the accompanying photograph (Fig. 6).

CASE 3.—A. D., 38 years of age, a shoemaker by trade, entered the hospital in January, 1900, having suffered from trifacial neuralgia for only two years. The onset was attributed to exposure and pain, and was at first limited to the supra-orbital area. One year later the infraorbital region became involved and soon the whole territory of the third division, the pain during the paroxysms extending into the suboccipital region. In March, 1899, by peripheral operations, I evulsed an inch or two of the inferior dental and infraorbital nerves, which showed the usual histologic changes after being re-

engaged in the effort to accumulate wealth, both directly from their journals and indirectly from the books and other wares that they therein advertise. In the management and course of these publications the profession has little or no voice. Their editors—while they are medical men—have often to submit their judgment of propriety in editorial conduct to the commercial exigencies of the owners. Other periodicals are owned openly or covertly by proprietary-medicine makers, and their object is too obvious to need expression. Still others—too many, in sorrow be it said—are conducted by men of our own profession, whose sole object is self-exploitation, and whose aim is not for an honorable paid subscription list, but for profitable consultation cases. Only a small proportion of our journals are conducted by high-minded men whose single aim is the upholding of the honor of medicine and the directing of professional thought toward elevated ideals. It will thus be seen that medical journalism is in a state of chaos. Close observation shows that there are few medical journals that can not be bribed into defrauding their readers in one way or another, and it is not alone the least among them that sin chiefly in this respect.

There being such a multiplicity of journals, few of them could live alone on their subscription receipts, and the pharmaceutical firms are appealed to for advertisements. The greed for advertising patronage leads the editor only too often to prostitute his pen or his pages to the advertiser, so long as he can secure the coveted revenue. So our journals are filled with articles and editorials containing covert advertisements of this and that remedy. So great has this abuse become that many drug houses—few of the better ones be it said to the credit of the trade—will not deal with a journal that does not, in the advertising contract, agree to publish, in addition to the advertisement in its proper place, and without extra compensation, certain advertising matter among its original articles or editorials. This trick the profession well knows, and already it shows signs of failing of its object, for the physician becomes disgusted with the journal that so demeans itself, and suspicious of the firm that can not be satisfied with placing its wares honestly before the profession in a frank advertisement. Happily also there are signs that the manufacturer is beginning to see whither this practice tends, and to fear the inevitable loss that will shortly follow, when the profession refuses to longer support the journals that thus soil their pages and deceive their readers, or to buy from firms that deal in deception.

In a clever editorial, the *St. Paul Medical Journal* for November, 1899, frankly divides journals and advertisers into two classes—the honest and the dishonest—and adds that the honest journal rigidly segregates its scientific matter from its advertising pages, and that the honest advertiser appreciates the value to him of space in the honest journal, as the means of attracting to his wares through a plain advertisement the best professional attention. This courageous editorial writer then says: "Granted the above standard of honesty is correct . . . there are not a dozen honest medical journals published in the United States to-day." This statement is sweeping, but it is lamentably true. One of our leading journals has several times in the past year published as scientific matter papers concerning the merits of different proprietary articles, whose importance is far from deserving such attention and whose qualities are much better described in an advertisement. One of these papers was written by a well-known medical author and teacher, and was subsequently republished—to the chag-

rin, let us hope, of its reputed author—among the advertising pages of a homeopathic journal. Naturally the *St. Paul Medical Journal* wonders how much the author was paid by the firm whose product was thus advertised, and also how much the journal received for the prostitution of its pages to commercial greed.

To-day most journals carefully refrain from expressing any opinion upon many of the important and disputed matters of personal conduct that appertain closely to the physician's life, and some even do not hesitate to vilify those few journals that dare to raise a voice in favor of honorable conduct.

The existence of evil tendencies, however, does not suffice for the sweeping condemnation of all that is. Conspicuous examples of the extraordinary commercial and moral success of journals that do not fear to speak the truth, nor hesitate to condemn that that is evil, while urging the desirability of clinging to that that is good, give rise to a well-founded conviction that immorality in journalism is not what the profession expects from its editors. There is a keen demand for clean ideals and for free condemnation of patent venality.

The flood of sample copies of cheap medical journals on the doctor's desk has become so irresistible that the legitimate journals are all but swamped in the undertow that leads to the waste-basket. Many careless physicians frankly state that there is little need of their subscribing for journals, when complaisant journalists will keep them well supplied with periodic literature free of all expense. The tide seems yet to be rising, as one new medical journal, through the naive statement of one of its advertising patrons, announces that during its first four numbers of existence it has guaranteed to deliver a copy of one issue to every one of the 125,000 physicians of the United States. Others asseverate that they possess suspiciously numerous thousands of paid subscribers, when one doctor who pays for the paper is extremely difficult to find. If any one of you will for a month keep tally of the number of sample copies of medical journals that reach your office, you will be astounded at the total. Yet the "sample copy" is not wholly reprehensible, for it furnishes the only means by which the reputable journal may indubitably submit its merits to your scrutiny. But the honest journal will not send you a "sample copy" of every issue, nor several copies of each issue, and the character of the "sample," as evident to even brief inspection will unequivocally determine whether the copy comes honestly seeking your support for a meritorious undertaking or sneaks into your office to delude the advertiser into the belief that you are a regular subscriber.

The foregoing cursory review of the present status of medical journalism leads naturally and logically to the question: "What is the proper aim of medical journalism?" On the answer to this question depends our conclusion as to the ethics of the problem in hand. Probably few physicians ever stop to consider the reasons for the existence of medical journals, or to formulate, however loosely, the principles that should govern their conduct. To give what is hoped to be a clear answer to this question, to clarify the profession's vision in the premises, and to aid, if never so little, in educating the professional conscience to the appreciation of journalistic evils and of the remedies that may be applied to the existing unfortunate conditions, is the object of this paper. There are certain reasons for the existence of medical journals that are constant and unvarying, and—once appreciated—they render easy the application to all cases of the test of legitimacy and usefulness.

Medical journals should be conducted only for the at-

tainment of the following objects: The prompt diffusion of medical knowledge, the furnishing of a ready means for the intercommunication of professional thought, the elevation of professional morals, the binding together of the medical profession into one harmonious organism, the representation of the best medical thought with the effort to raise the intellectual and moral qualifications of the entire profession to that level, and the extinction of sects and of all unreason in the art or science of medicine. The publication whose course does not conform to these standards has no excuse for existence. It is necessary, therefore, that physicians should know the earmark of the good and of the bad among medical journals, in order that intelligent and discriminating choice may be facilitated.

Like trees and men, medical journals may be distinguished by their fruit. First and foremost eschew instantly every journal that intermixes its original matter with advertisements—such journals are not conducted for any good purpose, and do not meet any of the indications given above as adequate reasons for existence. It is manifestly incumbent on reputable journals to furnish to their readers reliable information of the worth of new pharmaceutical preparations; and not all proprietary remedies are to be ruthlessly and unreasoningly condemned. Nevertheless, beware of that journal that repeatedly publishes cheap reports of limited experience by unknown authorities with remedies that are rightly regarded by reputable physicians with more or less suspicion, because of secrecy of composition or brazenness of exploitation. Such reports and experiences are of no value to the profession, and only those dealing with reputable and ethical pharmaceuticals are worthy of attention. The drug makers will soon learn that the profession is not to be hoodwinked by paid puffs published as original articles in cheap journals. The day for receiving large returns from that method is happily nearly gone, but it should be hastened by all physicians unanimously refusing to read or to be influenced by such articles, or to receive further copies of the journals in which they appear. The application of this remedy will greatly reduce the number of "fake" medical journals. If the profession could only realize the extent to which medical editors are constantly being importuned—even threatened—to cheat their readers by publishing as original matter articles that have been purchased or cajoled from frail or recreant doctors, there would be no hesitancy in applying the above remedy whenever the diagnosis of depraved journalism was made. It is better not to take any journal that repeatedly publishes unscientific articles concerning wares that are advertised in its pages. Unfortunately also it is almost always safe to look askance on those journals that publish "clinical and therapeutic reports," clippings from other journals, and "reading notices" scattered throughout their reading pages. Clean journals either refuse to publish such matter or else plainly include it in their advertising pages.

The preference should always be given to journals that are owned and entirely controlled by medical men. Even though of necessity they often err, it is at least certain that those conducted by reputable physicians are not promoted for mere mercenary reasons. Journals that are supported by or connected with reputable medical societies are universally governed by only the highest motives, and are well deserving of professional favor. Inasmuch as some of the best scientific work, and nearly all the practical advances in medicine, are first reported to medical societies, it follows that the papers and discussions presented are of the very freshest and most

definite interest to the profession, and that the prompt publication of this original matter is of unquestioned service to scientific medicine. Foremost in this class stands by right THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, whose national scope and well-recognized merits need no further mention. Other commendable instances of journals of this class will readily occur to your memory. They are deserving of your constant interest and cordial support. Their ascendancy, along with the few other really independent journals, will mean the extinction of disreputable journalism—a desirable end that can be obtained only through the discriminating favor of an awakened professional conscience—and will insure the occupancy by American medical science of a much higher plane than is possible under present conditions.

Know something about the character and reputation of the editor of the journal for which you subscribe. It is not in reason to expect a clean journal from the hands of a self-advertiser or of a man of doubtful reputation, nor on the other hand is it likely that a physician of good character will edit an immoral journal. Be discriminating in your choice of journals. If you accidentally subscribe for one that on trial proves to be venal and to be opposed to the best interests of the profession, stop it and refuse to receive further copies.

That medical journals are overnumerous and too frequently demoralized and virtuelose is in the main the fault of the profession, for if these papers were not received and read they would soon, as they deserve, die of inanition. Therefore it follows that the remedy for the existing disgraceful state of the ethics of medical journalism lies in the hands of the great body of the profession. Just so soon as you refuse to in any way countenance the readily recognized indecent journals, just so soon will they die for want of pabulum, for advertisers will be quick to realize that neither covert nor open advertising will pay in journals thus rejected by an enlightened professional conscience. If you are unable to persuade the promoters of these journals to cease sending you copies, write a letter for publication in one of the better class of journals stating the facts of the case, so that both the disgraced profession and the depleted advertiser may plainly see what journals are in ill repute with the profession and endeavor to exist by doubly deceiving both reader and advertiser.

It is not to be hoped that the reforms urged in this paper may be accomplished in a day, but if, in this imperfect manner, the conscience of the profession is aroused by directing attention to some of the evils that afflict American medicine through the shortsighted cupidity of many of its journals, the writer will feel amply rewarded for his effort.

CONGENITAL APHAKIA AND IRIDEREMIA.*

BY FLAVEL B. TIFFANY, M.D.

PROFESSOR OF OPHTHALMOLOGY, UNIVERSITY MEDICAL COLLEGE,
KANSAS CITY, MO.

Congenital aphakia is an exceeding rare anomaly, and is usually accompanied with other serious defects of the eye. The cases I report are of two brothers, aged 21 and 10, who visited my office Feb. 23, 1899. Advised to see me by Dr. Waterman, of Wilson, Kans., they were brought by an older brother who was perfectly emmetropic, with vision of 20/20 of each eye. This brother stated that there were seven children in the family, three of whom, one sister and these two brothers, had some trouble with their eyes; also that the mother had

*Read before the Midland Ophthalmological Society.

the same affection. An examination showed an involuntary oscillation of the globe—nystagmus of the lateral rotary form—also a gelatinous trembling or vibration of the iris—iridodonesis. The pupils were decentered toward the nasal and inferior quadrant, and would only slightly respond to the mydriatic. There was no history of consanguinity, but one of inheritance from the mother's side. The children having this trouble had brown irides, and those having perfect vision were blue-eyed, although the father had brown and the mother blue eyes. The iridodonesis nearly disappeared when the iris was under the influence of the mydriatic, but reappeared as soon as the pupil was allowed to contract. However, there was a slight trembling at the ciliary margin, seen during mydriasis. The fundus could not be distinctly seen by the direct method, nor did it show very distinctly by the indirect, and by this method the disc appeared convex. It was impossible to get any images by retinoscopy, or by the catoptric test: this I accounted for from the fact that there seemed to be no lens, excepting a small rim of one at the peripheral portion, which was opaque. These opacities seemed to be the residue or remnants of a once existing embryonic lens. They reminded one of a snowdrift nearly melted away. The eyes were all microphthalmic, especially in the lateral diameter. Each boy had one eye smaller, namely the left, and the other was not macrophthalmic. When the pupils were dilated the ciliary processes came distinctly into view. The younger boy had a shaking palsy—lateral—of the head. Each had binocular convergent strabismus and unioocular sursumvergence. The vision of the elder boy was 6/200 and that of the younger 5/200 of each eye.

Iridodonesis is usually accounted for by the loss of the crystalline lens, that is, the posterior support of the iris. In these cases I attributed the trembling of the iris not only to congenital aphakia, but probably to a weakness of the ciliary body and suspensory ligament. The irremediable dimness of vision I considered due to an arrest of development or defect of one or several of the ten layers of the retina. My colleague, Dr. Geo. E. Bellows, also examined the eyes with the ophthalmoscope and corroborated my diagnosis as to the aphakic and probable pathologic conditions of the eyes. For the strabismus I operated on the extrinsic ocular muscles, advancing without tenotomy, conserving all the power of adduction with no loss of abduction, bringing the axes into perfect parallelism, thus not only correcting the strabismus but lessening the iridodonesis to a considerable degree.

The most remarkable thing in these cases is that concave glasses gave improvement of vision showing a high degree of myopia, whereas hypermetropia was expected. I might add that both of these boys, aside from their eye trouble, were of good physical development and of bright intellect, the elder one already a graduate of a normal school and possessing a certificate for teaching.

Since writing this report, the sister of whom I spoke has consulted me with her brother Thomas, who has an iridodonesis with an eccentric pupil to the inferior and nasal quadrant (showing the patients). His eyes are not under the influence of a mydriatic and the iridodonesis is easily seen. He is aphakic, except that there is a remnant of the peripheral lens remaining, and he is also myopic. The iris trembles like a mass of jelly throughout its entire extent, and the trembling is more pronounced at the ciliary margin. In the sister Elva, aged 24, the right eye is disorganized; the cornea is not only

opaque, but has retrograded, having a yellowish exudate throughout all of the laminae; it is flattened antiposteriorly, is a shrunken, old ptihalitic eye and totally blind, with an increased ocular tension (T.+2). The left eye is also diseased, there being an interstitial vascular keratitis with an increased intraocular tension (T.+3), and only vision sufficient to discern an object when passed between the eye and a bright light. She is scarcely able to see or tell the direction from which the light comes in a dark room. The cornea, however, of her left eye, is not so opaque but that you will be able to illuminate the fundus and get a slight retinal reflex. There is some keratoconus, but there is no iris.

A few weeks ago I reported my first case of irideremia, the only one out of 25,000 patients seen within the last twenty years and now, following close on the heels of this first one, comes the second. It is with some hesitancy that I present my second case, it being such a rare affection and coming so soon after the first one. There is no iris present in this young woman's left eye, and the ciliary bodies here are to be seen. (The eyes were examined by the oblique illumination as well as by the direct and indirect methods, by several of the members present, all corroborating the diagnosis, especially agreeing that there was complete irideremia of the left eye.) May 19, I enucleated the right eye of Miss Elva and, on cutting it open, I found a fluidity of the vitreous humor, of a ceroplastic nature, the cornea hypertrophied and opaque, no iris, but a dense thick fibrous membrane stretching entirely across from the corneoscleral junction in front of the vitreous body. This membrane seemed to be in part an extension of the hyaloid membrane, besides being of a neoplastic nature. The crystalline lens was lodged between this membrane and the cornea, and was perfectly calcified, being as hard as a stone. From the fact that in the two brothers of this family there is aphakia, or absence of the crystalline lens, we need not be too much surprised in finding irideremia or absence of the iris in the sister. It is, however, most remarkable that two patients with this rare anomaly, irideremia, should have presented themselves so closely together.

805 McGee Street.

TREATMENT OF VARIOLA BY BICHLORID BATHS.

BY H. A. INGALLS, M.D.

CINCINNATI, OHIO.

During March, April and May last, Dr. R. L. Yeager and myself treated thirty-six cases of variola, of which one was hemorrhagic and thirteen confluent, without mortality, by means of these baths.

Our first case was seen in the papulo-vesicular stage, and we began the baths with the view of lessening the stage of pustulation, thereby securing a minimum of pitting, believing that pustulation was due to the ordinary pus cocci in the pores of the skin, and that in those vesicles that did suppurate the destructive process would be limited to the superficial layer. This case was a confluent one and we were pleased to note that not only was the disease lessened in pustulation and pitting, but that the patient was fairly comfortable, no opium being needed, and there was but little distortion of features at the beginning of the stage of pustulation and but a trace of the peculiar odor of the disease could be detected. That the baths were comforting is evidenced by the fact that the patient asked for them in case of delay. The method of giving the treatment was as

follows: A six-foot bathtub was placed beside the patient's cot and filled with a fairly warm —103-105— solution of bichlorid, 1 to 10,000, and the patient placed therein, head and shoulders above the solution; the nurse then went over the entire body, using a soft cloth, being careful of force applied so as not to cause much pain. After remaining in the bath about ten or twelve minutes, the patient was removed, thoroughly dried, dressed in freshly laundered clothing and placed in a clean bed.

These baths were given night and morning. After removal from the bath the patient expressed much relief, but shortly after, owing to the drying effect, complained of a burning sensation "just beneath the skin." We found that all were likewise affected, so, to obviate this, we began a routine practice of anointing patients immediately after the bath with a mixture of carbolic acid, bismuth subnitrate and olive-oil, with a very happy result.

Our observations lead us to believe this the best treatment yet offered. To substantiate this I give below short reports of Cases 8, 9, 10 and 11 of our series.

CASE 8.—R. M., a male, aged 6 years, never vaccinated, gave a history of exposure. First seen a few hours after the initial chill, his temperature was 104.6, pulse 132, respiration 29. On the morning of the third day eruption could be noticed appearing on the forehead at the edge of the hair. Temperature returned to normal on the evening of the sixth day, and remained so, there being no secondary nor suppurative fever in this case. A few of the vesicles went on to suppuration and a small number of shallow pock marks could be observed when the patient was discharged.

CASE 9.—F. M., a female, aged 30, was never successfully vaccinated. Seen shortly after the initial attack, her temperature was 102.6, pulse 98, respiration 20. On the morning of the fifth day of the disease temperature was normal, remaining so until the seventh day, when pustulation began and temperature went to 100. This was the highest point reached during the suppurative fever. The temperature returned to normal on the tenth day of the disease and remained so. This case was of the confluent type, and there was considerable puffing about the face at the beginning of the stage of pustulation, but not the horrible distortion usually seen in this form of the disease. A few deep pock marks were to be found at the time of discharge.

CASE 10.—P. W., a male, aged 22, was first seen when in the papulo-vesicular stage, with a history of severe onset. The temperature was 101.8, pulse 98, respiration 30. On the fourth day of treatment, about the tenth of the disease, the temperature reached 102.6 and was normal (to continue so) on the eighth day of treatment, about the thirteenth of the disease. This case was also of the confluent type and, with the exception of the pustular stage the features were not much distorted, the patient complained so much that morphia was given. This patient was considerably pitted.

CASE 11.—M. H., a male, aged 20, gave a history of severe onset. Seen in the papular stage, the temperature was 98.8, pulse 72, respiration 24. On the fifth day of treatment, about the ninth of the disease, the temperature reached 100.2, returning to normal (to remain so) on the eighth day of treatment, about the twelfth of the disease. His features were swollen at the beginning of the stage of pustulation, but not repulsively so, as in Case 10. There was but a slight amount of pitting.

Comparing the above cases it will be noticed that the disease is shortened by this treatment. Cases 9 and 10

were of the confluent type, and the one treated from the onset returned to normal four days sooner than the one in whom the treatment was begun after the stage of vesiculation had been reached, and even in this case the disease was aborted three or four days.

Bibb and Osborn have recently reported using these baths with great success, the former reporting several hundred cases in the practice of colleagues, without mortality. I have not had the pleasure of perusing a description of their technique, so am unable to say how it resembles or differs from the above.

Taking the above facts into consideration I think the following deductions can be made in regard to this treatment: 1. There is practically no mortality. 2. The suppurative fever can be shortened four to six days if patient is treated from the onset. 3. A minimum of pitting is secured and an almost entire absence of the characteristic, disagreeable odor. 4. The period of desquamation is materially lessened owing to the thinness of the scab formation. 5. Pain is much reduced; morphia being rarely indicated. 6. The great distortion of features, which gives us such repulsive looking patients, is eliminated to a great extent.

Berkshire Building.

THE SMEGMA BACILLUS.

BY OSCAR A. DAHMS.

CHICAGO.

(Concluded from page 986.)

THE SIGNIFICANCE OF THE SMEGMA BACILLUS IN THE DIAGNOSIS OF TUBERCULOSIS AND SYPHILIS.

Repeated allusions have been made to the striking similarity which exists between the smegma bacillus and the bacillus of syphilis, of tuberculosis, and of lepra. It is obvious that errors in the diagnosis of these diseases, especially of tuberculosis, might lead to serious consequences, and it is further apparent that because of the close resemblance between these microscopic forms, there exists a dangerous possibility of the occurrence of such mistakes whenever a diagnosis is to be based on the detection of the presence of the specific bacillus in physiologic or pathologic fluids and secretions. For these reasons it has been the aim of many experimenters to devise infallible differential stains for these organisms. Considering the comparative unimportance of a differentiation between smegma and lepra bacilli, no further attention will be devoted to that subject here, but the one toward which the careful efforts of numerous observers have for so many years been directed, viz., the successful differentiation between smegma and syphilis bacilli and smegma and tubercle bacilli, requires to be dealt with at some length.

Lustgarten employed the following method to distinguish the syphilis bacillus in sections of syphilitic tissue: 1. Anilin water-gentian-violet solution, twelve to twenty-four hours at ordinary temperature, or two hours at 40 C. 2. Wash in absolute alcohol several minutes. 3. Immerse in an aqueous solution of potassium permanganate—1½ per cent.—ten seconds. A brown flocculent precipitate of manganese hyperoxid forms. 4. Treat with an aqueous solution of sulphurous acid—1 to 2 seconds. 5. Wash thoroughly in distilled water. Nos. 3, 4 and 5 are repeated; at each repetition a shorter time is given to every individual step in the process until the sections are colorless. For cover-glass preparations water is used in place of alcohol after treating with gentian-violet, and the various stages are shortened. The specimens are run through alcohol and oil of cloves, and

finally mounted in Canada balsam. It was observed that smegma bacilli stain readily by this method. For decolorizing the micro-organisms, Edward Welander has recommended the use of oxalic instead of sulphurous acid in this process, for both syphilis and smegma bacilli.

De Giacomi devised a means of staining the syphilis bacillus, which, for cover-glass preparations, consists of the following steps: 1. Stain in hot anilin-water-fuchsin solution for several minutes. 2. Immerse first in a weak, then in a strong, solution of ferric chlorid. 3. Wash in water and pass through the usual reagents for dehydrating and clearing. The syphilis bacilli are stained red. This method, like that of Lustgarten, is applicable to the bacilli of smegma, and does not constitute a differential stain.

In 1887, J. Marcuse, under the guidance of Neisser in Breslau, conducted a series of very careful experiments in the hope of proving or disproving the identity of the syphilis and smegma bacillus, and of ascertaining the effect of each on the animal body, but without success. In spite of the most painstaking efforts he failed to prove that Lustgarten's bacillus is the specific cause of syphilis, and a similar lack of success marked his attempts to cultivate both varieties of organisms. In the same year Doutrelepont and Schütz published a new method of staining the bacillus of syphilis. They employed an aqueous solution of gentian-violet to impart color to their specimens; decolorized them in nitric acid—1.15—then in 60 per cent. alcohol and finally in absolute alcohol. Two years later, Joseph Lewy found that Doutrelepont's method left smegma bacilli unstained, and published the following tabulated differences between the two varieties of micro-organisms:

SYPHILIS BACILLI.	SMEGMA BACILLI.
Found in secretions of syphilitic lesions and in syphilitic tissues of all three stages of the disease.	Found in smegma praeputii penis et clitoridis, between labia majora and minora. In grooves of groin, and about the anus.
Generally lie on the epithelial cells, although they may sometimes occur free. Are rarely present in large numbers.	Lie on or about the epithelial cells, often in large numbers. Also occur abundantly outside the cells, the latter being few.
Are, as a rule, slender, straight or curved rods.	Appear generally as smaller, plumper rods. A greater diversity of form exists.
In staining, resist the action of alcohol for a considerable time.	Are more readily decolorized by alcohol.
Are decolorized by acids in 30 to 40 seconds.	May resist the action of acids for two minutes or longer.
Are decolorized by glacial acetic acid almost instantaneously.	May resist the action of glacial acetic acid for 25 seconds.
Are more numerous the more recent the infiltration.	Are more numerous the longer the secretion has accumulated.
Are stained well by Doutrelepont's method.	Are not stained by Doutrelepont's method.

The diagnostic value of a means of differentiation between smegma and syphilis bacilli is not a considerable one. If it is possible to find bacilli in gummatous lesions of internal organs it may be safely assumed that they are not those of smegma, for it would be difficult to understand how a penetration of smegma bacilli into the interior of syphilitic foci could occur. As regards the presence of bacilli in cutaneous ulcers, a differentiation is often a difficult task, but the diagnosis of syphilis is by no means dependent on a demonstration of the presence of Lustgarten's bacilli in the eruption. Not so with tuberculosis. That the necessity for a means of differentiation between the tubercle and smegma bacillus may become an urgent one is apparent from the fact that a diagnosis of tuberculosis of the urinary tract is often dependent on the discovery of the bacilli in the urine. If the question of the advisability of resorting to operative measures on the urinary organs is to be settled by a demonstration of the presence of tubercle

bacilli in, or of their absence from, the urine, it becomes self-evident that every possible source of error must be eliminated. The smegma bacillus has been mistaken for the tubercle bacillus a number of times, and unnecessary surgical operations performed on the strength of microscopic findings. Numerous attempts have been made to discover a useful method of differentiation, but of the many processes that have been recommended and tried, most have been abandoned.

It was known that the bacillus of smegma is more sensitive to acids than the tubercle bacillus, and on this fact were based many of the earlier differential stains, but it remained for Grethe to show, in 1896, the unreliability of these methods and to prove that the difference in sensitiveness to acids between the two bacilli is an exceedingly slight one. At the same time he recommended a new process to distinguish the tubercle from the smegma bacillus, in which acids are entirely dispensed with. This method is based on the property possessed by the smegma bacillus of being attacked by alcohol with greater ease than is the bacillus of tuberculosis, and consequently after the cover-glass preparations have been treated with hot carbol-fuchsin and washed in water, Grethe transfers them to a saturated alcoholic solution of methylene blue. The bacillus of tuberculosis treated according to this method retains the red color, while the smegma bacillus is stained blue. Instead of the saturated alcoholic solution of methylene blue, Czaplowski's alcoholic fluorescein-methylene blue may be employed as an after-stain and means of differentiation. That this method was not universally satisfactory is indicated by the fact that within a short time after the appearance of Grethe's publication Bunge and Trantenroth reported occasional failures. These two observers, moreover, pointed out that the peculiarities manifested by the smegma bacillus in the process of decolorization, which were attributed by Gottstein, Matternstock, Bienstock and others to a coating of fat surrounding each organism, could not be due to that cause, for the reason that these peculiar properties manifest themselves even after the bacilli have been treated with chloroform or ether, and because the same properties are not displayed by the numerous other bacteria occurring in smegma. Although failing to state a reason for the belief, they expressed their inclination to look on the fatty acids as the real cause of the peculiar staining qualities of the organism, presuming that these acids are taken up and assimilated by the protoplasm of the bacillus. Czaplowski called attention to the fact that as these peculiarities persist even when the organism is cultivated on media free from fat, it necessarily follows that they are dependent on the peculiar nature of the substance of the bacillus itself.

For differential purposes Bunge and Trantenroth recommended the following procedure: The cover-glass preparations, without having been previously fixed in the flame, are immersed in absolute alcohol or in a mixture of alcohol and ether for a period of time varying from several to twenty-four hours. It is claimed that by this means the organisms lose their resistance to decolorizing agents to such an extent that after having been stained with carbol-fuchsin, and having remained for 1 to 2 minutes in dilute sulphurous acid, an aqueous solution of methylene blue will, in the overwhelming majority of cases, succeed in imparting its color to the bacilli. Tubercle bacilli, after this treatment, still remain intensely red.

Finally, the same observers disclosed another process, which is, according to their statements, absolutely reliable in every case, and consists of these stages: 1.

Place cover-glass preparations, without previous heating, into absolute alcohol for three hours. 2. Treat with a 3 per cent. chromium solution for fifteen minutes. 3. Stain with carbol-fuchsin. 4. Treat with dilute sulphurous acid for two to three minutes. 5. Treat with concentrated alcoholic solution of methylene blue for five minutes. Tubercle bacilli retain the red, smegma bacilli assume the blue color.

In order to test the method of Bunge and Trantenroth the author prepared a series of slides, and applied the process last described. One hundred and seventy-three specimens of tubercle bacilli were stained in this manner. The bacilli were obtained from sputum twenty-two times, and in the remaining 151 cases from pure cultures. The organisms appeared red without exception. Sixty-three cover-glass preparations of smegma bacilli invariably displayed the organisms stained blue. These smegma bacilli were derived from every available source, but the locality of the growth had, in these cases, no influence on the tinctorial qualities of the micro-organisms.

Perhaps the most valuable practical result of the work of Bunge and Trantenroth was the furnishing of the experimental proof that after thoroughly cleansing the orificium externum urethræ, the urine which is withdrawn by means of a clean catheter is constantly free from smegma bacilli.

Laser contends that cultivation of the smegma bacillus is the most reliable method of differentiating it from those bacilli which are morphologically so deceptively similar to it. He was able to obtain growths of smegma bacilli in twenty-four hours from urinary sediment, while tubercle bacilli required for their development a period of time varying from ten to fourteen days.

Czaplewski found smegma bacilli in sputum, and recently Fraenkel and Pappenheim also reported the occurrence of this organism in expectorations from the lungs. Fraenkel observed the bacillus in the putrid sputum from a case of pulmonary gangrene. If Gabbet's method be employed, he cautions the microscopist to look with suspicion on organisms resembling tubercle bacilli when they occur in sputum rich in myelin and fatty acids. Fraenkel believes Honsell's method to be of utility in differentiating, but he takes care to add that no positive diagnosis can be made without resorting to inoculation of animals. In Honsell's process the bacilli are first stained with carbol-fuchsin, then treated for ten minutes with 3 per cent. hydrochloric acid in absolute alcohol, and finally counterstained with a moderately strong alcoholic solution of methylene blue. Tubercle bacilli are not decolorized.

In Pappenheim's case Gabbet's method revealed numerous red bacilli in the sputum, and a clinical diagnosis of pulmonary tuberculosis was made. In addition to this, the patient was supposed to be afflicted with intestinal tuberculosis. The autopsy disclosed the existence of chronic bronchitis, bronchiectasis, double ascending bronchopneumonia, a small gangrenous pulmonary abscess, and diphtheritic and follicular enteritis of the ileum, colon and rectum. All traces of tuberculosis were absent.

Efforts made by the writer to discover a ready means of differentiation between smegma and tubercle bacilli by staining with osmic acid together with various anilin dyes, before and after treating for diverse lengths of time with chloroform and ether, were not productive of successful results.

Dr. Marion Dorset² has called attention to the results

obtained in his work with Sudan iii as a selective stain for the tubercle bacillus. Cover-glass preparations fixed in the usual way were immersed for five minutes in a cold 80 per cent. solution of Sudan iii in alcohol. Subsequent thorough washing for five minutes in 70 per cent. alcohol removed the excess of the stain. Dorset found that while this process imparted to the tubercle bacillus a bright red color, it did not stain a variety of other micro-organisms with which he experimented. Among these organisms was the smegma bacillus.

The writer's own experiments with this process have been confined exclusively to tubercle and smegma bacilli. The latter invariably failed to take the stain; tubercle bacilli always appeared red after its application. Methylene blue was used as a counter-stain.

While the total amount of experimental work performed with Dorset's method is perhaps still too small to warrant the assertion that the process is always trustworthy, yet further experimentation will probably prove that such is the case. As far as the reliability of its results is concerned, it is at least the equal of the method of Bunge and Trantenroth, and in the readiness and rapidity with which it can be carried out is far superior to the process devised by the German investigators.

Attention to the following facts may frequently be of service in attempts at differential staining: 1. Smegma bacilli do not occur in internal lesions. 2. Lustgarten's bacilli are not known to have ever occurred in sputum,³ although if syphilitic lesions exist in the respiratory passages or mouth and these lesions contain Lustgarten's bacilli, it must be admitted that the mixture of the latter with the sputum is not impossible. 3. As first stated by Fraenkel, sputum containing a large proportion of myelin and fatty acids is apt to contain smegma bacilli, but these are not usually numerous. Regarding other varieties of sputum the writer has found: *a*, that the presence of smegma bacilli is exceedingly uncommon; *b*, that the possibility of finding smegma bacilli can be reduced to a minimum by a thorough brushing of the teeth, washing out of the mouth, and gargling of the throat, preferably with a solution containing a small amount of alcohol or sodium bicarbonate, previous to the expectoration of the sputum to be examined. In fact, it may be regarded as doubtful whether smegma bacilli ever occur under these circumstances in sputum which does not possess the characteristics mentioned by Fraenkel. 4. Smegma bacilli do not occur in urine obtained by catheterization after thoroughly cleansing the urethral orifice. 5. In the hundreds of preparations examined by the author, it was never possible to find a single smegma bacillus showing in a typical way the peculiar sharp curve near one extremity which is so frequently observed in tubercle bacilli.

With the increase of our knowledge regarding the peculiarities of growth of the smegma bacillus, the recent valuable improvements in staining methods, and the non-pathogenic character of the organism placed beyond reasonable doubt, it can not but rapidly lose the prominent position it has held in the field of bacteriologic diagnosis.

ADDENDA.

History.—It may be mentioned that Zahn, in 1882, first described the occurrence in sputum of rod-shaped organisms, resembling the bacilli of tuberculosis. He was able to prove the non-identity of these organisms and tubercle bacilli. The existence of similar forms in smegma had not at that time been revealed.

2. A New Stain for the Bacillus Tuberculosis. N. Y. Med. Jour., Feb. 4, 1899.

3. Kamen (Internat. Klin. Rundschau, 1889, 1, 10, 13) claims to have found syphilitic bacilli in the sputum of a boy 9 years of age, afflicted with hereditary syphilis.

Staining.—A more extensive experience with Dorset's Sudan iii has shown that as far as its inability to give color to smegma bacilli is concerned it has borne out the truth of the statements previously made as to its general reliability as a differential stain. It occasionally happens, however, even when Dorset's directions are faithfully carried out, that tubercle bacilli are but faintly tinted by the dye; so faintly, in fact, that the possibility of overlooking individual bacilli because of the lack of sufficient color can not be entirely excluded.

Significance of Smegma Bacillus in Diagnosis of Tuberculosis.—A. Dietrich has recently described an interesting case in which the symptoms, and the detection of what appeared to be tubercle bacilli led to the clinical diagnosis of peritoneal tuberculosis. The autopsy, performed by v. Baumgarten, disclosed the existence of a purulent ovarian cyst communicating by means of a fistulous tract with the lumen of the rectum. No macroscopic nor microscopic tubercular lesions could be found. The bacilli which had been regarded as those of tuberculosis could still be obtained from the cyst contents, but careful examination showed them to be slightly longer than the average tubercle bacilli, and not constantly characteristically grouped. Injections of these microorganisms into guinea-pigs did not result in the production of tubercular changes. Cultivation experiments were unsuccessful.

It is interesting to note that an early examination of the fluid obtained by exploratory puncture, before any conclusions regarding the diagnosis of the case had been reached, revealed pus microbes, but no bacilli. Some time after purulent intestinal discharges had indicated the occurrence of perforation these rod-shaped organisms began to make their appearance.

The bacilli were probably those of smegma, which, as Dietrich himself suggests, may have gained entrance, *per intestinam*, from the anal region, and finding in the degenerating contents of the cyst a favorable medium for development, multiplied to considerable numbers.

The possibility of the fact that the exploring finger may have been responsible for the introduction of the bacilli into the rectum is mentioned by Dietrich.

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CLINICAL REPORT.

DOUBLE INGUINAL HERNIA UPON THE SAME SIDE: ILLUSTRATION.

BY CHAS. C. ALLISON, M.D.

OMAHA, NEB.

In his excellent monograph on the anatomy and pathology of the rarer forms of hernia, Moynihan¹ very accurately defines the different types of bilocular hernia.

The essential feature of both the properitoneal and the interstitial protrusions is that the loculi have a common neck, ostium abdominale. In the properitoneal the inner loculus lies between the serosa and the fascia transversalis, the outer usually occupying the ring or canal, while in the interstitial the upper loculus may be inter- or extra-parietal, and the lower in the inguinal canal, the loculi having a common outlet to the abdominal cavity.

The presence of two distinct hernial sacs, the one opening into the abdomen at the internal ring, the other having a distinct neck at the external ring, that is to say, the presence of both the direct and the indirect forms in a hernia on the same side is, so far as I am able to learn, a hitherto undescribed hernial anomaly.

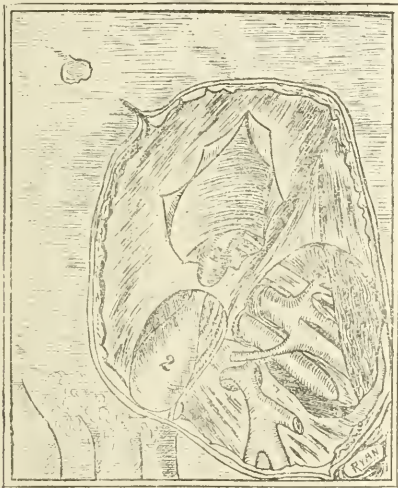
The case which I will describe was a male, 56 years of age, operated on Feb. 3, 1900. The hernial protrusion was oblong in shape and extended into the upper portion of the scrotum. It was reducible and its reduction revealed a very marked attenuation of the abdominal muscles over the inguinal region.

A high incision of the external oblique aponeurosis revealed a sac (Fig. 1) conical in shape and easily separable from the underlying tissues (cord). Its isolation

¹ The Lancet, February 24.

was accomplished, the sac excised and sutured well up within the limits of the internal ring. It was then found that the larger part of the hernial protrusion (Fig. 2) remained in the shape of a direct inguinal hernia which passed into the upper portion of the scrotum. The contents of this sac was omentum and bowel, after the replacement of which the sac was also excised, its neck closed by suture high up within the borders of the external ring, after which a transplantation of the cord was done after the Bassini method, additional support to the external ring being attained by a transplantation of a portion of the rectus muscle after the method described by Bloodgood. No complications were met with during convalescence, and the abdominal wall seemed to offer good resistance to internal pressure.

While it is true that the causes which operate in the production of hernia usually develop a single hernia, although it may be bilocular, there is no reason why two distinct sacs may not develop, yet practically such cases are extremely rare. I have outlined the different types of interstitial hernia for the purpose of making a differentiation more certain in case any abnormal condition is found in the relation of the sacs to the surrounding tissues.



The Bassini operation, with slight modifications to suit the exigencies of the case, has been employed by me for a number of years, but there is one step in particular quite generally followed by the writers on this subject, from which it has been my custom to depart, and that is a high suture of the neck of the sac as opposed to its ligation. The advantages of this surgical apposition of the peritoneal edges over their strangulation by the ligature will be, I think, apparent.

15th and Douglas Streets.

A PARIS omnibus was upset last May and a medical student had his skull fractured. The driver and the company were held responsible and Dr. Laugier testified that the injury to the skull had evidently caused a mental weakness although there was no wound apparent at this date. The court awarded the student \$5000, reserving the right to resume the case if his condition became aggravated.

SPECIAL ARTICLE.

RELATIONS OF PHARMACY TO THE MEDICAL PROFESSION.*

II.

Following the preliminary observation on proprietary medicines, in THE JOURNAL of last week (pp. 986-988), the various classes will be taken up and considered in their respective relations to medical and pharmaceutical practice. They may be divided as follows:

1. "Patent medicines"—medicinal articles of secret composition advertised directly to the laity, the proprietary right consisting in a copyrighted label and in an arbitrary trade-mark or title.
2. "Patent medicines" as above, being also protected by patent.
3. Dietetic preparations, including infants' and invalids' foods, malt and alcoholic liquids, mineral waters, meat products and restoratives.
4. External antiseptics, disinfectants and deodorants, the formulas or general composition known, usually protected by trade-mark or copyrighted names.
5. Proprietary pharmaceuticals—preparations of secret composition protected by trade-mark or copyrighted names, offered for medical prescription.
6. Proprietary pharmaceuticals—preparations under trade-mark or copyrighted names, of which the general constituents are known, the purported formulas being represented by enumeration of the ingredients, more or less intelligibly, without information as to how a similar preparation could be produced.
7. Pharmaceutical specialties—mixtures, preparations of well-known composition, formulas and full information published. They comprise: *a*, those offered under a descriptive title, protected, if at all, only through the copyrighted label, but not through the name of the preparation itself; *b*, those protected by trade-marked or copyrighted names.
8. Pharmaceutical specialties—simples, preparations of well-known composition, usually made by some special process or from crude material of certain character, the process sometimes being patented. These may be offered: *a*, under descriptive titles without any protection, or *b*, be designated by protected names.
9. Chemicals—substances of definite chemical composition, not mixtures merely, made by patented process and protected by trade-marked or copyrighted names, sometimes the product also being patented.
10. Chemicals and products made by patented processes.
11. Instruments and surgical apparatus protected by patent on mechanical devices.

PATENT MEDICINES.

It should be remembered that the so-called "patent medicines" are not patented for the all-sufficient reason that, in order to comply with the requirements of the patent laws, the composition would have to be divulged, to which the originator or rather "appropriator" would never consent, since it would disclose the fact that there was neither originality nor virtue in the alleged discovery. On the contrary, secrecy of composition is the *vis medicatrix* of all "patent medicines," since this admits of the most mendacious misrepresentation to bolster up their alleged virtues and puff them to a credulous public. The two first generally known medicines of this class, "Ayer's" and "Jayne's Family Medicines," were, however, exceptions, since formulas purporting to give the composition were furnished to medical men when they were first sold, some fifty years ago. Considering that the "pectoral" was alleged to contain morphia, such publicity was rather to be commended; but, on the other hand, the purported presence of iodid of iron in one of the preparations, consisting of an extract of a number of drugs, which would form "ink" with ferrous iodid, suggests that even the pioneer patent medicine men recognized the value of complicated formulas and their potency in preserving for them a monopoly in their offspring.

* The second of a series of articles to appear weekly in THE JOURNAL designed to correct the abuses from advertising and patronizing pharmaceutical specialties.

The history of some of the most celebrated "patent medicines" even during the past quarter of a century almost rivals the charlatanism of the Middle Ages. Who does not remember "Condurango," backed by the "Bliss Syndicate" and exploited by the leading statesman at Washington, because it "cured" the mother-in-law of Schuyler Colfax of cancer, and the subsequent discovery that the wonderful remedy was a bark without any special therapeutic effect? "Kaskine" was launched as the most wonderful discovery of the age, a substitute for quinin, without disagreeable taste or after-effects, recommended through a testimonial from one of the celebrated medical teachers of New York—the long-sought desideratum, the realization of the dreams of the world's most famous chemists, rivaling the philosopher's stone. It proved, on analysis by Dr. Hoffmann, to be 20 grams of granulated sugar, selling for one dollar!

Then there was the "Sweet Corassa Compound," or the celebrated "Bible House Prescription," furnished gratis to sufferers by the Rev. Jos. T. Inman of New York. An old postal station in New York was located in an old building known as the "Bible House," and here the reverend Inman, who represented himself to be a retired missionary, received his letters. To the victim would be sent a prescription impossible of compounding, and shortly afterward he would be advised that the mixture could be had on receipt of \$3.50, bare cost of the ingredients—about four ounces of gentian and similar vegetable powders. The Halish Sativa Prescription was operated on the same plan, by Noyes, in Rochester, N. Y., celebrated as the home of many similar enterprises, including the "Safe" remedies introduced by Safe-Warner, whose kidneys having been rejuvenated by an infusion of hepatica and saltpeter, felt compelled to force this discovery as a boon on suffering humanity. After exhausting the renal possibilities of the American public, Warner went to London and succeeded in floating a half million dollars in shares on the unsophisticated Britishers only to finally meet with reverses and defeat.

PATENT MEDICINES—PATENTED PROCESS.

Since secret composition is the chief element of the patent medicines, obviously, securing protection through patent of the process with its attendant publicity and limitations would never be thought of. Yet there are exceptions, notably in the case of the most successful of the present-day medicines.

Castoria.—The formula¹ of the preparation of a syrup of senna, with aromatics and alkaline salts together with a process for the extraction of the senna with hot water containing a little sodium bicarbonate, was patented by one Dr. Samuel Pitcher, some thirty years ago, under the name of "Castoria." The name and the label were copyrighted. The patent on the process having expired by limitation some years ago, it was discovered that the name also reverted, along with the process, to public use, and various parties began the manufacture of castoria. The owners of the original patent began legal proceedings against the infringers and succeeded in all but one instance in prohibiting any one from making castoria or vending any article under that name except that made by them. In one instance the case was carried to the United States Supreme Court, which, in an opinion written by Justice Brewer, held that the patent on the process having expired, the name "Castoria," being the only name to designate the article, became a common name and therefore free for use. The design, style and signature of the package being copyrighted can not be imitated, hence the tremendous effort on the part of the original manufacturers to familiarize the public with the signature of a person who manages the business for the present owners—who by the way married into the family. As for Dr. Pitcher, who was the original owner, he was at last accounts struggling along in Hyannis, Mass., apparently content with an occasional crumb from the table of the New York Dives, who has made millions out of his "discovery," and yet the extraction of senna with a weak alkali to furnish with correctives a preparation

which will be active but not possess gripping qualities, was practiced long before Dr. Pitcher appeared on the stage.

Syrup of Figs.—A preparation quite similar to "Castoria" and rivaling the latter in popularity is "Syrup of Figs." While the name is registered as a trade-mark, it is an open secret that the preparation is a syrup of senna containing some fig juice and aromatics. Although designed for domestic use, this article has been extensively advertised in medical journals and no secret made of the fact that the fanciful name, "Syrup of Figs," was given to the preparation to distinguish it from all other laxatives and also from the fact that it contained a small quantity of the juice, or soluble substance, of figs, together with aromatic carminatives, white sugar and water. In order to satisfy the medical profession and guarantee the excellence of its product, the manufacturer gives the component parts of each teaspoonful as: solution of active principles of senna, 15 minims; aromatic syrup of figs, 3 minims; white sugar, 24 grains; water 18 minims, the above representing 15 grains of senna.

This combination, except for the figs, is substantially that of the official syrup of senna, being of the same strength. There is a discrepancy in the formula, however, which would be of little consequence but for the apparently exact manner of stating the quantities in a teaspoonful. While the figures of the above quantities added together make 60 grains, without taking the slight specific gravity variation of the liquids into consideration, the syrup resulting from the solution of the sugar will not measure more than 50 minims, instead of 60 minims, or a teaspoonful. Of course, the idea intended to be conveyed by the formula was, that to the liquid extract of senna and aromatic syrup of figs sufficient sugar and water were added to make 60 minims, or one fluid dram. The fact that the 24 grains of sugar when in solution loses nearly one-half its volume seems to have been lost sight of by the chemist who furnished the formula—a trifling error and no doubt unintentional, but this formula is an illustration of how formulas are frequently carelessly thrown together for advertising purposes. This often happens through the ignorance of the advertisers themselves, and often through design, immunity from discovery being relied on through the indifference or unfamiliarity with the subject by the medical readers.

Several years ago an injunction was sought against a manufacturer of so-called non-secret medicines for infringing on the trade-mark, "Syrup of Figs." The case was strongly contested and, when it was proven, and also admitted by the plaintiff, that the article sold under the name of "Syrup of Figs" was really a syrup of senna, the injunction was denied, the court practically deciding that the law could not be invoked to protect any person in the use of a name which was admittedly false, as applied to the character and origin of an article, and that no relief could be afforded "without coming into court with clean hands." From several published formulas, and also practically by the admission of the manufacturers, "Syrup of Figs" owes its value to the use of desensitized senna, which prevents the gripping effects attendant on preparations of senna not so treated. The idea is an old one, originating with the late Dr. Hermann Hager, who published a formula for extracting the resin from senna by alcohol. On evaporation of the alcohol the glucosids to which the cathartic action is due are then extracted with water. It has since been observed that the same object is accomplished by extraction of the senna with warm—not hot—water and precipitation of the gummy and other inert matter by the addition of 20 per cent. alcohol; in the clear liquid, on separation of the precipitate, the sugar is dissolved, without heat and aromatics added. This is the official process for syrup of senna, which is 25 per cent. drug-strength, the aromatic being oil of coriander. When made in this manner from Alexandria senna—not "siftings"—there is no better preparation of senna. The syrup of senna should not be made by mixing the fluid extract of senna with syrup simply, since the fluid extract, being made with dilute alcohol, contains the resin to which the objectionable gripping qualities of senna are due.

DIETETIC PREPARATIONS.

In this group are included all preparations or products used as refined foods. Since it is sometimes impracticable to differ-

¹ The formula, according to the patent, is as follows: To 135 pounds of senna leaves add 35 gallons of water at 65 C., in which has been dissolved 48 ounces of sodium bicarbonate. Exhaust the senna by percolation until 240 pounds are obtained. In this dissolve 210 pounds of sugar, and four ounces of Rochelle salts, then add spirits of saffron, 18 grains; spirits of pepp, spirits ebopodidum, spirits of menth, piper, spirits of anise, of each two ounces.

entiate between a food and a medicine in its broad sense, it is somewhat difficult to draw the line sharply between these substances. These products are usually designated by a trademark or copyrighted name. They are rarely protected by process patent. In view of the intermediate position they occupy, the ordinary rules of ethics can not be strictly applied to them and should be largely modified. They are mostly obtained on the recommendation of physicians, often with fair knowledge on the part of the patient as to what they are or what the general composition is.

The name usually indicates the general composition of the article, but not always. If coined names are to be employed, they should indicate the origin or composition of the article rather than be derived from therapeutic uses or effects. A descriptive name in conformity with scientific nomenclature should be associated with the trade-name as a synonym. Preference should be given, by physicians, to such of these articles as conform to these reasonable requirements.

There is one general requirement which should be strictly adhered to, viz., when any article of this character is exploited to the laity as a remedy or cure for any complaint or ailment, medical patronage should be at once withdrawn. Instances are numerous where, for example, a lithia water has met with great favor of medical men, who have been unstinted in their testimonials and thus given the water standing and reputation. No sooner was this established than the owners began to exploit the water to the laity in public prints, often with the most hideous "before and after taking" illustrations. Many of the so-called malt extracts (alcoholic) have a similar history. The first domestic brand of malt extract was designated as a "Tonic" and, after its enterprising proprietor had spent a large fortune in introducing it to the medical profession and the drug trade, he was surprised that it was not better appreciated, not realizing that an up-to-date physician could not afford to prescribe his tonic, no matter "how famous the town" in which it was made. The result was that the article degenerated into a common beverage and, as such, found its level in the buffet. The rule then should be, emphatically; these articles may be patronized, provided their composition is known and they are not exploited as therapeutic agents.

Therapeutics.

In Gouty Subjects.

- R. Extracti colchici radices.....gr. iv
Ft. pil. No. xii. Sig. One or two three times daily. Spirits of camphor locally. —*Brocq.*
- During the formative period, give tar water to drink, and:
- R. Sulphuris sublim.....gr. iss
Pulv. camphoræ.....gr. i
- M. For one capsule. Sig. Three such to be taken daily. —*Robin.*
- R. Sodii sulphatis
Sodii bicarbonatis
Potassii sulphatis
Acidi tartarici
Mucilag. acaciæ ãã.....3iiss 10j
- M. Sig. From ten grains to a dram daily in divided doses, in a wineglassful of water or milk.
- R. Sodii arsenitis.....gr. i
Syrupi simplicis.....3i
Aque q. s. ad.....3iv
- M. Sig. Teaspoonful in water twice a day.

FOR COMPRESS.

- R. Chloroformi.....3viiss 30j
Essence earyophyl.....3i¼-iiss 5-10j
Beechwood creosote.....gr. xv-xxx 1-2j
Camphorated oil.....3xiiss 50j
—*Gourine.*

Apply carbolic acid to the central point.

- R. Ichthyol.....3i
Emplast. plumbi.....3ii
Emplast. resinæ.....3i
- M. Sig. As a plaster. —*Stechwagon.*

- R. Acidi salicylici.....3iiss
Emplast. saponis.....3iiss
Emplast. diachyli.....3i
- M. Sig. Spread and apply.

Insomnia.

The following methods of treatment of this condition are quoted from "The Practitioners' Manual."

WHEN PAIN IS NOT AN ELEMENT.

- R. Chloral
Ammonii bromidi.....gr. xx
Extracti nucis vom. fluidi.....gtt. x
Ext. belladonnæ fluidi.....gtt. ii
- M. Sig. To be taken at once and repeated in an hour or two if needed. —*Adolphus.*

IN NERVOUS INSOMNIA.

- R. Croton chloral
Tinct. zingiberis ãã.....3iiss 10j
Aque mentha pip.....3xxxviiss 150j
- M. Sig. A dessertspoonful at night. —*Boas.*

FROM OVEREXCITEMENT, WITH MOTOR RESTLESSNESS.

- R. Sulfolal
Ext. conii fluidi ãã.....3i
- M. ext. disp. in caps. No. xv. Sig. One capsule at 6, 8, and 10 p. m.

FOLLOWING ALCOHOLIC EXCESS.

- R. Chloral
Potass. bromidi ãã.....3iv
Extr. cannabis indicæ
Ext. hyoscyami ãã.....gr. xvi
Chloroformi.....3ii
Aque bullientis q. s. ad.....Oij
- M. Dissolve the extract of cannabis indica in the chloroform and add the chloral. Pour the boiling water on this and add the bromid and the hyoscyamus. When cold, filter. Dose: Dessertspoonful to a tablespoonful. —*E. C. Hoover.*
- R. Amylene hydrate P. G.gr. xc
Morphinæ hydrochloratis.....gr. ¼
Extract of licorice.....3iiss
Aque dest.....3xxxv
- M. Sig. Half on retiring.
- R. Amylene hydrate.....gr. lx
Morphinæ hydrochloratis.....gr. ¼
Mucilag. acaciæ.....3vi
Aque.....3xiiss
- M. Sig. As an enema. —*Fischer.*
- R. Paraldehyde.....3ii
Glycerin.....3ss
Syrupi.....3i
Spt. etheris nitrosi.....5x
Olei anisi.....gtt. xx
- M. Sig. Tablespoonful every half hour until sleep, or until six have been taken. —*A. A. Rawson.*
- R. Chloral.....gr. x
Sulphonal.....gr. x
Phenacetin.....gr. v
- M. Sig. For one dose. —*Edwin Rayner.*

In the eruptive fevers in childhood, tuberculous meningitis, pernicious malaria with cerebral excitement triorial, gr. vi-xv, in the twenty-four hours. Children show a particular tolerance and it is prompt in action. —*H. D. Chapin.*

In neurasthenia, strychnin and digitalis are often effective. —*C. K. Clarke.*

In overworked students, strychnin or hot coffee. Magnesium sulphate is an ancient but trusty ally. As a last resort, chloralamid, but without the patient knowing what drug he is taking. —*Donald MacAlister.*

In the insane, chloral is the surest sleep-producer. Paraldehyde at times acts well. Secure sufficient outdoor exercise and supply suitable diet. —*J. Y. A. Campbell.*

If the patient be gouty, sodium phosphate, sodium salicylate piperazin, or uricedin. In kidney diseases with contracted blood-vessels, nitrites. In anemia, iron in organic preparation. —*R. W. Wilcox.*

To break a pernicious habit of sleeplessness, trional in initial dose of gr. xx-xxiv, subsequently reduced to gr. xv.

—*J. A. Browne.*

Treatment of Rachitis.

R.	Phosphori	.....gr. 3/20	01
	Olei amygd. dule.	.....5viiss	30
	Pulv. sacch. alb.		
	Pulv. acacia, āā	.....3iii+gr. xlv	15
	Aquæ dest.	.....3x	40
M.	Sig.	Teaspoonful at a dose.	
R.	Phosphori	.....gr. 1/25	
	Olei olivæ (refined)	.....3i	
	Sacch. alb.		
	Pulv. acacia, āā	.....5ss	
	Aquæ dest., q. s. ad.	.....3ii	
M.	ft. emuls.	Sig. Dose one teaspoonful.— <i>Mettenheimer.</i>	
R.	Phosphori	.....gr. 15/100	
	Ol. morrhue	.....3iii	
	Saccharin	.....gr. lxxv	
	Ess. limonis	.....gtt. ii	
M.	Sig.	A small teaspoonful may be taken daily.— <i>Marfan.</i>	
	Iodo-phosphorated butter	to be used as a substitute for cod liver oil in hot weather:	
R.	Fresh butter	.....3xviiss	
	Potassii iodidi	.....gr. iv	
	Potassii bromidi	.....gr. xv	
	Sodii chloridi	.....3ii	
	Phosphori	.....gr. 1/7	
M.	Sig.	About one-third of an ounce daily spread on bread.— <i>Trosseau</i> (modified by Comby).	
R.	Syr. calc. lactophosphat.	.....5xxv	100
	Ferri citro-ammon. pyrophosphat.	.....gr. xv	1
	Aquæ dest., q. s. ut sol.		
M.	Sig.	A dessertspoonful one to three times daily.— <i>D'Espine and Picot.</i>	
R.	Aquæ calcis		
	Syr. Calc. lactophosphat, āā	.....1 part	
	Olei morrhue	.....2 parts	
		— <i>J. Lewis Smith.</i>	
R.	Phosphori	.....gr. 3/20	01
	Olei morrhue	.....5xxv	100
M.	Sig.	Teaspoonful twice daily.	
R.	Phosphori	.....gr. 3/20	01
	Dissolve in		
	Olei amygd. dule.	.....5iiss	10
	Add		
	Pulv. acacia		
	Syr. simplicis, āā	.....3i¼	5
	Aquæ dest.	.....5iiss	80
M.	Sig.	One teaspoonful daily, below the age of 1 year; from the twelfth to the fifteenth month, two; and over 2 years of age, four teaspoonfuls. Each teaspoonful contains half a milligram of phosphorus.— <i>Kassowitz.</i>	
R.	Syr. ferri iodidi	.....gtt. iii-xxiv	
	Aquæ dest., q. s. ad.	.....5iii	
M.	Sig.	One teaspoonful every four or five hours.— <i>Hare.</i>	
R.	Phosphori	.....gr. i	
	Alcoholis absoluti	.....3v	
	Glycerini	.....5iiss	
	Alcoholis	.....3ii	
	Spt. mentha pip.	.....m. xl	

Dissolve the phosphorus in the absolute alcohol with the aid of a gentle heat; then add to it the glycerin, alcohol, and spirit of peppermint, previously mixed and slightly warmed. Each fluid dram contains nearly 1.20 gr. of phosphorus.

—*J. Ashburton Thompson.*

Puerperal Eclampsia.

Dr. G. Ernest Herman, in "Allbutt's System of Medicine," says:

I believe that much of the mortality of puerperal eclampsia comes from the pernicious maxim, "Deliver as quickly as possible." Eclampsia depends upon a disease of the kidney peculiar to pregnancy; and for its prevention I think that labor should be induced as soon as any considerable amount of albumin is found in the urine, and other treatment has not been effective. But when the acute disease—characterized by fits and urine solid with albumin—is established, the time for prevention has passed. The disease will run its course, and this course is not affected by delivery. Some cases end in recovery without delivery; others get worse after delivery. There is abundant evidence that delivery has no favorable effect on the disease. I speak of natural delivery. Forced

delivery has many bad effects. Manipulations provoke fits. Dragging the child through an imperfectly dilated genital passage involves tearing of the parts. Pulling the child away when the uterus is not contracted surely leads to post-partum hemorrhage. Cesarean section has been proposed; and the hastening of delivery by freely cutting open the cervix, vagina, and vulva (Dürhssen). Such measures have no justification unless immediate delivery greatly benefits the patient, and it does not. The right course is to let the labor go on with the least possible interference. Let the uterus do its work, and interfere only if some condition be present which makes natural delivery impossible.

Regarding the means of treatment to different stages of the disease, he says:

1. The patient has had a fit; she is restless and half-conscious. The aim of treatment is to prevent further fits by lessening the irritability of the nervous system. We have three agents for this purpose—chloroform, morphia, and chloral. The first two are more powerful than the third, and chloroform is the quickest, but its prolonged use is sometimes impracticable, and not free from risk. I therefore prefer morphia. Give half a grain of morphia subcutaneously. Wait to see its effect, and if in half an hour the patient be not asleep, give a quarter of a grain more, or if the patient be still very restless, half a grain. If restlessness be great so that another fit seems imminent, give chloroform at once, and keep the patient under it until the morphia has had time to produce narcotism. Put the patient on her left side, in the semi-prone position, with her left hand behind her back.

2. The patient is in coma. The coma may be simply that which follows fits. If so, it will soon be broken by the restlessness which precedes fits, and then treatment by morphia will be appropriate. It may be accompanied by re-establishment of the urinary secretion, and then it will pass into natural sleep, and recovery will follow; and, if so, no treatment is needed. It may be deepening into coma which ends in death. For such coma baths are the only remedy. If the temperature is normal or subnormal, use the hot bath, followed by packing in hot blankets. If temperature is rising, the cold bath is the only way of reducing temperature, and the only hope of saving life. Watch the progress of labor, and interfere only if conditions arise which would demand interference in a patient not the subject of eclampsia.

Transpericellular Treatment.

By this term Unna describes, in his *Mon. f. Prakt. Derm.*, March 15, the application of green soap or of any strong remedy on top of a dried application of collodion. The effect of the drug is felt through the pellicle formed by the collodion, with its irritating properties abolished. The compression of the collodion film is peculiarly beneficial in cutaneous affections accompanied by a circumscribed angioneurotic edema—strophulus, insect bites, itching chilblains and lupus erythematosus—and the results of this combined transpericellular treatment are remarkably favorable.

An Alkaline Oxidating Substance for Dermatology.

Such a substance has long been sought, and Unna announces its discovery in a salve-soap made of three parts paraffinum liq. and seven parts sapo medicatus, with which sodium dioxide is incorporated—natronsulpheroxid. He states that he has never seen anything to compare with it in the rapidity with which it cures acne punctata and pustulosa, and rosacea seborrhoica, restoring the skin completely to normal. It is applied to make a lather three times a day, until it produces discomfort and is then rinsed off.

Salicylates in Gonorrhœal Epididymitis.

Bettmann asserts that the pains are promptly relieved and the application of a compressing bandage made possible in three to four days, if 6 to 8 c.c. of a mixture of one part methyl salicylate to two parts olive oil is applied on cotton to the scrotum. It is then hermetically wrapped in rubber tissue, and fastened in a padded suspensory. The application is renewed every twelve hours.

Acute Coryza in Nurslings.

Dr. F. Figueira recommends, in *O Brazil Médico* of March 1, a mixture of ten parts almond oil to one part menthol, for external use. Instil one or two drops in each nostril three to four times a day. Keep constantly boiling in the room a mixture of 200 gm. water and 5 gm. essence of turpentin.

Medicolegal.

Nonexperts Can Give Opinion on Intoxication.—The testimony of an expert, the appellate term of the Supreme Court of New York holds, in *Donoho vs. Metropolitan Street Railway Company*, is not required to give an opinion on the question of intoxication, but the evidence of a nonexpert witness in characterizing the action of a person as that of an intoxicated person is admissible.

Medical Examiner's Report is Conclusive.—By an Iowa statute a life insurance company is debarred from setting up in defense of an action on a policy that the assured was not in the condition of health required by the policy at the time of the issuance or delivery thereof, unless the same was procured by the fraud or deceit of the assured. A medical examiner for a company pronounced a certain person "a fit subject for insurance." And when an insured is in such a physical condition as to be "a fit subject for insurance," the Supreme Court of Iowa holds, he is in a "condition of health required by the policy." Wherefore, it maintains, in *Stewart vs. Equitable Mutual Life Association of Waterloo*, that, in the absence of fraud or deceit practiced on the medical examiner of the insurer, the company was estopped from questioning the truthfulness of the assured's answers, and it holds that, unless the examiner was deceived by these answers, or in some other way, the company was not entitled to have the assured's condition of health investigated. Besides, it holds that, while, ordinarily, the intention of the insured is not involved where answers are warranted to be true, yet where their truthfulness depends on the construction of a question subject to two different interpretations, then his intention becomes important for his understanding of the inquiry determines the character of the answer, and the material inquiry is whether he truthfully responded to the inquiry as he understood it. Questions prepared by the insurer are to be construed liberally in favor of the policy holder. For example, the question, "How long since you have consulted a physician?" might by different persons be taken to be an inquiry as to how long since a physician was last, or first, consulted, perhaps depending on whether it was the person's habit to consult one or not, so it is held that an answer of "five years," referring to the beginning of the time of such consultation, could not be said to be false, though the ailment then was a "cold," and later diabetes, perhaps.

Transferred Note For Services Enforceable.—A physician practicing in San Augustine, Texas, and vicinity, was given a negotiable promissory note, which he transferred before maturity for value, and without notice as to what its consideration was. The note was given in reference to medical services, which were in fact never performed. Besides the physician had not complied with the requirements of the Texas statutes relating to physicians in order to entitle him to practice, and was not among the classes of persons exempted from the statute. Nor did it appear whether he had a diploma or not, in the action on the note, brought by the party to whom it was transferred. Now, under these circumstances, the physician would have been incapacitated from recovery for medical services, unless he held a diploma, says the Court of Civil Appeals of Texas. But, assuming that he held no diploma, it holds, *Roach vs. Davis*, that the rule forbidding his recovery would have no application to a negotiable note for services, in the hands of an innocent holder. And so here it affirms a judgment in favor of the holder of the note in question.

Physician Not Required to Attend Trial.—One of the grounds urged, on the appeal of the St. Louis & San Francisco Railroad Company vs. Kilpatrick, why a judgment for damages for personal injuries necessitating the amputation of the latter's foot should be reversed, was an alleged abuse of discretion in the trial judge refusing an attachment for a doctor who was wanted as a witness in the case. But the Supreme Court of Arkansas holds that there was no error in refusing the attachment because the company could not enforce the doctor's attendance, there being no showing that he had been summoned, and had failed to appear and give his deposition. Under the Arkansas statute, the court says, the

deposition of a practicing physician may be used, instead of his testimony *ore tenus*, and such witness shall not be compelled to attend unless he has failed, when duly summoned, to appear and give his deposition. Moreover, it seems to think that some account ought also to be taken of the fact that it appeared that the testimony the doctor was expected to give was cumulative, and no prejudice could have resulted from his failure to testify.

Privileged and Private Communications.—The Iowa Code provides that no practicing physician shall be allowed, in giving testimony, to disclose any confidential communication properly entrusted to him in his professional capacity, and necessary and proper to enable him to discharge the functions of his office according to the usual course of practice. In *Nelson vs. the Netherland Life Insurance Company*, a physician was permitted to testify that he was consulted in his professional capacity by the assured on seven different dates, and that he prescribed for him during that time. In this, the Supreme Court of Iowa sees no infraction of the law. It points out that the evidence had reference to their relation solely, and not to any communications because of it, and that the fact that the witness attended the assured as a physician, and prescribed, involved no disclosure of any information obtained professionally. It further holds that the witness undoubtedly had the right to refresh his memory as to dates from the prescriptions. But whether they were admissible independent of his testimony it does not determine. But it regards it as a clear attempt to evade the statute to ask the witness whether he advised the assured as early as a certain date that he was suffering from a disease for which he was treating him, and also whether, at the time of the last treatment he suffered from any disease other than that for which he treated him at the date first referred to. It says that whatever the advice given, information on which it was based was derived from the assured; so, too, the doctor could only ascertain that the patient suffered from no other disease in the same way. Then, the prescriptions were, rightfully or wrongfully, introduced in evidence, and their ingredients explained. But the court does not believe the statute will permit such a disclosure, though indirectly made, as that which would be embodied in the fixing of the fact that the assured was suffering from one disease only for four months prior to his death and showing the treatment administered, from which the nature of the malady would be made known to those skilled in medicine. On the other hand, the court says that the statute does not prescribe any rule of professional conduct. The physician, in disclosing the secrets of his patient in conversation or writing, violates no law of which the court has knowledge, though such a course may be reprehensible, and in disregard of professional propriety. It is "in giving testimony" in a judicial proceeding that such disclosures are prohibited by statute, and doubtless this may no more be done by affidavit than orally. And here the court makes another distinction. As a part of her proofs of loss, the beneficiary presented to the company an affidavit by the physician who was the witness above mentioned. That affidavit disclosed facts indicating the invalidity of the policy. The company offered the affidavit in evidence. It was objected to as a disclosure of a confidential communication by the assured to his physician. The court says that the policy required no more than satisfactory proofs of death, and the company might, under this provision, demand that the fact of death be shown with reasonable definiteness and certainty. But, under the guise of ascertaining that fact, it had no right to insist upon information concerning the cause thereof, and that would have no direct bearing on such an inquiry. So the unnecessary statements made by the physician in his affidavit must be regarded as gratuitous. Nevertheless, and notwithstanding that the affidavit would have been incompetent as evidence of the physician, or of what he said, the court holds that, having been forwarded by the beneficiary for the consideration of the company in determining its liability, it should be received in evidence as in the nature of an admission and accorded the consideration due to it in view of all the particular circumstances of the case.

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

Boston Medical and Surgical Journal, April 12.

- 1.—*Folie à Deux. Arthur C. Jelly.
- 2.—*Use of the Angiotribe. J. Riddle Goffe.
- 3.—*Problem of Boston's Insane. Philip Coombs Knapp.
- 4.—*Work of Trustees of the Boston Insane Hospital, and Their Plans for its Future Development. Henry C. Baldwin.

Medical Record (N. Y.), April 14.

- 5.—*Diffuse Septic Peritonitis, with Special Reference to a New Method of Treatment, Namely, the Elevated Head and Trunk Posture, to Facilitate Drainage into the Pelvis, with Report of Nine Consecutive Cases of Recovery. George E. Fowler.
- 6.—*Observations and Suggestions Concerning Hypodermoclysis. Robert C. Kemp.
- 7.—*Nitrous Oxid and Ether Anesthesia. H. W. Carter.
- 8.—*Chronic Vertebral Rheumatism (Rheumatic Spondylitis) and its Pseudo-Neuralgic Form. H. Forrester.
- 9.—*Treatment of Superficial Wounds without Sutures. John F. W. Whitbeck.
- 10.—*Case of Iodoform Poisoning in Infant Two Weeks Old. J. C. Josephson.
- 11.—*Complication of Miscarriage with Appendicitis, due to Traumatism. Carl D. S. Früh.

Medical News (N. Y.), April 14.

- 12.—*Two Cases of Recurrent Tubal Pregnancy. Philander A. Harris.
- 13.—*Recent Advances in Treatment of Insomnia. Reynald W. Wilcox.
- 14.—*Purulent Meningitis; Report of Six Cases. L. Napoleou Boston.
- 15.—*Legislation Needed in Regard to Apparent Death. Henry J. Garrigue.
- 16.—*Ligation of First Portion of Right Subclavian for Aneurysm of Third Portion. A. E. Halstead.

Philadelphia Medical Journal, April 14.

- 17.—*Selections from the Lane Lectures: Senile Arterial Plethora. T. Clifford Abbott.
- 18.—*Case of Death from Psychic Insult, with Remarks on Delirium Nervosum Dupuytren and Operation-Psychoses. F. Pagenstecher.
- 19.—*Control of Hemorrhage in Penetrating Wounds of Chest. Robert G. LeConte.
- 20.—*Case of Malarial Fever. Some Stains for Sporozoa of Malaria. Albert Woldert.
- 21.—*Peculiar Manifestations of Uremia. Frederick Krauss.
- 22.—*Report of Case of Abdominal Pregnancy. Charles D. Center.

New York Medical Journal, April 14.

- 23.—*Primary Diffuse Small-celled Sarcoma of Parietal Pericardium. J. C. Williams and A. L. Miller.
- 24.—*Remarks on Embryopathy, Chiefly in Reference to Mechanics of Deep Sutures. J. Milton Abbott.
- 25.—*Gunshot Wounds. Report of Gunshot Cases in Spanish-American War and Deductions Therefrom. (Concluded.) W. C. Borden.
- 26.—*Consideration of Neuromuscular Elements in Hip-Joint Disease, with Especial Reference to Questions of Abolition of Protective Treatment. Newton M. Shaffer.
- 27.—*Books are Injurious to the Eyes. F. G. Murphy.
- 28.—*Ankylostomiasis in Porto Rico. Bailey K. Ashford.
- 29.—*Experiments in Transfusion of Complete Blood. A. Davis Hard.

Cincinnati Lancet-Clinic, April 14.

- 30.—*Penetrating Wounds of Eyeball. Francis Dowling.
- 31.—*Hemorrhoids. George J. Monroe.

Medical Review (St. Louis, Mo.), April 14.

- 32.—*Some Remarks on Dementia Paralytica, with Presentation of Patients. E. C. Runge.
- 33.—*Eleven Cases of Castration and Their Histories. Merrill Ricketts.

Medical Age (Detroit, Mich.), March 25.

- 34.—*Significance of Postmicturitic Hemorrhages. F. A. L. Lockhart.
- 35.—*Catarrhal Deafness. A. L. Adams.
- 36.—*Use of Nauehim Bath in Cardiac Disease. F. R. Henry.
- 37.—*Peritonitis, with Perforation of Small Intestine; Gunshot Wound of Abdomen with Thirteen Perforations. T. J. Crofford.

American Practitioner and News (Louisville, Ky.), February 15.

- 38.—*Thyroid Extract in Epilepsia. John E. Hays.
- 39.—*Report of Case of Epidemic Cerebrospinal Meningitis Treated with Antistreptococcus Serum. J. D. Maddox.

Pediatrics (N. Y.), March 15.

- 40.—*Hygiene of Children's Sleeping Apartments. Joseph Byrue.
- 41.—*Cretinism, with Report of Case of Sporadic Variety. Christopher Graham.
- 42.—*Five Years' Experience in Private Practice with Diphtheritic Antitoxin Serum. Frank W. Wright.
- 43.—*Fatal Case of Carbolic Acid Poisoning in Infant, Due to Absorption by Skin. R. Abrahams.

Railway Surgeon (Chicago), April 3.

- 44.—*Traumatic Neuritis or Traumatic Tetanus? S. R. Hewitt.
- 45.—*Case of Fracture of Cervical Vertebra. S. A. Spillman.

American Journal of the Medical Sciences (Philadelphia), April.

- 46.—*Contribution to Diagnosis of Diverticula in Lower Part of Esophagus. Franz A. R. von Krause.
- 47.—*Clinical Aspects of Plague. Frank G. Clemow.
- 48.—*Remarkable Case of Probable Thoracic Aneurysm Presenting Intermittently Through the Sternum. Richard C. Cabot.
- 49.—*Experiment in Transmission of Syphilis to Calves. Mazyck P. Ravenel.

- 50.—*Gumma of Iris and Ciliary Body. Recovery with Normal Vision. Charles A. Oliver.

- 51.—*Value of Electrolytic Dilatation of Eustachian Tubes in Chronic Tubal Catarrh and Chronic Catarrhal Otitis Media. Arthur B. Ducl.

- 52.—*Localization, Diagnosis, Prognosis and Treatment of Gonorrhoea in Women. (Continued.) John G. Clark.

Yale Medical Journal (New Haven, Conn.), April.

- 53.—*Chronic Endocarditis or Valvular Disease. O. T. Osborne.
- 54.—*Garbage: What is Garbage, and How Can it Best be Disposed of? C. W. S. Frost.

Annals of Surgery (Philadelphia), April.

- 55.—*Surgery in Presence of Sugar in Urine. Arthur L. Fisk.
- 56.—*Volvulus in Association with Hernia. R. Lawford Knags.
- 57.—*Tumescence Inflicted by Animals. R. Harvey Reed.
- 58.—*Use of Fusion Plates in Treatment of Fractures of Leg. Lewis W. Steinhach.
- 59.—*Relationship between Cholecystitis, Jaundice and Gall-Stones. Archibald MacLaren.
- 60.—*Principals Involved in Immediate Hermetic Sealing of Aseptic Wounds. Henry O. Marcy.
- 61.—*Surgery of Gastric Ulcers. Thomas W. Huntington.
- 62.—*Excision of External Two-Thirds of Gasserian Ganglion, by Hartley-Krause Method, After Preliminary Ligation of External Carotid Artery. Joseph M. Spallissy.
- 63.—*Two Cases of Anomalous Spinous Process of Seventh Cervical Vertebra Articulating with Scapula. H. Augustus Wilson and J. Torrence Rugh.
- 64.—*New Operating Table and Improved Bowl Stand. August Schachner.
- 65.—*Conical Stump after Amputation in Childhood. Charles A. Powers.

Clinical Review (Chicago), April.

- 66.—*What the Physician in General Practice Ought to Know about Insanity. E. A. Christian.
- 67.—*Report of Some Surgical Work at Cottage Hospital, Harvard, Ill. C. M. Johnson.
- 68.—*Meningeal Operations in Obstetric Practice. Denslow Lewis.
- 69.—*Complicated Cataract Extractions: Enucleation for Panophthalmia. J. Elliott Colburn.
- 70.—*Etiology, Pathology, Diagnosis and Treatment of Tumors. A. H. Levings.
- 71.—*Cerebral Hemorrhage. D. R. Brower.

Journal of Nervous and Mental Diseases (N. Y.), April.

- 72.—*Landry's Paralysis; Remarks on Classification. E. W. Taylor and J. E. Clark.
- 73.—*Case of Unilateral Progressive Ascending Paralysis, Probably Representing New Form of Degenerative Disease. Charles K. Mills.
- 74.—*Case Presenting Right-Sided Hemiplegia with Hemianesthesia, Blindness, and Incontinence of Urine. Hemiplegia, Jarmon Aphasia, Wernicke's Pupillary Reaction Sign and Neuritic Pain in Arm of Paralyzed Side. F. X. Dercum.
- 75.—*Case of Acute Poliomyelitis Anterior, in Man 17 Years of Age. Wharton Sinkler.
- 76.—*Transient Blindness in Hysteria. George C. Harlan.

Medicine (Detroit, Mich.), April.

- 77.—*Inguinal Hernia; Comparative Results of Radical Treatment by Operation and Treatment by Injection; Report of Cases. Thos. F. Scully.
- 78.—*Enzymes and Immunity. Chas. T. McClutock.
- 79.—*Observations on Recent Pathology of Acute Lobar Pneumonia as Basis for Treatment. James K. Crook.
- 80.—*Carcinoma in Lacta. Leo Loeb and George Jobson.

The Doctors' Magazine (Chicago), March.

- 81.—*Surgical Clinic at College of Physicians and Surgeons. J. B. Murphy.
- 82.—*Clinic on Syringomyelia, Nerrasthenia, and Facial Paralysis. D. R. Brower.
- 83.—*Medical Instruction in Syria. Franklin C. Weils.

Journal of Eye, Ear and Throat Diseases (Baltimore, Md.), March-April.

- 84.—*Case of Empyema of Frontal Sinus. E. T. Rogers.
- 85.—*Successful Application of Adrenal Extract in Rhinology. Wadsworth Warren.

Archives of Pediatrics (N. Y.), April.

- 86.—*Hypertrophic Pyloric Stenosis in Infancy. Eric Pritchard.
- 87.—*Note on Kernig's Sign in Infants. Frederick A. Packard.
- 88.—*Case of Congenital Goiter and Diaphragmatic Hernia. Isaac A. Abt.
- 89.—*Treatment of Whooping-Cough Without Drugs. N. R. Norton.
- 90.—*Drug Values as Observed in Management of 752 Cases of Whooping-Cough. Charles G. Kerley.

New Orleans Medical and Surgical Journal, April.

- 91.—*Is Food Inspection Beneficial to Health? Charles Heitzman.
- 92.—*Regulations for Lay Nurses, to Prevent Spread of Contagious Diseases and to Prevent Quarantines; Yellow Fever, Cholera, Plague, Smallpox, Diphtheria, Typhoid Fever, Scarlet Fever, Measles, Edmond Seuchon.
- 93.—*Typical Case for Use of Digitalis. Arthur V. Meigs.
- 94.—*Case of Jacksonian Epilepsy Specific in Type. Traumatic Hernia. Carcinoma of Breast. W. W. Keen.
- 95.—*Interesting Case of Enteric Fever, with Remarks on Diagnosis and Treatment of Peritonitis, Addison's Disease. James C. Wilson.
- 96.—*1. Treatment of Simple Case of Nausea and Vomiting in Pregnancy. 2. Care of Breasts after Miscarriage. E. P. Davis.
- 97.—*1. Treatment of Improperly Fed Child. 2. Bronchopneumonia. E. E. Graham.

St. Paul Medical Journal, April.

- 98.—Bacteriologic Diagnosis of Diphtheria in Minnesota. F. F. Westbrook.
 99.—Subnormal Temperature. Record of Three Cases with Comment on its Probable Cause. H. A. Tomlinson.
 100.—Tropical Diseases. H. P. Ritchie.
 101.—Value of Kindergarten as an Adjunct to our Public School System. Ogden H. Hammond.
Buffalo Medical Journal, April.
 102.—Practical Psychology. Frederick Peterson.
 103.—Rational Steps in Scientific Treatment of Nervous Prostration, Headache and Neuralgia. Ambrose L. Ranney.
 104.—Uterine Hemorrhage. A. L. Beahan.
 105.—Two Cases of Myelitis, One Subacute; Recovery; the Other Central; Death. Edward B. Angell.
 106.—Radical Operation as Applied to Middle Ear Diseases. George F. Cott.

Pacific Medical Journal (San Francisco), April.

- 107.—Gynecologic Treatment of Insane in Private Practice. Ernest Hall.
 108.—Modern Pathology in Diseases of Digestion. H. D'Arcy Power.
 109.—Early Diagnosis of Bright's Disease by Increased Arterial Tension by Gaertner's Tonometer. Alfred W. Perry.
 110.—Surgery of Vermiform Appendix. Winslow Anderson.
 111.—Care of Nature's Surgery. Ernest S. Pillsbury.
 112.—School Hygiene. Frank Howard Payne.
American Medical Compend (Toledo, Ohio), April.
 113.—Hallucination: A Personal Experience. J. T. Woods.
 114.—Eczema. J. L. Baird.
 115.—Influenza. E. E. Armstrong.
Medical Mirror (St. Louis, Mo.), April.
 116.—Home Treatment of Consumption. William Osler.
 117.—Night Air of New England in Treatment of Consumption. C. S. Millet.
 118.—Surgical Operations. How I Perform Them in the Home of my Patients. R. H. T. Mann.
 119.—Treatment of Constipation. Joseph M. Mathews.

Western Clinical Recorder (Ashland, Wis.), March.

- 120.—Pneumococcus Infection. Frank Billings.
 121.—Induction of Premature Labor. Jos. B. DeLee.
 122.—Syphilis from a Dental Standpoint. L. Blake Baldwin.

Fort Wayne Medical Journal-Magazine, March.

- 123.—Some Moot-points in Management of Fractures. Chas. Stoltz.
 124.—The Angiotribe. J. H. Carstens.
 125.—Intravenous Transfusion of Normal Salt Solution, with Special Reference to its Use in Surgery. Miles F. Porter.
Medical Register (Richmond, Va.), January.
 126.—Treatment of Cancer of Cervix or Uterus Complicated by Pregnancy. George Ben. Johnston.
 127.—Use and Abuse of Vaginal Douche. I. S. Stone.
 128.—Organotherapy: Some Clinical Uses. Clifton M. Miller.
 129.—Congenital Measles, with or without Symptoms of Disease in Mother: Report of Four Cases. C. W. Keel.
Medical and Surgical Bulletin (Nashville, Tenn.), March.
 130.—Bubonic Plague. Thomas L. Maddin.
 131.—Treatment of Croupous Pneumonia. W. G. Ewing.

Iowa Medical Journal (Fort Dodge), March.

- 132.—Nasal Accessory Sinus and Middle Ear Complications of La Grippe. F. H. Boncher.
 133.—Self-Medication. Wm. B. Doherty.
Medical Examiner and General Practitioner (N. Y.), April.
 134.—Extra Rating of Unhealthy Lives. E. Syms Thompson.
 135.—Medical Examiner: What He Does and Why He Does It. Geo. W. Wells.
 136.—Can Beginning Pulmonary Tuberculosis be Diagnosed Through a Shirt? Andrew H. Whitridge.

St. Louis Clinique, April.

- 137.—Licensing of Carnal Houses. Amzi S. Plummer.
 138.—Some Newer Therapeutic Agents. C. W. Lillie.
American Therapist (N. Y.), February.
 139.—Superiority of Holograin to Cocain for Certain Ophthalmic Operations and Diseases. Edward Jackson.
 140.—Another Illustration of Value of Elevated-Hip Position in Difficult Labor. Abram Brothers.
 141.—Is Cancer Curable? J. M. G. Carter.
Medical Summary (Philadelphia), April.
 142.—Abnormal Labor: Malrotated, Persistent Occipito-Posterior Position of Fetal Head, Face to Pubis, Causing Lingering and Dangerous Labor. T. C. Comstock.
 143.—Treatment of Catarrh of Nose and Throat. S. D. Sarr.
 144.—Accurate Science of Bacteriology. A. T. Czuzner.
 145.—Can We Really see with Our Eyes or the Brain. J. Waterloo Dunsdale.
 146.—Gelsemium and its Active Principles. W. C. Buckley.
 147.—Complicated Case of Obstetrics. Louis J. Pons.
 148.—Biochemistry. C. C. Edson.

St. Louis Medical and Surgical Journal, April.

- 149.—Antinoin in Skin Grafting. R. F. Amyx.
 150.—Pseudoleukemia: Report of Two Cases. A. L. Ohmann-Dumesnil.
 151.—Technique of Excision of Superior Cervical Ganglion of Sympathetic for Glaucoma. James Moores Ball.
Seaboard Medical and Surgical Journal (Norfolk, Va.), March.
 152.—Some Remarks on Ethics. Israel Brown.
 153.—Progressive Procedures in Bone Surgery. James N. Ellis.

Journal of Medicine and Science (Portland, Me.), March.

- 154.—Development of Sermotherapy. W. H. Kimball.
 155.—Rheumatism. S. J. Bassford.
 156.—How Much May We Expect from the Treatment of Cretinism? H. B. Palmer.
 157.—Bacteriology. C. A. Peaslee.
 158.—Electric Communications Around the World. Franklin Staples.
Regular Medical Visitor (St. Louis, Mo.), March 15.
 159.—Uterine Cancer and Its Treatment. Thomas More Madden.
 160.—Chronic Catarrhal Pharyngitis. O. F. Baerens.
 161.—Case of Bichromate of Potash Poisoning. John Dillon Thompson.
 162.—Cosmetic Treatment: Some General Observations. E. E. Holt.
 163.—Physician and Law. Norwood Fitch.
Southern Practitioner (Nashville, Tenn.), April.
 164.—Intestinal Obstruction. (Continued.) Richard Douglas.
 165.—Smallpox. Its Successful Abortion and Treatment as Originally Suggested and Adopted by Dr. Thomas Crutcher Osborn. S. H. Stout.

Texas Medical Journal (Austin), March.

- 166.—Is Fever a Conservative Force? J. V. Embree.
 167.—Something Needed for Worthy Doctor to be Appreciated. R. H. Simpson.
 168.—Instrumental Delivery. A. R. Kuykendall.
 169.—Abortion: Spontaneous and Induced. J. A. Winfrey.
 170.—Ossification of Choroid. James Moores Ball.
Texas Clinic (Dallas), March.
 171.—Epilepsy. J. S. Turner.
 172.—Some Familiar but Neglected Topics. F. W. Gallager.
American Journal of Surgery and Gynecology (St. Louis, Mo.), March.
 173.—Infection from old Hematoma: Peculiar End of Hernia: Parovarian Cyst: Suppurating Cystoma: Hysterectomy for Pns Tubas Rufus B. Hall.
 174.—Surgical Intervention for Severe Intestinal Hemorrhage Complicating Typhoid Fever. Edwin Ricketts.
 175.—Appendicitis Stimulated by Hydrosalpinx with Twisted Pedicle. J. P. Baldwin.
 176.—Examination of Gut in Recent Successful End-to-End Anastomosis. Geo. W. Crile.
 177.—Ovarian Pregnancy: Report of Case at Full Term. B. Merrill Ricketts.
 178.—Proctoscopy Under Difficulties. Thos. Chas. Martin.
 179.—Management of Hypertrophied Prostate Gland. Frank Warner.
 180.—Report of Three Cases of Gunshot Wounds of Abdomen. Clarence S. Miller.

AMERICAN.

1. **Contagion of Insanity.**—The contagion of insanity is illustrated by a number of cases reported by Jelly, who points out the characteristics of the condition, and its pathogenesis, which is that of sympathy and suggestion, its diagnosis, and its prognosis, which is good unless there is bad heredity. The first thing in treatment is separation, which is usually followed by recovery.

2. **The Angiotribe.**—The introduction of this instrument into America is due to Dr. Clement Cleveland, to whom Goffe gives due credit. The instrument is illustrated and described, and its advantages stated: 1. The superiority of this method of controlling the blood-vessels over the former method of applying forceps. More and more room is gained with each application. 2. The handles of the forceps protruding from the vagina were a great source of annoyance and discomfort to the patient. Moreover, the forceps had to be removed at the end of thirty-six or forty-eight hours, and in a certain proportion of cases hemorrhage occurred from the tissue adhering to the forceps and being torn away as they were withdrawn. After the use of the angiotribe none of these disturbances arise; convalescence is smooth and comfortable. There is very much less pain after using than by either the old forceps application or use of ligatures. 3. It is superior to ligatures in two respects: it is more easily and quickly applied and it is attended by less discharge during convalescence. The angiotribe has also a field of application in dealing with hemorrhoids.

5. **Diffuse Septic Peritonitis.**—The principal point made by Fowler is that the pelvic peritoneum possesses certain resistant powers to infection which are not shared by those portions situated above, hence he advises posture to facilitate drainage into the pelvis in cases of septic infection. Nine cases are reported in which this method was used, all ending in recovery. The two points in the treatment, on which he feels ready to speak with confidence, are the advantages of the employment of the elevated head and trunk position and the drainage of the pelvic cavity, at least by means of properly placed and protected glass drains. He thinks transference of the septic fluids from the most dangerous areas of this enor-

mous lymph sac to a less dangerous region, and removing these from the latter by proper means of drainage, constitute not only a rational but an imperatively-demanded procedure.

6. **Hypodermoclysis.**—Kemp suggests the choice of the iliolumbar region, especially laterally, as the locality for the hypodermoclysis. The specific effect of this procedure on the renal secretion is especially valuable where it is desirable to stimulate urinary secretion. The elimination begins in four or five minutes. The rapid absorption, however, is modified by certain clinical conditions, as in the uremic states, and this should be considered; sloughing has occurred in the breast, from too great or rapid injection of saline solution. In certain cases, however, where the rapidity of absorption is lessened, it is of much value, as in hemorrhage from typhoid or gastric ulcers. The method also appeared to be of some value in cases of poisoning by alkaloïds, and he suggests it in belladonna poisoning, while it is worthy of trial in that from opium. Hypodermoclysis has been found to be of value in pleurisy with effusion, and in enterocolitis in infants and children, also as an eliminative in diphtheria, following antitoxin injection, and in nephritis complicating diphtheria. Dawbarn's method of using hot saline injection is an excellent one, but in some cases should be preceded by a preliminary saline hypodermoclysis. In conclusion, he describes an apparatus for converting the hypodermic needle into a needle for hypodermoclysis.

7. **Nitrous Oxid and Ether Anesthesia.**—Carter calls attention to the apparatus advised by Dr. T. L. Bennett for the combined administration of nitrous oxid and ether anesthesia, which he thinks is, in some respects, superior to the Clover-Hewitt apparatus used in Great Britain. The most of his paper is taken up with the details of the administration.

8. **Chronic Vertebral Rheumatism.**—After first noticing the papers by Zenner and Dana on spondylitis Forestier describes a pseudoneuralgic form of chronic vertebral rheumatism characterized by: 1. Temporary rigidity of the vertebral column, without any ankylosis from muscular contraction, giving the patient a peculiar stiff gait; these symptoms depend on the pain which the patient feels when he moves the trunk. 2. Predominant pseudoneuralgic pains; pains radiating from the back through the lower limbs, simulating in some instances either tabes or pachymeningitis spinalis externa, or even Pott's disease. 3. Coincidence of arthritis involving some peripheral joint, showing there is a rheumatic process. 4. Curability under such treatment as the Aix-les-Bains douche-massage, the recovery showing that the pathologic process may be considered as rheumatic. This, he thinks, has been noticed in textbooks. Five cases are described. There is no deformity of the spine. The subjective symptoms are: pseudoneuralgia, various pains irradiating from the back, intercostal, girdle and sometimes shooting pains in the limbs. No paresthesia, no trophic changes, no muscular atrophy exist; as a rule the kneejerks are exaggerated. The clinical feature which differentiates this from the ankylosing type is the fact that it is curable.

9. **Treatment of Superficial Wounds Without Sutures.**—Whitbeck thinks that absorbent cotton and collodion will suffice to produce prompt and good union of superficial incised and lacerated wounds. After free asepsis of the skin the edges of the wounds are brought together and secured by cotton and collodion alone, or narrow strips of isinglass plaster moistened by bichlorid solution or by some strips of muslin or linen painted over with a thin coat of flexible collodion. After this the thinnest possible layer of absorbent cotton is applied and, if there is a little blood oozing, it will help the dressing, discoloration being only slightly objectionable. He has used this method in various injuries of the scalp, head, face, thigh, etc., and thinks that its advantages are obvious. It makes a finer and better cicatrix than do sutures, and in suitable cases will not fail.

15. **Apparent Death.**—Garrigues notices the signs of death and their value, and holds that the law should require the personal inspection by the physician who signs the death certificate, and the filling of blanks giving the most important signs that are present or absent, and that until the death certificate is signed the supposed dead should be treated as a living person and nothing done that would cause him pain or do him harm if

he were alive. This would prevent bodies being put on ice, embalmed, etc., before the death certificate was signed.

16.—See abstract in THE JOURNAL of February 17, p. 422.

18. **Psychic Insult and Death.**—Pagenstecher's paper reports the case of a man who had suddenly died after slightly scratching his hand. Apparently under the impression that he had got blood-poisoning in the wound he begged for amputation of his arm. There was active delirium with various delusions, followed by great weakness. There was no fever, but a quiet pulse and the patient could be aroused at any time. Twenty hours after injury there was an incomplete crisis with profuse sweating; death followed thirty-two hours after injury, and was entirely unexpected. As the man was carrying a very large life insurance the case was brought up in court and several theories as to his death were suggested, one that he committed suicide with curare, one of malingering throughout, and one that tetanus was the cause of death. He offers the case as a peculiar one of some medicolegal importance and unique in some of its features.

19. **Penetrating Wound of Chest.**—The symptoms and conditions of penetrating wounds of the chest are described and a case reported by LeConte. He concludes that when the wound of the lung is giving only slight hemorrhage, it is best to close the external wound with gauze and watch for the physical signs of bleeding. When the hemorrhage is more marked, he says to open the chest, insert a small drainage-tube, and regulate the admission of air according to the difficulty of respiration in the patient. When the hemorrhage is large and its symptoms alarming, open the chest and insert a large drainage-tube, so as to form a rapid and complete pneumothorax, and at the same time, when necessary, inject salt solution into a vein. When this does not control the hemorrhage, resect one or more ribs, and deal radically with the bleeding. In severe hemorrhage from a lung, the first object of treatment should be to get pressure on that lung. By opening the chest air will do this as well as blood in the pleura; it will do it instantly instead of waiting until a sufficient amount of blood has been poured out; it will save to the patient the amount of blood necessary to exert this mechanical pressure; it will permit the vessels to close by clots, and the remote benefits are that it eliminates the dangers of pyothorax or of universal adhesions of the pleura. He does not think that the fact that danger of engorgement of the right side of the heart is serious in full-blooded dogs would necessarily make it so in an exsanguined man, as the cases are not parallel. While these views are his own, he admits they are not indorsed by the majority of surgeons, but he gives them as the results of his experience.

20. **Malaria.**—Woldert reports a case of estivoautumnal fever with tertian paroxysms, originating in Philadelphia, and describes Fletcher and Lazear's stains for malarial parasite, giving also one of his own. "By this method the specimen must be fixed by heating at 115 C.—239 F.—for fifteen or twenty minutes and stained. The formula for making the stain is as follows: Solution No. 1—toluidin-blue, 15 grains; distilled water, 34; solution No. 2—acid fuchsin, 15 grains; distilled water, 35; solution No. 3—2 per cent aqueous solution of eosin. To No. 1 he adds 20 drops of No. 2, and afterward 20 drops of No. 3. When these are mixed together a reddish stain is produced, in the bottom of which a heavy precipitate occurs. It is essential that the solutions be mixed in the bottle from which the stain is to be subsequently used, as the precipitate seems to be of advantage in the "ripening" process. After fixing by heat, the specimen is stained for five minutes in the cold, washed in water, dried, and mounted in Canada balsam. By this method the malarial parasites are stained blue, the red cells a faint pink, and the nuclei of the leucocytes blue. The pigment granules of the malarial organism remain a very dark color. The parasites are easily found by this method.

21. **Uremia.**—Krauss reports a case occurring in a person with a fair secretion of urine containing no albumin, in whom there were unilateral convulsions and paralysis of the opposite side. No lesion of brain was found on autopsy.

23. **Malignant Diseases of the Pericardium.**—The rarity of the occurrence of malignant growths of the pericardium make the case reported by Williams and Miller of considerable in-

terest. It was in a boy, 13 years of age, who had been troubled with some peculiar symptoms, and the post-mortem showed a small-celled, diffuse sarcoma of the parietal pericardium, which is illustrated. The origin of it is discussed by Williams, who concludes, from the absence of glandular enlargement elsewhere, the uniform thickening of the pericardium and freedom of epicardium from invasion, that it must have originated in the lymphatic layer of the pericardium itself.

24. Perineorrhaphy.—The principle to which Mabbott calls attention is that of the effects of pressure or tension by sutures, which is toward the center and equal from all directions; hence sutures placed in the elliptical form tend to produce circular pressure, and the point here made is that we should put the suture in the perineum so deeply into the tissues that when drawn tense it may coapt the parts without longitudinal compression, the whole tissue enclosed in the suture being circular, so that the rent is not distorted. The paper is illustrated by diagrams which explain it better than can be done by text. The author thinks what is true of primary operations is equally so of secondary. The sutures should be passed so deeply in the tissues that the coated surfaces will not be contracted or wrinkled. Make the sutures include enough tissue on both sides of the wound to enable them to exert their greatest traction in the right direction and hold the wound surfaces together in their natural relations.

25. Gunshot Wounds.—Borden gives the general results of his observations, 202 in number. He finds that perforating and penetrating wounds by the compound modern bullet are usually aseptic, that the shock and injury to tissue are slight provided no important nerve or vessel is injured, that in the bone it produces some comminution which may, if near the joints, give rise to some impairment of function. The wounds of exit are often smaller and seldom larger than the wound of entrance, and are little influenced by the tissue through which the bullet has passed. Lodged bullets are usually due to long range or to ricochet, and seldom produce immediate harm in the tissues. The proportion of killed to the wounded has not been increased. As regards surgical methods, asepsis and antisepsis have been the greatest factors in reducing the number of complications and mortality; excellent results are derived from the first-aid packages. The bullets remaining in the tissues usually give rise to discomfort and disability sooner or later, hence removal should be done, but deferred until aseptic conditions are available. The Roentgen rays are of the greatest value in military surgery, and where they show the need, there should be no hesitation in operative interference, or where there is displacement of bone, everything being done under aseptic methods. Surgical asepsis is impossible in the field or in field hospitals, and operative interference there should be restricted to measures imperatively demanded to save life or decrease the probability of death where transportation without operation would be more dangerous than possible septic infection from immediate operation. The transportation of the wounded to permanent base hospitals should be facilitated as much as possible.

27. Books Injurious to Eyes.—Injuries to eyesight, from books, may occur in three ways: 1, reading on curved surfaces, which is the rule; 2, light reflection when reading from such a surface; 3, long lines running the entire width of the page. The only way to avoid the first trouble would be to have the lines run parallel to the binding instead of at right angles to it, and this would also aid in lighting the book from the side and avoiding reflections. The great width of reading columns is tiresome to the ocular muscles and often requires movement of the head. Where this is not done fatigue is very much increased.

28. Ankylostomiasis in Porto Rico.—Ashford describes the disorder due to ankylostoma duodenale which is the most destructive and general disease of Porto Rico, largely prevailing in the poorer classes and due to their unsanitary habits and underfeeding. He describes the condition at length. It is characterized by pallor, passive expression, anemia, often hypostatic congestion of the lungs, sometimes anemic ulcers, pernicious secondary anemia, hemic murmurs, very low proportion of red globules and hemoglobin, marked eosinophilia, no leucocytosis due to the disease itself, frequent presence of normoblasts,

sometimes megaloblasts, poikilocytosis and the utter uselessness of blood tonics unless the parasite is dislodged. He thinks that with the improvement of sanitary conditions the disease can be to a considerable extent controlled.

29. Blood Transfusions.—Head reports experiments in transfusions of the blood, to support his theory that vitality is increased by the assimilation of protoplasmic cells in this way.

34. Postlimeric Hemorrhages.—Importance of attention to any colored discharge occurring after the change of life is emphasized by Lockhart. He points out the conditions which produce it and their distinguishing marks from carcinoma. One of these is the senile simple endometritis of the hemorrhagic variety; in this the hemorrhage is in the form of constant oozing instead of gushes of blood, and the fluid is inclined to be dark and mixed with mucus. General oozing is almost always characteristic of senile hemorrhagic endometritis. It has been said that in extensive atheromatous changes generally the uterus is also thus affected, but Lockhart rather doubts this and thinks that the uterus may be entirely free from the condition though the other organs are extensively involved. In addition to these conditions we have hemorrhages from subcutaneous fibroid, but it is rare to not have this manifest itself until after the climacteric. In cases of small tumors it may be difficult to diagnose, but the steady oozing of blood and lack of cachexia are against the existence of cancer. If after pathologic examination by the curette, the disease is described as benign, it should be watched carefully for several months. If the hemorrhage should return after the second, or at most the third, curettage, Lockhart would strongly advise removal of the uterus. In a case where there is a reasonable doubt, the safe side is hysterectomy.

38. Thyroid Extract in Psoriasis.—Acting on the suggestion of Bramwell and Barclay, Hays tried thyroid extract in three cases of psoriasis, without any satisfactory results. He does not think the promise of this remedy good in this disease.

46. Esophageal Diverticula.—Jung reports a case of esophageal diverticula, in detail, which he tested by various methods. He suggests that it will be well to consider the following points in the differential diagnosis of this condition: 1. With dilatation as well as with diverticula there occur painful cardiospasm (Kelly, Jung), as well as painless cases (Reitzenstein). 2. In both vomiting occurs from the esophagus, occasionally from the stomach. Even in cases of typical cardiospasm eructation from the stomach may occur. 3. If food eaten one or two days before is vomited while other food eaten in the meantime remains down, the case seems to be one of diverticulum. No observations to the contrary have so far been made. 4. The swallowing sounds are abnormal in all cases of dilatation. In cases of diverticula the swallowing sounds are audible in 33 per cent., and can be used for diagnostic purposes (Kelling's method). Westphalen's sound can also be heard in diverticulum with dilatation of the esophagus (Jung). 5. If after emptying the esophagus it is easy to enter the stomach, a diverticulum probably exists (Mintz, Reichmann). Yet the passage of the tube may be difficult. "Only once out of ten experiments does one find the cardia and gain entrance into the stomach" (Reitzenstein). 6. In making Rumpell's test, proof must be furnished that the tube is actually in the stomach. Inflation in this case is impossible, as feeling of the sound is not always practicable. 7. The proof positive of having entered the stomach is obtaining gastric juice through the inner tube (Jung). 8. Mercier's sound or Leube's diverticulum tube are necessary in order to find the entrance into the stomach. These tubes must be perforated for the diverticulum test, and by means of a thin inner tube gastric juice can be brought up. 9. After a diverticulum has been diagnosed, its height can be ascertained: *a*, by Kelling's test—swallowing sounds—and *b*, by filling the diverticulum with a colored solution and putting a narrow strip of white adhesive plaster longitudinally on the tube. 10. Neubauer's experiment for ascertaining the level of the liquid can also be used, according to Kelling, to determine the entrance into the diverticulum. 11. The entrance of the diverticulum can easily be overlooked by esophagoscopy. 12. Gastrodiaphany did not show the diverticulum in Mintz's case, and gave no information about the kind of enlargement. In

Reitzenstein's case it was impossible to diagnosis diverticulum by gastrodiaphany alone. 13. X-rays show an enlargement of the esophagus only. 14. The statements of even the most experienced patient, that the tube is in the stomach, are often erroneous. The bending of the tube gives the patient and physician alike a sensation as though it had entered the stomach.

49.—See abstract in THE JOURNAL of March 3, p. 560.

51. **Electrolysis of the Eustachian Tubes in Chronic Tubal Catarrh.**—Duel reports three cases in detail, and tabulates some fifty in which electrolysis was therapeutically employed for the relief of chronic obstructive catarrh of the Eustachian tubes. He presents the following conclusions for consideration: 1. The pathologic process in inflammatory conditions of the Eustachian tube and the tympanum is the same, i. e., hyperemia, followed by the exudation of round cells, which organize into new connective tissue, and subsequently atrophy. 2. The names "chronic tubal catarrh" and "chronic catarrhal otitis media," then, should signify only a difference in position of the inflammation and not in its character. 3. Where the affection is confined to the tube, the impairment of hearing is functional, and is restored as soon as the normal patency of the tube is effected. This is true also of tinnitus and vertigo. 4. Tubal obstruction is present early in a very large percentage of all cases of chronic hypertrophic catarrhal otitis media, and in such instances is one of the chief contributing causes to the further advancement of the disease within the tympanum. 5. It is our duty, then, wherever there is a stenosis of the Eustachian tube, to remove the obstruction as rapidly as possible. 6. In every instance where the obstruction is due to an organized exudate, the best method for its removal is electrolysis, for the following reasons: a. It is more rapid. In several instances one application of the electrolytic bougie has been sufficient to cause the reabsorption of the deposit, and in the majority only a few applications have been necessary to secure a patent tube. b. It is more efficient. The disappearance of the exudate results from electrolytic action and not by mere pressure, as in other methods of dilating strictures, and consequently requires less force. There is, therefore, less danger of traumatism. The electrolytic bougie has been easily passed through strictures which were so firmly organized that it was impossible to pass a cotton bougie. c. The results are more permanent. A stricture once removed by this method is permanently removed. The primary cause, acting again, may bring about its reappearance, but by careful attention to proper treatment a large percentage of the tubes may be kept patent. 7. The removal of obstructions in the Eustachian tube is only a large factor in and not the whole treatment of chronic tubal catarrh and chronic catarrhal otitis media. 8. The prognosis in any given case depends largely on the amount of injury to the tympanic structure. Where inflation is followed by marked temporary relief of deafness, subjective sounds or vertigo, one may expect brilliant results from the establishment of the patency of tubes. Where no temporary improvement follows inflation, much may be accomplished, although the results are by no means so certain. The narrow tube should be opened, nevertheless, in every instance, with the hope of checking the advance of the disease. In a word, then, the writer wishes to make the points that: 1, all narrow tubes should be restored to their normal caliber; and, 2, where the narrowing is due to an organized inflammatory exudate, the best means of accomplishing this is by electrolysis.

55. **Surgery in Glycosuria.**—From his own experience and the observation of others, Fisk concludes that the presence of glycosuria in those individuals who have surgical diseases does not in itself constitute contraindication to any and all surgical relief. Good judgment must be used in the selection of cases and in the determination of the kind and extent of operation to be performed. Strict surgical asepsis must be observed. When infection does not occur the operative wounds heal kindly, but slowly, especially in granulating wounds. The vascularity of the tissue must be interfered with as little as possible, and this must be kept in mind in any operation, particularly so in gangrene of the extremities, where experience shows the necessity of high amputation. He thinks it better to

cut down on and ligate the artery in these cases rather than use the Esmarch band.

57. **Traumatism Inflicted by Animals.**—Reed discusses the supposed existence of greater danger of hydrophobia or tetanus from wounds inflicted by animals, and reports two cases where lacerations were very extensive but only constitutional disturbances occurred, due to ordinary suppurative infection. He thinks it advisable to in such cases convert all punctured wounds into open ones by free incision, to avoid the dangers of infection.

58. **Fixation Plates in Limb Fractures.**—Steinbach reports on his method of using silver plates with screws to keep the fractures of the long bones in proper apposition, and reports four cases, illustrated by skiagrams. He finds the plate a harmless tenant in the leg, and leaves it in position until bone union has taken place. Its removal is then accomplished under local anesthesia.

59. **Cholecystitis, Jaundice and Gall Stones.**—MacLaren believes jaundice a very much overrated symptom and the passage of gall-stones a rather unusual occurrence. Inflammation of the gall-bladder is the first step in the majority of cases and gall-stones are rather a symptom than a disease. Since his attention has been called to this subject, he has seen only one case which did not show either past or present evidence of inflammatory action in the gall-bladder.

60. **Hermetic Sealing of Aseptic Wounds.**—The condition of soil is of importance only second to that of seed which may be planted in it, in this matter of infection, according to Marcy. The advice he gives in wound technique is the recognition of the vitalized structures with which we have to deal, and to injure them by clean dissection as little as possible; to remember that even the largest vessels require comparatively little force for their occlusion, and that coated, well-vitalized structures held at rest furnish a minimum of exudates; that it is of first importance to preserve these; that on this account the drainage-tube has been wisely abandoned, as harmful as a foreign body. He speaks of the importance of thoroughly antisepticizing the suture material and the advantages of rubber gloves in preventing possible epithelial-cell infection. He thinks that iodoform collodion, strengthened by a few fibers of cotton, is an ideal dressing for the purpose of preventing subsequent infection. Subsequent dressing is of no avail except to keep the parts from extraneous injury. The one operation should be final for good or evil.

61.—See abstract in THE JOURNAL of February 17, p. 426.

72. **Landry's Paralysis.**—Taking as a text a typical clinical case in which the post-mortem findings were rather negative as regards peripheral nerve degeneration or an exciting bacterial infection, Taylor and Clark discuss the literature and the inconstant pathology of the so-called disease, and conclude that inasmuch as there is no essential constancy in the clinical symptoms, nor in the pathologic findings of so-called Landry's paralysis, and inasmuch as the etiology is wholly vague, it is probable that the affection does not represent in itself a process to which the term "disease" may properly be applied, and that, therefore, it is desirable to drop the term, as unnecessary and misleading.

73. **Unilateral Ascending Paralysis.**—Mills describes a case of gradually ascending paresis of the right side, with temporary hyperesthesia, wasting of muscles, retention of sensation and faradic reaction, exaggerated knee-jerk, but diminished plantar reflex on the right, and normal ocular and pupillary symptoms; no spasm nor contracture. The clinical picture does not correspond fully with any known disorder, and he is inclined, from this and other somewhat similar cases, to a diagnosis of a slowly increasing degeneration of the pyramidal fasciculi or the cerebral motor neuron system.

77. **Inguinal Hernia.**—After noticing the operative methods for the relief of inguinal hernia, Scully describes his method of treating it by injection, which consists in the use of a formula containing fluid extract of white oak bark, ℥iiss; solid extract of white oak bark, ʒiiss; with carbolic acid and iodine, each ʒii; and morphin, gr. x. It is important that a perfectly fitting truss should be used before and after injection. After antiseptic cleansing of the part the needle is introduced over

the site of the internal ring and pushed down until it passes the end of the finger pushed into the canal. Three to five minims should be injected. As the finger is withdrawn the needle is made to follow it for about one-half inch, during which time the fluid is still being injected, and when twenty minims have been injected the needle should be withdrawn suddenly to avoid depositing any of the fluid in the subcutaneous tissue, where it would cause intense burning. The truss should be placed in position immediately, and the patient lie down for about half an hour. If there is much pain, placing a hot-water bag over the site will soon ease it. The injection should be repeated once a week for three or four weeks when, if the hernia does not come down after taking off the truss, and having tested it by the patient coughing or stooping, no more injections need be given. The truss should be worn at least four weeks longer. During the last eight years he has treated 148 patients in this way. Of 28 double hernias, none were cured, but all were benefited so that the truss was retained with more comfort. Of 120 single hernias, 50, or 48 per cent., were successful one year from the date of last injection. In 16 children treated included in the 58, all were successful; none had more than two injections. He thinks that we can promise cure in recent inguinal hernia by this method. Cases of long standing can only be relieved in some cases, and operation is the elective method in such.

78. Enzymes and Immunity.—McClintock believes that the means of defense of the system against disease is through enzymes. He questions whether we can produce these outside the body and lend them where there is need—probably though not fully proved.

79. Pneumonia.—The treatment of pneumonia as enforced by our knowledge of it as an infectious disease is discussed by Crook, who reviews the physiologic action of calomel, quinin, salicylic acid, and creosote, and points out the unanswered questions in regard to the action of these remedies. After a careful survey of the field, he thinks the following conclusions are forced upon us: 1. The discovery that pneumonia is an infectious disease and the recognition of its pathogenic microbe increase the hope that an abortive or specific form of medication will be brought to light. 2. Recent research strongly indicates that our chief reliance for an improvement in our present methods of treatment rests in the elaboration of a satisfactory form of antitoxin. 3. The use of antiseptics for the destruction of pathogenic microbes in the tissues is very limited. Pathologic chemists as well as clinical observers now recognize the hopelessness of attempting to discover any single body which will destroy all forms of bacteria in the system while leaving the host unimpaired. The discovery of specific remedies for several diseases, however, shows that certain agents act more powerfully on the cause of disease than on the tissues of the patient, and inspires the hope that the list of conditions thus yielding to specific medication may be extended. 4. Coming to the consideration of pneumonia, however, it must be confessed that little actual progress has been made in this direction. It would appear that the field has not been sufficiently traversed by the pathologist and the chemist to light the way for the clinician. Several facts in connection with the natural history of the micro-organisms concerned in the disease still require elucidation, and we should have fuller information concerning the antiseptic solutions and the strength of these required to exterminate the microbe, before we can proceed intelligently or safely. In the treatment of pneumonia, we should remember that it is self-limited, and its tendency is to recovery if we can keep the patient alive a few days; therefore, while we may cautiously test the new germicidal remedies, we should not widely depart from an intelligent expectant form of treatment.

80.—See abstract in THE JOURNAL of February 24, p. 493.

86. Hypertrophic Pyloric Stenosis in Infancy.—From a review of the cases in literature, and their analysis, to which he adds a report of one of his own personal observations, Pritchard concludes as follows: 1. The hypertrophy is secondary to overaction of the sphincter, and the stenosis chiefly due to spasm. 2. The stenosis as measured "post-mortem" is but an accurate gauge of its organic degree during life. Overaction

and inco-ordinated contractions of the sphincter may be due to some fault in the nervous mechanism. 4. Injudicious feeding, either quantitatively or qualitatively may be a contributory factor of the nervous inco-ordination.

87. Kernig's Sign in Infants.—The value of a positive sign in the meningitis of children led Packard to observe for the occurrence of Kernig's sign, so valuable in adults. He reports three cases in which it was not found, and, while he would not be considered as endeavoring to belittle its value, he calls attention to the possible error that might arise from attaching too much importance to it in the case of infants. In these three patients meningitis was determined by autopsy. All were under 18 months of age, and in all the sign was absent during life. A question still to be solved is at just what age this sign becomes significant; its value in older children can not be denied.

88. Congenital Götter and Diaphragmatic Hernia.—Aht reports and illustrates a case of this condition and discusses the pathology.

89. Treatment of Whooping-Cough.—Two methods of treating whooping-cough are especially studied by Norton, the administration of carbonic acid gas by the rectum and the use of the O'Dwyer laryngeal tube. The former was tried in 150 children. In 143 there was apparently decided benefit. The vomiting ceased even in serious cases, on the second or third dose. The number of paroxysms was reduced and their severity diminished. The other seven were not benefited. The only ill effect to be possibly attributed to the method was a mild diarrhea in a few patients, probably due to irritation of the rectal tube. O'Dwyer's tube has been tried in three cases of complicated whooping-cough and laryngeal diphtheria. The effects of the tube on the larynx on whooping-cough were interesting. There were the signs of beginning paroxysm, excitement and the desire to hold on to something for support, followed by spasmodic cough of usual length, sometimes even causing cyanosis, but there was no glottic spasm. Air entered the lungs freely and paroxysms terminated abruptly without the least distress or vomiting. After the removal of the tube the symptoms were the same as before its insertion. He thinks O'Dwyer's views of the usefulness of this appliance in serious cases of whooping-cough appear well grounded.

90. Drugs in Whooping-Cough.—Kerley reports experiments with quite a number of drugs in this affection, systematically undertaken and the results recorded. His conclusions are: 1. Every case of whooping-cough may be ameliorated either by modifying the severity or by diminishing the number of paroxysms. In many both the severity and number of paroxysms may be favorably influenced. 2. Remedies, sedative in character, with fresh air, furnish the best results. 3. If a remedy is to be of service its beneficial effects will be noticed within twenty-four hours, and always within forty-eight. 4. The best results are obtained when the antipyrin and bromid are commenced at the height of the paroxysmal stage, and then pushed. 5. These remedies being sedative in character, the effect may be lost in a prolonged case, requiring a change of treatment. 6. Children may have whooping-cough and never whoop.

99. Subnormal Temperature.—Three cases of subnormal temperature in the insane are reported by Tomlinson; one was a terminal dement in an agitated and depressed condition, and the pulse fell to 94, at which point it remained for nearly a month. During this time he passed into a condition of profound urinemia with extreme emaciation. The second case was that of a woman in whom the temperature went below the scale of the thermometer, and as nearly as could be estimated was about 90 F. after a spell of violent agitation. It arose to 108 F. at the time of her death. In the third case, one of terminal dementia, the temperature was subnormal during the greater part of a year, going as low as 88 F. just before death. In all these cases there was kidney disorder, and he remarks that in looking over his case records he finds subnormal temperature practically always present in cases of uncomplicated degenerative disease of the kidneys, and he associates the two conditions.

107. Gynecology on the Insane.—Hall reports a largenum-

ber of additional cases of gynecologic operations on insane women, insisting on his former views of the necessity of such measures and their value.

108. **Diseases of Digestive Tract.**—Power believes that the clinical examination of gastric contents is too much neglected, and as an evidence gives the results of examination of 25,000 prescriptions found in California drug stores. They gave no evidence of the present state of knowledge of hyperchlorhydria, and many of them were rather inconsistent and futile. The small use of intestinal disinfectants was also notable.

116.—See abstract in *THE JOURNAL* of Nov. 25, 1899, p. 1360. 117.—*Ibid.*

120. **Pneumococcus Infection.**—Billings reports a case of general pneumococcus septicæmia in a child, and others of localized pneumonia complicating otitis media, and also of general pneumococcus septicæmia with little or no lung involvement. The cases are illustrated by temperature-curves.

121. **Induction of Premature Labor.**—The indications for the induction of premature labor are four: Contracted pelvis, disorders incident to pregnancy, those which are accidental to pregnancy, and in certain cases where habitual death of the fetus occurs before term. In contracted pelvis, De Lee objects to premature induction of labor combined with symphysiotomy, on account of the danger to the child. The question whether the patient will be allowed to go to term is a difficult one, and all the circumstances must be considered. The question must be laid before the mother and the dangers described, but the physician can sway the judgment of the patient as he thinks best, and should advise one of the graver operations at term only under the most favorable circumstances. As to the diseases incident to pregnancy, eclampsia is first considered, and his teaching is that treatment should be at first purely medical, but if in spite of this the convulsions increase and are more severe, the pregnancy should be interrupted, and if labor should be spontaneous, everything should be done to hasten it. If, however, medical treatment succeeds, he allows the patient to go to term under proper hygienic precautions. As a rule, the kidney of pregnancy does not produce dangerous symptoms, but it is hard to draw the line between it and Bright's disease. In placenta previa there is no expectant plan. As a rule the child is viable when the symptoms become marked. Induction of premature labor is demanded unless proper medical attendance can be had. Chorea aggravated by pregnancy may be a fatal disease. Premature labor not unfrequently occurs, but it may be too late. Pernicious anemia is a very fatal disease during pregnancy, and often premature labor can not prevent death. Uncontrollable vomiting of pregnancy usually occurs before the child is viable, and the question is whether or not to induce abortion. Experience, he thinks, will show there is less and less cause for induction of premature labor in this condition. Early diagnosis and recognition of the condition will enable the physician to put the patient under the best possible surroundings and obviate the necessity. When the time does come when the condition is very serious a proper conscientious medical treatment should precede the operation. Among the accidental ones Bright's disease is the most common. When it is determined, the patient should be kept under constant observation and tided through if possible, but then the symptoms increase and eclampsia threatens, interference may be unavoidable. Ten days is the limit he gives for observation in these cases. Tuberculosis is a very difficult question, and tuberculous women should not bear children. Insanity does not justify the operation except in rare cases. Carcinoma, if confined to the cervix, does not indicate the induction of premature labor. If carcinomatous disease is too far advanced to permit a radical cure, it is probably better to let the patient go to term and then do Porro's operation. Under the fourth general heading we have the indication, occasionally, but the cause can not be determined. In that case he treats the woman and sometimes the man for syphilis. As to the conditions for induction of premature labor, before the twenty-eighth week there is little chance for a living child and not much before the thirty-second. The child must be living and in good condition, the mother must be in good health or relatively so. The pelvic contraction must not be too great. Below 7 cm. in a

flat pelvis and below 7.5 cm. in a generally contracted one it is not safe to induce labor. The consent of the mother and a consultation should always be insisted on. The dangers to the mother, except from sepsis and too great haste in delivery, are not great, and the outlook for the child is better since the incubator has been introduced. The best method is to dilate the cervix by means of rubber bags. It is safe, quick and convenient, provided it is done under proper precautions.

126. **Cancer of Uterus in Pregnancy.**—Johnston thinks that in cases where cancer appears before the fourth month of pregnancy, and is limited to the cervix, the indications are clear; the only consideration must be for the welfare of the mother, and we should act as in case of a non-pregnant uterus. When it appears after the fourth month and is still limited to the cervix, the safety of the mother and child should be the object, but if the disease advances too rapidly the child must be sacrificed. Here the responsibility is most serious. In the third group where, regardless of the stage of pregnancy the disease has extended beyond the cervix and is inoperable the child alone is to be considered. The mother should be carried to term if possible and delivery be performed by Cæsarian section. Three cases are reported.

127. **Vaginal Douche.**—Stone insists on the importance of following Emmet's directions, that the douche should be prescribed by the physician only and he should direct the treatment. Sterilization of the syringe should not be overlooked and should be by boiling. Vaginal washes will never cure endometritis.

151. **Technique of Excision of Cervical Superior Ganglion.**—The operation of excision of the superior cervical ganglion for glaucoma has been performed a number of times and the technique is therefore of interest. Ball advises first an incision five inches in length, through the skin and superficial fascia and down to the vertebral column. The spinal accessory nerve is cut and the deep dissection must be done by blunt instruments or fingers. He opens the carotid sheath extensively, and follows the nerve downward to the point where the ganglion is located, and upward if necessary, in case the middle ganglion is absent. If this fails to differentiate the nerve he picks up the nerve separately and irritates it to watch the effect on the heart, so as to avoid dividing the pneumogastric by mistake. After identifying the nerve, the ganglion is separated to the base of the skull; the branches given off are cut and the ganglion is held taut with the forceps while the operator places his left index finger under it and cuts it at the highest possible point, using strong, curved strabismus scissors. The excision is completed by severing the nerve-strand an inch below the ganglion. The closure of the wound is by superficial sutures.

165. **Smallpox.**—The Osborn treatment for smallpox, which has been previously noticed in *THE JOURNAL* in the abstract of a paper by Dr. Bibb, Saltillo, Mexico, consists in the external use of strong solution of corrosive sublimate. Stout reports a case in which he used this method with remarkable success. While at first somewhat incredulous of the universal applicability of this method, he has watched and noted all the reports, and has become a convert. The solution is innocuous on the skin, but should be kept from mucous surfaces, the eyes, nose, and throat. Here the spray of peroxid of hydrogen or a saturated solution of boric acid may be used.

FOREIGN.

British Medical Journal, April 7.

Practical Observations on Cancer of Breast. WILLIAM BANKS.—In this third lecture Banks first discusses the parasitic theory of cancer, reviewing the observations of Russell, Soudakewitch, Metchnikoff, Plimmer, Buchanan, Monsarrat, Sanfelice and others, and the impression which he obtained from a study of the subject he notes in substance as follows: 1. There is plainly a structure found in man at the marginal or growing edges of carcinomata. It is not found in other neoplasms except sarcoma. This used to be considered a protozoan, but is now generally thought to be a form of saccharomyces reckoned to be a development stage of certain fungi. Most of the parasites are inside the epithelial cancer cells;

some are outside. How they get there is not known, but it is undoubted that cultivations from these in certain media can be made, and when injected into animals produce a fatal growth containing the same parasites. Sanfelice claims he can produce the same results by injection of blastomycetes obtained from a fruit juice, and furthermore that by passing the parasites through a series of animals can produce an adenocarcinoma. And yet there is no clear and indisputable proof of the infectivity of cancer, and rash assertions as to this point can not be justified. On the other hand, the possibility of this infectivity must not be lightly treated in view of the information obtained of late years in regard to this parasite and certain of its properties. The present is not the time for positive assertion, but for careful experimentation and collection of facts. As regards the operative treatment, he claims that in 1877 he advocated a more thorough extirpation of the axillary glands as well as the breast, which was endorsed by Prof. S. W. Gross, in 1880. His views were rejected by Butlin, but Halsted's work has since demonstrated their correctness. He sees, however, nothing new in Halsted's method, excepting what he himself considers superfluous, and sarcastically says that it seems a pity that Halsted did not recommend, while he was about it, the extirpation of the liver and lungs. Banks sees no use in the removal of the pectoral muscles and thinks that when the cancer has reached the supraclavicular glands it is past extirpation. The work of Heidenhain and Stiles is noticed, but he does not think that they have done anything to especially influence the views of men as to eradication of mammary cancer, and it is rather hard that certain surgeons should date the origin of modern operative treatment of cancer from the microscopic researches of Heidenhain and Stiles, and the labors of Halsted and themselves.

The Lancet, April 7.

Remarks on Physical Signs of Pulmonary Disease. P. H. PYE-SMITH.—In these remarks on auscultation and percussion, the author thinks these methods have suffered from over-refinement and too nice distinctions. There is no special "quality" of tone or timbre peculiar to the liver or spleen, the muscles, the heart or the solidified lung. Special terms, such as "Skodaic" resonance, "tympanitic dullness," "flat" or "empty" percussion are undefinable and contradictory or tautologic. The practice of auscultation has suffered even more than has that of percussion, from needless refinements, inaccurate language and vainly descriptive or fanciful metaphorical terms. He discusses the character of breath signs, râles, etc., at length, pointing out where he thinks valid differences exist. He especially notes the musical quality of certain râles as distinguished from others. What he calls nonmusical râles always imply a spongy condition of the lung, whereas râles with tone—consonating or crepitant—always point to solidification of the lung, the only exception being where they are rendered musical by bubbles bursting in a large cavity filled with air. He does not think a râle the sign of pulmonary edema.

The Practitioner (London), April.

Some Remarks on Digitalis Treatment in Chronic Disorders of the Circulation, and Especially on Continuous Use of Digitalis. J. GROEDEL.—Groedel is a strong advocate of digitalis, and reviews the alleged objections to its continuous use. 1. The cumulative effects are due to too large doses or where, when by continuous and somewhat large doses, we seek to produce an effect for which we have to wait longer than usual. He does not consider these usually dangerous, but still they are warnings, especially in cases where the pulse becomes irregular after only small doses, showing the idiosyncrasy. If we watch the diuresis and find it increased, we can have recourse to digitalis administered in small doses without fear of cumulative effects. He emphatically contradicts the charge that the drug causes a rapid decline of strength and wasting of the tissue. Another objection that it produces a tolerance of the drug is only true, he says to a very limited extent. He has no fear of it becoming injurious in this way. The results of experiments by Van der Heiden, as far as we can apply them are not unfavorable to protracted use of digitalis given about once in twenty-four hours. The general indication for its use is in those cases where we can no longer produce the lasting

compensation by repose, baths, gymnastics or even a short course of medicine. The special indications are mitral insufficiency, when no contraindications are present such as tension of the blood-vessels, heart disease from overexertion, and slight fatty degeneration resulting from alcohol and tobacco where it may be also curative. In these last cases it is often better to alternate it a week at a time, with some other remedy. In purely nervous disorders of the heart it is useless. In arteriosclerosis it is only of value in the last stage when high vascular tension has passed away, and the same is true as regards disordered circulation is chronic nephritis. He does not advise it in these cases, though he obtained advantage from it in one. In all chronic disorders of the circulation he abstains from it as long as possible, using dietetic and physical means first; it is only when these fail that he resorts to the drug.

Palliative Treatment of Paralysis Agitans. R. T. WILLIAMSON.—While paralysis agitans it not a curable disease, much can be done to palliate its symptoms, and it is important that the patient should lead a quiet life and have as little mental excitement and worry as possible. Alcohol drinks and strong tea and coffee should be avoided, and life in the open air is recommended as far as practicable. Railway journeys and riding often relieve the symptoms for a time. Special stress is laid by Williamson on preventing the patient going about alone in the late stages, especially after walking has become difficult, as fatal accidents are liable to occur. The only drug that he has found to be of real service is hydrobromate of hyoscin, which he gives in doses of 1/75 gr. in 2 drams of chloroform water. It does not stop the tremors, but it diminishes the general restlessness. In beginning its use it is well to be cautious and not give more than from 1/50 to 1/100 gr. and watch its effects as it is increased. Hyoscin is of great service in the sleeplessness which is so troublesome sometimes. Another little point mentioned that the bed should not be too soft as it would increase the difficulty the patient has in turning over in bed to relieve himself from being too long in one position.

Havana Medica, March.

Peptonuria in Yellow Fever. E. EDELMANN.—The renal lesions in yellow fever, according to Edelmann, are invariably the same as in Bright's disease, but the fever and effect of the toxins on the central nervous system materially increase the toxicity of the urine. He has been vainly trying to isolate an alkaloid from this urine resembling the yellow fever toxin by its biochemical properties, but he has succeeded in precipitating all the albumin in the urine. Treated with Millon's reagent, after filtration, a remarkable amount of peptones were precipitated, and he is now studying their biochemic action.

Progreso Medico (Havana), March.

Connection Between Bacillus Icteroides and Yellow Fever. A. AGRAMONTE.—The writer's extensive personal experience and the results of considerable experimental research force the conclusions on him that the agent of yellow fever is still undiscovered, and that new methods of research and new culture-media are necessary for the task. Also that the bacillus icteroïdes has no more connection with yellow fever than the bacillus coli, which is found in most cultures derived from cadavers. The bacillus icteroïdes is not found in the blood of yellow fever patients, while it has been found in persons with no indications of the disease. Other arguments against icteroïdes are its failure to produce specific agglutination and the fact that serum from convalescents from yellow fever does not protect against infection with the bacillus icteroïdes.

Gazzetta degli Ospedale (Milan), March 25.

"Combined" Method of Hysterectomy. E. TRUZZI.—In his inaugural address, on assuming the chair of gynecology at Padua, left vacant by Inverardi's death, Truzzi proclaimed anew the remarkable success invariably attained with his combined method of hysterectomy. He first opens the abdomen, the patient in the Trendelenburg, and liberates all adhesions between uterus, omentum, appendix and intestines, the uterus held with forceps. The infundibulo-pelvic and round ligaments are then divided between ligatures. The abdomen is then closed, the whole intervention thus far rapid and restricted to isolating the uterus and annexes. The patient is then placed in the

gynecology position and uterus and annexes are removed through the vagina after ligation of the uterine. By this means the adhesions are detached from below upward, a great advantage in freeing the annexes, and pus collections are evacuated downward through the vagina. Another advantage is the impossibility of lacerations of the round and other ligaments.

Sublimate in Treatment of Tuberculosis of Bones and Joints. SILVESTRI.—Three years ago Capparoni urged others to adopt his method of treating surgical tuberculosis with a daily subcutaneous injection of 1 cc. of corrosive sublimate, with which he had been very successful, especially in Pott's disease. Silvestri describes several observations in which the improvement after these injections was so unerring and so prompt that it must certainly be ascribed to them.

Syphilis Possibly Acquired from Latent Inherited Infection in Another. F. ZAGATO.—An instance is related of a young married couple from distinguished families, both husband and wife of high moral character and apparently perfect physique, an ideal love match in every respect. Two months after marriage coitus, before the menstrual period had quite finished, resulted in a slight excoriation of the penis from which a typical syphiloma developed, followed by the classic syndrome of syphilis, requiring specific treatment for several years before the youth and fine constitution of the man finally conquered it. The most searching investigation failed to disclose the slightest clue for the infection, except a record of possible syphilis in the young woman's father and four abortions preceding her birth. The young husband refrained from intercourse with his wife until completely cured, and she has never shown any signs of syphilis at any time. A child has been born to them since, the picture of health. Is it possible, Zagato queries, that inherited syphilitic infection could have remained latent in the young wife, and becoming exceptionally virulent in the menstrual discharge at one time, have infected the husband?

Annales de Dermatologie (Paris), February and March.

Clinical and Bacteriologic Study of Impetigo. R. SABOURAUD.—In this profusely illustrated article Sabouraud announces that he has succeeded in demonstrating that the impetigo contagiosa of Tilbury Fox is in fact a chronic streptococcus dermatitis, contagious, autoinfectable, the microbe streptococcus constantly found in it from first to last. It is the same affection and the same lesion which may assume an ulcerous form and become ecthyma. Almost all the lesions of the impetigo contagiosa of Tilbury Fox may become secondarily infected with the staphylococcus and suppurate, but this suppurating stage is extrinsic and does not form an integral part of the affection. The staphylococcus aureus flourishing in the streptococcal phlyctena may cause, between the lesions of the impetigo, pustulizations exclusively staphylococcal and entirely independent of the streptococcus. As the affection becomes chronic, a period of eczematization and lichenization ensues, in which Sabouraud has traced the streptococcus by means of cultures with ascites serum and neutral bouillon. He states that the discovery of the streptococcus in this affection opens several new chapters in what have hitherto been called microbian cutaneous lesions. "Certain affections now classed with chronic eczemas are in reality verified streptococcus dermatitis. It is amazing that the streptococcus has escaped discovery so long."

The Eczema Question. L. BROcq.—This important study is continued through 138 more pages and presents the history of the question in all its phases. Brocq restricts the term eczema to the affection characterized by vesiculation, pronounced and leading to oozing, or aborted, almost exclusively histologic, and terminating merely—from the objective point of view—in the formation of a tiny rounded crust. The redness, desquamation, lichenification, etc., are not essential to the process. He, therefore, refuses the title of eczema to Hebra's prurigo, impetigo and the numerous other affections which Unna has classed as eczemas. The pure objective forms of eczema, he adds, are rare. They are the prototypes, the elementary lesions, and they do not seem to depend on a single, pure pathogenic cause, always the same. Hence results the great difficulty in determining the definite types in eczemas, although a satisfactory compromise may be effected by com-

bining the "etiologic dominant" and the objective form. These are the pure eczemas. The combination of these pure forms constitutes the compound eczemas, and there are besides, the complicated eczemas in which the pure complicates or is complicated by some other dermatosis or dermatoses.

Reflections on Syphilis. C. AUDRY.—The importance of early, prolonged, systematic treatment of syphilis with no regard to the manifestations of the moment, is the conclusion imposed by Audry's conception of the disease. He considers it a relapsing, generalized vascularitis, due to a primary infection of the blood.

Annales de l'Institut Pasteur (Paris), February 25.

Action of Certain Renal Poisons. W. LINDEMANN.—In the course of the experimental research reported from Metschnikoff's laboratory, guinea-pigs were inoculated with an emulsion of rabbit kidneys, killing them in three to five days with symptoms of uremia and lesions in the kidneys identical with those produced by true renal poisons. This nephrolytic serum in its action resembles the hemolytic sera Metschnikoff has recently described. Its action is probably due to certain specific substances which are formed in the blood under the influence of the process of absorption of the kidney substance, these evidently affecting the kidney.

Semaine Medicale (Paris), March 21 and 28.

Complicated Varieties of Pneumonia in Children. MARFAN.—Among the complications noted in children are pneumococcus otitis and peritonitis. The effusion with pleurisy is usually purulent under 5 years of age, and is sometimes complicated with suppurative endocarditis, almost always fatal. Pneumonia in children is occasionally accompanied with a rash and subsequent desquamation, resembling the eruption of scarlet fever. It may be initial or tardy but never lasts over forty-eight hours, and appears on the trunk, neck, etc., never on the palms or soles. There may be delirium, convulsions, stiffness of the back of the neck and Kernig's sign, as in an observation he describes in detail, which commenced with the rash, headache, vomiting and extreme agitation. Some writers have described a cerebral pneumonia, eclamptic in children under 30 months and meningitic in those from 2 to 6 years, with coma, and delirium above 6. Delirium in children with pneumonia is chiefly at night and intermittent. This cerebral pneumonia is not so regular in its course as the ordinary variety. It may last longer and the crisis occurs more gradually. It is more serious and, when death ensues, it seems to be due to the nervous accidents. In differentiating pneumonia in these cases it is well to remember that convulsions from a serious intracranial lesion are followed by severe and continuous nervous symptoms, which are absent in the "meningism" of acute disease, especially pneumonia. The torpor in the coma is less pronounced than with actual meningitic or cerebral lesions. The child can usually be aroused by speaking sharply to it. A very high temperature, continuous or subcontinuous, with slight morning remissions, suggests that the cerebral accidents may be due to pneumonia. Lumbar puncture will assist in clearing up the diagnosis and may relieve the patient. Children usually recover from pneumonia. Marfan applies wet cups or leeches to the affected side below the nipple, with fluid foods and drinks in abundance, and a potion of acetate of ammonia. In severe cases he orders a tepid or coolish bath or packs the thorax or trunk for an hour at a time, several times a day, with a napkin wrung out of cold water, covered airtight. Chloral for eclampsia; brandy for cardiac asthenia, 4 or 5 gms. for each year of the age, very much diluted, is given; in case of necessity, caffeine or ether, mustard baths and inhalation of oxygen.

Fleshy Consumptives. G. LEMOINE.—Emaciation is considered one of the chief features of the clinical picture of phthisis, but Lemoine states that tuberculosis developing on an arthritic foundation may progress without causing loss of flesh. The subject appears strong and well, appetite is good; curable consumptives usually belong to this class. The disease presents the same picture in serofulous as in arthritic patients. The course of the disease is extremely slow and gradual. There is comparative weakness, cough and expectoration, but aside from this, the general health is good and the subjects continue their occupations. Hemorrhages may occur, but they are brief

and the tendency to congestion seems to favor the healing of the tuberculous lesions, which may become encysted and circumscribed. The patient may gain in weight with appropriate hygiene, even in case of quite extensive cavities. They usually at last succumb to a fulminating hemorrhage or some acute secondary pulmonary affection. Others gradually lose their *embonpoint* as the cavities extend, and die emaciated.

Berliner Klinische Wochenschrift, March 12, 19 and 26.

Cause and Treatment of Fissura Ani. O. ROSENBACH.—Persons with a tendency to abnormal conditions of circulation in the abdomen, from nervous or inflammatory causes or irritations in the domain of the sexual organs, are liable to have the excitability or innervation of the bladder and rectal sphincters become abnormal in turn, and if the functions of the bowels are not kept in good order, or the irritating causes removed, accumulations of hard fecal masses, or foreign bodies, grape stones etc., in the rectum may produce an acute or chronic disturbance in its functions, thus setting up a *circulus vitiosus* of motor innervation and circulation anomalies. The most prominent symptom of such a condition is the cramp of the sphincter ani, and the false desires for defecation leading to straining which aggravates the arterial and venous congestion, until all desire for defecation is resisted and a paradoxical innervation results with permanent functional disturbances and painful contraction of the sphincter. The treatment is principally psychic. The circumstances must be explained to the patient as his energetic co-operation is indispensable to accomplish a cure in the simplest way without narcosis or operation. He must control his will, to allow the anus to be touched and allow light massage and dilatation of the sphincter with his own finger, as the dentist's patient resigns himself to the pain of having a tooth filled. Each time the pain is less and he will find that he can insert his finger more and more readily. The manipulations must be thorough and repeated two or three times, at intervals, five or six times during the twenty-four hours. Mild purgatives are given later to keep the bowel functions in good order. After one daily evacuation the desire for defecation must be resisted. Inserting the finger will relieve the desire or prove its justification. Rosenbach some time ago called attention to the psychic benefits of the stomach pump and sound in nervous dyspepsia, and states that this psychic treatment of fissure of the anus has proved remarkably successful in his experience. He gives 1 g. of morphin in the evening or early morning, in exceptionally painful cases. At this dose it influences favorably the internal tonus of the muscle and promotes defecation.

Tuberculin in Early Diagnosis of Tuberculosis. B. FRAENKEL.—Tuberculin has no affinity for any but tuberculous tissue, Fraenkel observes, and its absolute harmlessness, and the important information derived in dubious cases, renders the tuberculin test a valuable adjunct in diagnosing. It is especially important in differentiating tuberculosis, carcinoma and syphilis, and in "surgical" tuberculosis. Tuberculous glandular affections give a typical local reaction.

Diagnosis and Therapeutic Significance of Tubercle Bacilli and Other Bacteria in Sputa. L. BRIEGER.—"The stomach of a tuberculous subject is his best friend, but his mouth is a traitor, sheltering his deadliest enemies, who may at any moment transform a simple tuberculous lesion into a fatal phthisis." The care of the mouth in tuberculosis, Brieger says, is a most important prophylactic measure that should never be neglected. He attributes the success of creosote, inhalations, ozone and hydrotherapy to their action on the secondary infections, as they have very little effect on the tubercle bacillus. The fever he ascribes to mixed infection; strictly local tuberculosis is afebrile. Hectic fever shows the "streptococcus curve," and this stage of phthisis pulmonalis is a chronic sepsis. The staphylococcus may cause an "aspiration pneumonia." The influenza bacillus fans the flame of the tuberculous process and may induce suppurating inflammation of the still intact portions of the lungs, to which is due the high mortality among the tuberculous in an epidemic of la grippe. This bacillus has also been found snugly ensconced as a harmless saprophyte in open tuberculous cavities where it may vegetate for years, a constant menace to its

host and to others. Mixed infection may also remain latent in tuberculous subjects.

Diagnostic and Prognostic Significance of Diazo Reaction in Tuberculosis. M. MICHAELIS.—The importance of the diazo reaction for the prognosis of tuberculosis is emphatically demonstrated by the following statistics of 67 cases tested at the Berlin Charité. Of the patients with negative diazo reaction, 5 were cured; positive, 0. Improved: negative, 44; positive, 15. Unaffected by treatment: negative, 5; positive, 13. Died: negative, 3; positive, 80. Michaelis and Brieger would exclude tuberculous subjects with positive diazo reaction from public sanatoria. Schroeder has also recently stated that two-thirds of all his patients with positive diazo reaction died within three months.

Etiology and Treatment of Ozena. NOEBEL.—In 79 cases out of 111 of typical ozena with the triad of scabs, fetor and atrophy, Noebel was able to establish the existence of an empyema in the frontal sinus in 6; in the antrum of Highmore in 39; in the ethmoidal cells in 10; and in the sphenoidal sinus in 24. The remaining cases were under too brief observation for discovery of the cause, but Noebel considers it beyond all question that by far the largest majority of cases of ozena are due to concealed empyema in an adjacent cavity, and that evacuation is the only treatment. When the cases reach the physician the affection has been of such long standing that the primary cause has hitherto always been systematically overlooked.

Monatschrift f. Prakt. Dermatologie (Hamburg), Jan., Feb. and March.

Staining Elastin and Elacin. F. KRZYŻTAŁOWICZ.—This essay won the prize offered by Unna last year for the best treatment of the question of the specific character of the staining of elastin and elacin. It states that they take the usual stains alike and can only be differentiated by the Taenzer-Unna stain, which imparts a specific color to each. As the elastic fibers—elastin—become degenerated by age or climatic conditions, into the condition known as elacin, they change from acidophile to basophile. Preparations show very distinctly, treated with a basic stain and then with a solution of tannin and glycerin. In concluding the article states that kollastin is found in large quantities in the upper layers of the skin of young subjects, and seems to diminish with age. Elacin is found in young subjects in large quantities in the upper layers of the skin, and later develops in the lower, without being confined, however, to the papillary layer alone. Basophile collagen is also occasionally noted. The change known as kollacin does not join the rest until an advanced age.

Rapid Cure of Vascular Nevi in Infants. P. G. UNNA.—It is astonishing, Unna states, with what ease these arterial angiomata or venous vascular nevi can be cured with prolonged gradual compression if applied in early infancy. Later it has no effect. He accomplishes this compression by painting the surface with a mixture of 1 part of ichthyol to 9 parts collodion, two or three times a day. The brown pellicle that forms compresses the nevus beneath until the rapidly growing surrounding tissues have caught up with the excessive growth of the angiomata or nevi. The ichthyol collodion compression is also a rapid cure for insect bites as mentioned elsewhere.

Banish Linen. P. G. UNNA.—One of the most annoying delusions of the lay mind is that old linen rags, old handkerchiefs, etc., should be used in applying salves, when in fact they are directly counterindicated. They soak up the salve, depriving the wound of all benefit from it, and transfer it to the clothing. Few patients ever apply the salve on cotton, which is much less absorbent of grease, and none ever think of covering the salve on the wound with a piece of woolen or flannel, or with the simplest of all, a piece of oiled silk or rubber tissue. Linen pillow cases and linen caps deprive the scalp of all benefits from the salves applied, and yet mothers will bring their children to the clinic in a linen cap every time. Bathing caps should be used and especially worn at night, as the pillow is a frequent source of renewed infection in scalp diseases. Linen should be completely banished, except possibly in simple hyperemic, edematous, hot cutaneous affections, in which it is found more cooling than other substances. In moist affections the linen soaks up the albumi-

nous serum, dries, sticks and causes new lesions when it is pulled off.

Role of Nervous System in Skin Diseases. LEREDDE.—The pathogenesis of skin diseases has been completely revolutionized during the last twenty years, and the rôle ascribed to the nervous system is becoming more and more restricted. Zona is the only affection in which the arguments in favor of a dependence on the nervous system are convincing. Leredde reviews the history of the various skin diseases and shows that the nervous origin attributed to nearly all at some time, has been dropped for many, and the more we learn in regard to the mechanism of skin diseases, the more difficult it becomes to comprehend any direct action of the nervous system in lesions of the skin, especially those which have a regular course. On the other hand, the action of other causes, microbial alterations, alterations in the blood, etc., are becoming more and more probable, even in diseases in which they can not yet be scientifically demonstrated. The pathogenic rôle of the nervous system must be viewed from a different standpoint than heretofore. The skin is exposed to multiple causes of disease, and we will appreciate their action more and more, as we reject the theory that the nervous system can cause dermatoses. The evidence in favor of "troponeuroses" and "dermatoneuroses" is far from convincing, and one skin disease after another has proved its independence of the nervous system.

Yolk of Egg as a Vehicle for Salves. P. G. UNNA.—"The remarkable emulsifying properties of the yolk of egg have never been duly appreciated in dermatotherapeutic practice." This emulsifying power is most marked with balsamic substances, tar, ichthyol, etc. It has also another advantage for the treatment of cutaneous affections, as it forms a pellicle as it dries, and the large proportion of sulphur is another point in its favor. Unna recommends for the purpose twenty parts of yolk of egg to thirty parts almond oil, blended as for a salad dressing, and calls the mixture unguentum domesticum. He adds to this, as desired, ichthyol, balsam of Peru, sulphur, camphor, etc. (10 per cent.), sublimate (5 per cent.), etc. "Unguentum domesticum will be found useful."

Muenchener Medicinische Wochenschrift. April 3.

Causes of Climacteric Hemorrhages. A. THEILHABER.—The abnormal behavior of the musculature of the uterus is the cause of the hemorrhage in the great majority of cases, according to Theilhaber. He has noticed that the non-pregnant and non-periperal uterus is normally moderately contracted. It is usually relaxed during the height of the menses, and the hyperemia and hemorrhage are gradually arrested by the return to its condition of moderate contraction. If the latter is insufficient, the hyperemia continues and the organ may swell, but, with or without the latter, long protracted menorrhagia may follow. In the post-climacteric period the musculature of the uterus becomes atrophied and partially substituted by connective tissue. This atrophy is gradual; the menopause is not a sudden process, and it is usually accompanied by more or less pronounced stenosis of the vessels, so that the bleeding is not excessive even when contraction is insufficient. But if the muscular atrophy sets in before the stenosis of the vessels, the musculature is unable to control the hyperemia and congestion, and menorrhagia follows, sometimes with edema of the organ, and thickening of the walls. The same cause—atrophy of the uterine muscle—will explain the "essential uterine hemorrhages" in young girls, in whom the musculature has not attained its full development; also in chlorotics, phthisics and convalescents from severe febrile diseases, in whom the musculature is weak. The same explanation applies also to the menorrhagia appearing before the menopause in women with myomata, which have never before interfered with menstruation. The functioning capacity of the uterine musculature is much reduced in a myomatous uterus and, when the rest of the musculature begins to atrophy, the menstrual hyperemia is prolonged, hyperemia of the mucosa follows, and subsequently endometritis fungosa and its accompanying menorrhagia. The excessive hyperemia may also start the myoma to more rapid growth, and as the surrounding tissue atrophies it may become polypous, pedunculated.

Epileptic Equivalents. E. SCHULTZE.—Among the equivalents of epileptic seizures described is a periodical paralysis of the abductors, an impulse to travel, to do immodest acts, a periodical paralysis of the trigemini, etc. Schultze, in analyzing them and others in literature, has become more and more convinced that epileptic seizures or their equivalents may occur without any disturbance in the consciousness. Donath has also recently described three observations of poromania or epileptic impulse to wander, which he considers a psychic equivalent of an epileptic seizure.

Embolism of Mesenteric Arteries. OTT.—The symptoms characteristic of this rare occurrence, embolism of the mesenteric arteries, are intestinal hemorrhage, falling temperature, colics, tympanism, evidences of an effusion in the abdominal cavity, embolisms in other vascular regions and palpation of sacs of blood between the sheets of the mesentery. Ott describes two typical cases, one with previous mitral insufficiency, chronic nephritis and emphysema of the lungs. The defective action of the heart suggested a cause for the embolism and a chill, fever, much edema of the lower extremities, and evidences of infarct formation in the lungs, associated with the symptoms above, rendered the diagnosis of embolism of the mesenteric arteries more than probable, and the prompt administration of digitalis and camphor restored the patient to comparative health by raising the arterial pressure and forcing the obstruction along to a less dangerous point, or breaking it up and distributing it to remote vessels. The intestinal hemorrhage in the second case was the almost alarming symptom; fully a quart of blood was lost the first day. The treatment indicated was the reverse of the first: a little sherry was given, ice was applied to the abdomen and the rectum was tamponaded, as high as possible, after morphin to arrest peristalsis. Prompt recovery followed. The patient had applied for treatment of hemiplegia when the syndrome of embolism in the mesenteric artery suddenly appeared, although no evidences of embolism elsewhere could be discovered, nor any cause for it.

A Trip Through the Russian Starvation Districts. C. A. LEHMANN.—The writer reports that the Russian peasantry are diseased through and through in the numerous regions he visited: Scorbutus among the starving, and spotted typhus in all classes every year until May, with syphilis, trachoma, tuberculosis and malaria extremely prevalent, and large numbers of cases of dysentery, anemia, abdominal typhus, anthrax, erysipelas, echinococcus of the liver, etc., and epidemics of measles, scarlet fever and diphtheria. The Russian peasant is generally considered robust, but this impression is false and partially due to his endurance: he works till he drops. The peasant huts have been deprived of their thatch to feed the starving animals, and many are roofless, several families gathering into one hut, with domestic animals, all in one room, never aired, lighted with a small window, and "heated black" in the winter, that is, stopping the chimney to keep the smoke in. In the hundreds of huts the writer entered he never failed to find the walls and floor swarming with roaches. In the district of Kasan, the number of cases of scorbutus among the starving was estimated at 20,000. The symptoms differ from the classic picture, although gingivitis, cramps and hemorrhages were usually associated. Sometimes in young subjects the only symptom is a lesion of the gums, which develops until the entire mouth becomes a fetid suppurating cavity. The subjective depression is extreme. Strong men lie groaning, praying for death to end their sufferings. The pulse and thoracic organs seemed normal, but nephritis was frequent. The disease does not seem contagious. Good food promptly effected a cure; without it recurrence was the rule. One of the officials informed Lehmann that nearly every woman has some gynecologic trouble and hysteria, and that the children die off like flies. In these remote districts there is one physician to 32,933 inhabitants on an average. The smallest proportion is one to 13,387; and the largest, one to 69,288. These physicians receive a modest stipend from the authorities, and Lehmann expresses much admiration for their sympathy and devotion and their thorough scientific training, fully abreast with modern ideas. All are well equipped with microscopes and reagents.

Societies.

COMING MEETINGS.

AMERICAN MEDICAL ASSOCIATION, Atlantic City, N. J., June 5-8.

American Proctologic Society, Washington, D. C., May 2 and 3.

Illinois State Medical Society, Springfield, May 15-17.

American Medico-Psychological Association, Richmond, Va., May 1.

American Association of Anatomists, Washington, D. C., May 1-3.

American Association of Genito-Urinary Surgeons, Washington, D. C., May 1-3.

American Laryngological Association, Washington, D. C., May 1-3.

American Surgical Association, Washington, D. C., May 1-3.

American Association of Physicians, Washington, D. C., May 1-3.

American Climatological Association, Washington, D. C., May 1-3.

American Dermatological Association, Washington, D. C., May 1-3.

American Orthopedic Association, Washington, D. C., May 1-3.

Arizona Medical Association, Prescott, May 2-3.

American Gynecological Association, Washington, D. C., May 4-6.

Medical Society of State of North Carolina, Torboro, May 5.

American Pediatric Association, Washington, D. C., May 7-9.

Ohio State Pediatric Society, Columbus, May 8.

Nebraska State Medical Society, Omaha, May 8-10.

Washington State Medical Society, Spokane, May 8-9.

Oklahoma Territory Medical Society, Oklahoma City, May 9.

Ohio State Medical Society, Columbus, May 9-11.

Kentucky State Medical Society, Georgetown, May 9-11.

Medical Association of State of Missouri, Mexico, May 15-17.

Medical Association of Montana, Butte, May 16.

Iowa State Medical Society, Des Moines, May 16-18.

Arkansas Medical Society, Jonesboro, May 14-16.

Connecticut State Medical Society, New Haven, May 23-24.

Association of Military Surgeons of the United States, New York City, May 31 to June 2.

North Dakota State Medical Society, Grand Forks, May 23-24.

Indiana State Medical Society, Anderson, May 24-25.

New Hampshire Medical Society, Concord, May 31 and June 1.

German Neurologists and Alienists of the Southwest.—The date of this Congress is May 26 and 27, at Baden Baden.

German Otologic Association.—The ninth annual meeting of this Association will be held at Heidelberg, June 1 and 2. For particulars apply to Dr. Siebenmann, Basel, Switzerland.

San Diego County Medical Society.—At the annual meeting of this Society, held recently, the following officers were elected: president, R. L. Doig; vice-president, D. Gochenauer; and secretary and treasurer, T. L. Magee.

Wells County Medical Society.—This Society held a meeting in Bluffton, Ind., April 10. The newly-elected officers are: president, Brose S. Horne, Bluffton; vice-president, L. Mason, Bluffton; secretary, S. A. Shoemaker, Poneto; treasurer, C. L. Blue, Toecin.

Cumberland District Medical Society.—At the annual meeting, held at Bridgeton, N. J., April 11, the following officers were chosen: president, Frank M. Bateman, Cedarville; vice-president, H. G. Miller, Millville; secretary, J. C. Applegate, Bridgeton; treasurer, Joseph Tomlinson, Bridgeton.

Florida Medical Association.—The annual meeting of this Association for 1900 has just been held at Orlando, Fla., and W. L. Hughlett, of Cocoa, Fla., elected president. The next place of meeting will be Jacksonville, the second Wednesday in April, 1901. The secretary is J. D. Fernandez, Jacksonville.

Tennessee State Medical Society.—The annual session of this Society has just closed, at Knoxville, Tenn. Next year the Society will meet in Nashville. The newly-elected officers are:

president, Jere A. Crook, Jackson; vice-president for East Tennessee, B. D. Bosworth, Knoxville; vice-president for Middle Tennessee, R. E. Fort, Nashville; vice-president for West Tennessee, J. Richmond, Memphis; Secretary, W. D. Haggard, Nashville (re-elected); treasurer, W. C. Bilbro, Murfreesboro.

International Congress of Medical Electrology and Radiology.—The following addresses are announced on the official program: "Bois-Reymond's Law," by Dubois of Berne; "General Indications for Galvanization and Faradization," by J. Althaus of London; "General Indications for Franklinization," by A. Tripier; "Electrotherapy and Suggestion," Eulenburg of Berlin; "Franklinization in the Treatment of Dermatoses," Chlitzky, Moscow; "Electric Treatment of Neuralgia," Leduc, Nantes; "Electrolysis in Treatment of Uterine Fibromata," F. La Torre of Rome; "Physiologic and Therapeutic Properties of Currents of High Frequency and High Tension," Doumer of Lille; "Electric Syndrome of Facial Paralysis," Wertheim-Salomonsen of Amsterdam; "Application of X-Ray in Dermatology," Schiff, Vienna; "Diagnosis of Thoracic Affections with X-Ray," Becière, and "Physiologic and Therapeutic Properties of Ozone," Labbé. The membership fee, \$5, should be sent to Dr. A. Moutier, rue Miromesnil 11, Paris; all other communications to the secretary, Prof. E. Doumer, rue Nicolas-Leblanc 57, Lille, France. The Congress is under the patronage of Benedikt, Erb, Kronecker, Roentgen, De Renzi, Solvay, Tigerstedt and five other well known specialists. (See THE JOURNAL, March 10, p. 620.)

Association of American Medical Colleges.—The next meeting of this Association will be held in the Hotel Shelbourne, in Atlantic City, N. J., June 4, 1900, the Monday preceding the meeting of the AMERICAN MEDICAL ASSOCIATION. The educational session will be opened at 2 p.m., with the following program: 1. The President's Address, by Parks Ritchie, Dean of the University of Minnesota, Minneapolis, Minn. 2. Methods of Clinical Instruction and the Management of Clinics, by Prof. F. C. Hotz, Professor of Ophthalmology in Rush Medical College, Chicago. 3. A Report on the Practical Operation of the Case System in Harvard Medical School during the past year, by W. D. Cannon, Cambridge, Mass. 4. The Library of Pathologic Specimens, by Gustav Fitterer, Chicago. 5. Report by the Committee on Elective Courses in Medical Schools. By John M. Dodson, M.D., Chairman, Chicago. According to the constitution of the Association all amendments to the constitution must be incorporated in the "Call." The following has been submitted by the Milwaukee Medical College, and is herewith presented to the members of the Association, that it may be acted on at the meeting: Amendment to Article 3 (Section 8).—"Colleges members of this Association, to remain in good standing, must not accept from any student a tuition fee less than that advertised by said college in its annual announcement for that year." BAYARD HOLMES, M.D., Secretary.

Chicago Ophthalmological and Otological Society.

March 13, 1900.

Dr. C. D. Wescott in the Chair.

TRAUMATIC CYCLITIS.

DR. WILLIAM A. MANN showed a patient who was bit in the eye by a chip from a block of wood, some five weeks before. The eye was greatly inflamed. Whether the anterior chamber is filled with blood or a blood clot, he could not say. He was inclined to the belief that there might be a dislocation of the lens. Vision is very defective in the injured eye, while in the other it is normal, and there is also normal accommodation. The tension in the injured eye is low. The patient does not complain of much pain, but the eye is very tender.

DR. C. P. PINKARD said the injury must have been severe to keep the eye so greatly inflamed such a long time. He thought there might be a dislocation of the lens or fundus injury of some kind, although there is no way of determining it.

DR. F. C. HORTZ stated that a blow might cause considerable disturbance in the interior of the eyeball; that probably in this case there might be a dislocated lens, and the intraocular

hemorrhage would fill the whole eyeball. He thought the cornea presented the characteristic streaky condition observed in long-standing cases of traumatic cyclitis. In such conditions absorption of blood takes place very slowly.

Dr. W. A. MANN, in closing the discussion, said he believed the man had sustained a serious injury to the eye, consequently the prognosis was bad, but whether the condition would clear up or not, he did not know. The condition of the eye had not changed in the last two or three weeks, although the blood clot was possibly a little lighter in color.

EXTRACTION OF CONGENITALLY DISLOCATED OPAQUE LENSES.

Dr. WM. H. WILDER reported a case of this condition.

DIABETIC RETINITIS.

Dr. W. H. WILDER presented a woman who came to him six or eight weeks ago, in whom he found some impairment of vision which could not be remedied with glasses. Examination revealed retinitis, which appeared to be diabetic in type. The patient was referred to him by a prominent physician who had made a diagnosis of diabetes. Since then the urine has been examined several times with no evidence of albumin. This is the third case he has seen. In some it is difficult to differentiate it from the ordinary retinitis of chronic Bright's disease. If there are any distinguishing features, it would be that the plaques of degeneration are not so symmetrically arranged around the yellow spots. In this case these plaques are situated in a zone around the optic disc, and there are quite as many to the nasal as to the temporal side, and numerous hemorrhages are present. The plaques of degeneration are usually large and do not present the white glistening appearance that is seen in typical cases of albuminuric retinitis.

Dr. O. DODD said he had had the good fortune to see three cases of diabetic retinitis within a few months, two of which were pure diabetes, the other a mixed case. There is considerable dispute as to whether this form of retinitis is caused by nephritic changes, or whether it is due to blood changes on account of diabetes. About four years ago he consulted the literature in regard to this subject and found that there were only forty-six cases recorded of pure diabetic retinitis. The cases which he had seen were very much like the one of Dr. Wilder's in appearance. In one the diabetes had existed for nine years, in the other four, and the combined case of nephritis was one of long standing.

Dr. C. P. PRICKARD saw a case of diabetic retinitis last summer in a woman, 65 years of age, who had had diabetes for many years. She had been treated in this country and in Europe with practically no benefit. Two months before he saw her she began to lose vision in one eye. The distribution of the degenerative plaques was somewhat similar to that noticed in Dr. Wilder's patient, that is, they seemed to be apparently more grouped around the nerve than the macula. The hemorrhages were far more abundant in his case and larger. The patient remained in Chicago for only a few months, and during that time no change took place. What ultimately happened he does not know, as the patient returned to the South.

PROFUSE RETROCHOROIDAL HEMORRHAGE AFTER IRIDECTOMY FOR CHRONIC GLAUCOMA.

Dr. F. C. HOTZ reported this case. The hemorrhage occurred almost twenty-four hours after a perfectly smooth iridectomy for chronic glaucoma. The tension was only moderately high, the media were perfectly clear, and the ophthalmoscopic examination did not reveal any alterations of the vessel walls in the fundus. The hemorrhage was ushered in by the same symptoms as those formidable hemorrhages which sometimes occur after a perfectly normal cataract operation.

The patient, Mrs. W., 63 years of age, anemic and nervous, had gradually lost the sight of her left eye during the preceding two years. One year ago an oculist pronounced her case glaucoma, but for some reason declined to operate, and prescribed daily instillations of eserine. When she first came to Dr. Hotz the pupil was contracted to the size of a pinhole, so as to render an ophthalmoscopic inspection impossible, but the tension was nevertheless decidedly increased. Four days later, Nov. 30, 1898, the pupil was still smaller than that of the right

eye, which appeared normal in every respect; but a drop of cocaine dilated it within a few minutes, without affecting the tension. There was a shallow anterior chamber, clear media and a typical glaucoma excavation, the margin of the disc showing H. 1 D and the floor of the excavation M. 3 D.; arteries small, veins slightly enlarged, no pulsation; vision reduced to perception of hand. Inasmuch as the sight of the eye was irretrievably lost and the patient had no marked discomfort, he saw no reason for urging an operation, and decided on watching the eye under the moderate and restricted use of eserine.

But when during December and January the patient repeatedly complained of attacks of pain in the eye and left side of the head, accompanied by an appreciable increase of tension, and when he learned from her physician that she was wearing herself out by constantly worrying about her eye, he thought an iridectomy was warranted in order to relieve the tension of the eye as well as the patient's mind. The operation was performed under chloroform at 2 p.m., Jan. 24, 1899; the excision of the iris was smooth and complete; there was no bleeding, and the tension was decidedly reduced. The patient recovered from the anesthetic without nausea, and passed a very comfortable night. During the morning she occasionally felt a darting pain in the eye; at noon she was suddenly taken with the most violent pain in the eye and head, accompanied by a nervous chill, nausea and vomiting. He was at once notified by telephone, and was at the bedside of the patient at 1 p.m. When he removed the bandage he found the lens on the dressing and half the vitreous outside of the wound, and when this was removed the rest of the vitreous was extruded with portions of the retina and choroid and clots of blood. The nausea and headache subsided within two hours, but the bleeding continued for three days. His first thought was to urge the immediate removal of the eye; but both her daughter and physician, fearing the most serious results from the shock such a proposition would have on the patient in her low nervous state, begged him to postpone the enucleation as long as in his judgment it might be done with safety for the other eye. He yielded to their entreaties, and under strict antiseptic dressings and the use of cocaine the wound healed, and the blood within the eye was gradually absorbed, so that by the end of February the anterior chamber was clear and the iris plainly visible; the pupil and the coloboma were filled with a fibrinous membrane. The tension, which had been very low, gradually rose to nearly normal, and the tenderness of the eye slowly, but steadily, subsided. Since last May the eye has been free from redness and tenderness, perfectly comfortable, but it is somewhat reduced in size.

He has watched over the other eye with the greatest anxiety, and he is glad to state that up to this time its central vision, its field of vision, and the ophthalmoscope have not shown the least change from the first examination.

Dr. C. D. WESCOTT said he had an exact duplicate of the case reported by Dr. Hotz occur in his practice about a year ago. A patient who had consulted Dr. Holmes thirty years ago for traumatism of one eye, in which the sight was practically lost from a serious injury to the cornea, came back because the fellow eye was rapidly failing and had been for a year or more. The man was 72 years of age, of gouty diathesis, and showed general arteriosclerosis, the temporal artery being decidedly hard and firm. In that respect the case differed from that reported by Dr. Hotz. The tension was high, and on dilating the pupil with cocaine he found there was beginning cataract and glaucoma. A moderate cupping of the disc could be seen through the clearer portions of the lens, but otherwise there were no changes in the vessels of the fundus to attract particular attention. Iridectomy was advised, with the hope of checking the glaucoma. The man was told that if this operation was successful the cataract would be extracted later, giving him better sight than would be possible in the other eye. Iridectomy was done under cocaine and holocain anesthesia. There was practically no hemorrhage attending the operation. The morning following the operation the patient experienced considerable pain, and it was suspected that an atheromatous vessel had broken. On removing the dressing he found the wound distended by the cataractous lens. The lens with its

capsule had come forward and was about one-third external to the wound. The patient was anesthetized with chloroform, and the lens was extracted without the loss of more than two or three minims of vitreous. The eye was dressed. As Dr. Westcott and Dr. Pusey were getting ready to leave the house, their attention was directed to a little stream of blood running from under the dressing down the temple. The dressing was removed, and it was found that the vitreous had practically escaped with some blood still flowing. The eye was in a condition for immediate enucleation. It was not thought best to give the patient chloroform again so quickly. The patient was asked to consider the operation and declined any further interference. The eye healed after some time, with moderate reaction, and perhaps two months after the accident Dr. Westcott saw him, when the eye was practically quiet.

Dr. J. E. COLBURN said that in 1885-6 he had a glaucomatous pair of eyes to deal with. He operated on the right eye without accident, and secured a very good result. Some four weeks afterward he operated on the left eye, and on account of a little nervousness on the part of the patient he dragged the iris out a little farther than he intended, but aside from that the iridectomy was smooth. At the end of the third day the patient complained of severe pain, and he was sent for. He opened the dressing and found the lens in the anterior chamber; there had been extensive hemorrhage and the dressing was saturated with blood. A portion of the remains of the iris protruded with the hemorrhage, it having been forced down by the partially dislocated lens. Without any difficulty he removed the lens with his fingers, closed the wound, and the blood was absorbed. Four or five weeks later he snipped off a bit of iris which was protruding from the wound. He saw the patient about three years ago and the eye had not given any trouble from the time of the operation. The eye he operated on first was in good condition; the vision had materially improved, and there had been no return of the glaucomatous condition. This was eight or ten years after the first operation. He thought he would have to enucleate the eye in this case. There was perception of light in it, with rather opaque lacework crossing the artificial pupil; the iris was drawn somewhat downward, and as near as he could determine the blood clot had been entirely absorbed, leaving only little filaments of lacework in the opening.

In 1892 he operated on an old woman for cataract. The first eye gave him a very easy operation. In the second, which looked rather suspicious at the time of the operation on the first eye, he advised the removal of the lens, because it was hypermature and beginning to give disturbance. He removed the lens and during the night following the operation the contents of the eye was expelled. He thought it was much safer out than in because it was only a question of time when the eye would have given trouble anyway. He enucleated the eye in this case the morning following the operation.

Dr. F. C. HEITZ says he had always considered an iridectomy in a case of chronic glaucoma as a comparatively easy operation, one which would not ordinarily give any trouble, but after hearing of accidents in such cases as had been reported, he thought differently. In the case reported by Dr. Colburn, the hemorrhage must have commenced in the anterior part of the choroid so as to crowd into the vitreous and the smaller vessels. But in the cases of Dr. Westcott and himself it must have been a good-sized vessel, rupturing with such force as to press the whole vitreous forward. He did not know whether the cases of Dr. Colburn were acute or chronic.

Dr. COLBURN replied that they were chronic.

Dr. HOLTZ said that stress should be laid on the acute cases because in them hemorrhages were more likely to occur on account of the vessels being more engorged than in the slowly proceeding chronic ones. In his case he was told by the daughter of the patient that there were unmistakable signs of hemophilia in the family, although this could not be elicited in the history of the mother.

Dr. H. M. STARKEY mentioned a case of chronic glaucoma that he had had under observation for several years, the patient having been seen by Dr. Mann with him. He found that spontaneous rupture of the eyeball with escape of the contents had

taken place. The patient bled profusely. She had suffered terrific pain before the eyeball ruptured. The spontaneous hemorrhage occurred in the degenerated eye without any accident or without any violent exercise.

Dr. C. P. PINCKARD asked whether the rupture occurred at a right angle to the scleroconal margin, or whether it was concentric with the cornea.

Dr. W. A. MANN said it occurred along the border of the iris in a concentric direction.

Dr. C. P. PINCKARD reported a similar case of spontaneous rupture, saying that the night nurse was awakened by a scream from one of the wards; she went to see the patient, an old woman with chronic glaucoma, and found that spontaneous hemorrhage had taken place, the rupture having occurred near the scleroconal junction. It was not concentric, as one might expect it to be, but at a nearly right angle to the corneal margin. The Doctor enucleated the eye the next day.

THE INVENTION OF THE ALUMINUM BALL.

Dr. H. F. COLEMAN reported the following case:

About a year ago, Dr. Paul Walter called to ask my advice in regard to Mule's operation. I remarked that my experience was adverse to it, but if he wished to try the insertion of a ball, I would suggest that a perforated aluminum one be used, and it might be more safely inserted in Tenon's capsule than in the sclera. Some three months later the Doctor again called and reported that on May 15, last, he removed from Mrs. C., the left eye, which had been destroyed two years previously by an accident and had since continued to suppurate.

The conjunctiva was dissected back, the muscles picked up and ligated and the eye enucleated. This was followed by irrigation with one gallon of sublimate solution, 1-4000. An aluminum perforated ball that had been carefully disinfected was placed in Tenon's capsule, and the muscles, then the conjunctiva were brought forward over the ball and stitched. Boric acid and formalin dressings were applied. Healing rapidly followed and was attended by very little reaction. Five weeks later a slight purulent discharge appeared. On examination the aluminum ball was found corroded, half of it having disintegrated, and it appeared like soft mud. The other half was much corroded. The remains of the ball were so adherent that in order to remove it, it was necessary to use the curette. By the use of disinfectants the eye healed in a few days, but during that time the patient suffered a good deal.

CYSTOID CICATRIZATION FOLLOWING CATARACT EXTRACTION, WITH PERIODICAL ESCAPE OF AQUEOUS.

Dr. ALBERT E. BULSON, JR., Ft. Wayne, Ind., reported the following case:

Mr. H., aged 66 years, in excellent health, with mature senile cataract in the left eye, presented himself on Sept. 5, 1899, and five days later was operated on at Hope Hospital, linear extraction being performed. The operation was without incident, no hemorrhage of any consequence following the iridectomy, the lens being easily removed and apparently no cortical substance remaining. The usual precautions were observed in looking for possible tags of iris, pieces of capsule, clots of blood, and beads of vitreous that might be present between the lips of the wound to prevent proper healing, and with the usual aseptic dressing, consisting of a gauze pad and bandage over both eyes the patient was put to bed in what was considered first-class condition.

The dressings were not disturbed for thirty-six hours, and the eye not inspected for seventy-two after the operation, when it was found that the wound had not completely closed and aqueous was escaping through a small opening near the center of the original wound. Except for the delayed union of the wound there were no untoward symptoms and the dressings were reapplied, with quite firm pressure, and maintained for a period of three days, at the end of which time inspection showed that the wound had apparently closed.

Ten days after the operation the patient was allowed to have the eye uncovered, though wearing a moderately smoked glass for protection from bright light. At this time there was no evidence of inflammation and the wound gave every indication of having closed properly.

Nearly four weeks after the operation I was asked to visit the patient and make an examination of the eye, the report being that "something had happened." Inspection of the eye disclosed a partially collapsed cornea, with escape of aqueous through a minute opening near the center of the site of the wound made for extraction of the lens. There was no assignable cause for the accident, nor could I obtain a history of trauma. Examination with a magnifying glass disclosed no prolapse of iris or capsule.

The wound was carefully touched with tincture of iodine and a pressure bandage applied. At the end of three days, when the bandage was removed, the wound appeared perfectly closed. Four weeks later, or a little over two months after the original operation, there being no contraindication, glasses were adjusted and vision 20/40 obtained with +9D = C +2D, axis 10°.

The patient then resumed his avocation, that of "night man" at the office of an omnibus and hack line, and experienced no inconvenience nor discomfort pertaining to the eye until three months later when he reported that, while rubbing his eye something had "broken," allowing nearly a teaspoonful of clear liquid to run from the eye. Inspection of the eye disclosed a small fistulous opening at the site of the former fistulous opening, with aqueous escaping on the slightest pressure on the cornea. As on previous occasions, nothing could be seen protruding in the wound, though it was suspected that a remnant of capsule was probably responsible for the imperfect closure of the wound.

The lips of the wound were thoroughly rubbed with pure ichthylol and a pressure bandage applied. At the end of five days the fistulous opening appeared perfectly closed, and there being no evidence of inflammation or irritation the patient was allowed to resume regular work, but with due admonition regarding the liability of recurrence of trouble in consequence of trauma. From that time until this no indication of return of the trouble has put in an appearance, the eye is free from inflammation or irritation, and a test of the vision a few days ago showed that 20/40 is still maintained.

The interesting feature of the case is the fact that the fistulous opening has to all appearances perfectly closed on three occasions, and remained so for a considerable length of time, only to burst open later. There has been no marked ectatic condition of the conjunctiva, nor could increase of intraocular tension be detected at any time either before or after the operation. There had at no time been any evidence of inflammation such as would likely occur if a tag of iris had been imprisoned in the wound, and very fortunately there has been no septic infection of the wound, though there has been ample opportunity for such a complication. The question of recurrence of the trouble is one that time alone will settle, but if present indications may be judged the fistula is securely closed.

Omaha Medical Society.

TUBERCULAR MENINGITIS.

DR. H. M. McCLANAHAN discussed this topic from the medical side, and said that the first point of importance is that of a correct diagnosis, which is by no means easy. Many diseases simulate this one. Ordinary meningitis has a high temperature with marked symptoms, seen early and of rapid growth. In this form the conjunctival reflex is lost early; the secretion of the Meibomian glands is always profuse and the lids are glued together; the mental conditions are quite different and sudden in their access; the delirium is more active. The usual disease diagnosed improperly is typhoid fever; here the blood count and leucocytosis should assist in differentiating one from the other. Malarial fever can be eliminated by the use of quinin.

The prodromes of tubercular meningitis are very interesting and characteristic; they are always slow and of many days' duration, often thirty or forty; one of the early symptoms is a change in the mental state; the patient is peevish, irritable, dislikes are more pronounced, headache is complained of and becomes more and more severe, constipation is seen early and is permanent and can not be relieved; gastric crises often

occur. The fact that you can secure no amelioration of the symptoms in general is, of itself, a means of diagnosis. The secondary symptoms are due to pressure. Somnolence goes on to stupor, spinal rigidity becomes a constant symptom, the tache cerebrale is present but is not pathognomonic, the red line persists after the finger is drawn over the surface, and convulsions may occur if the patient is quite young.

As a rule, the disease is a secondary one, the focus being found in the bronchial glands.

Since the disease is an incurable one, he can not understand why the surgeons do not operate when called in. They agree in the diagnosis, wish something might be done, but are too loath to operate. Twenty-three years ago, the great Gross humorously said: "I suppose we shall some day see specialists for the vermiform appendix." We now have them, and Dr. McClanahan hopes to see the day when the surgeon-specialists will operate and learn to save some of these patients with tubercular meningitis. We now save those with tubercular peritonitis, by operation, while, a short time ago, it was considered a hopeless condition. He thinks we should seek out the primary focus and operate boldly.

DR. A. F. JONAS discussed the question from the standpoint of the surgeon. He said that he had thoroughly gone over the last twenty years of the *Annals of Surgery* and the *Am. Jour. of the Medical Sciences*, and found no reports of successes in the surgical treatment of this disease. Trephining has been done since 1800, for relief, but all results have been poor. There was slight revival on the advent of antiseptic surgery, but with little or no improvement. All operators speak of brain surgery in general as discouraging; the operations are not hard, but brain tissue regenerates slowly and imperfectly. If a functional center is involved, function is permanently lost. Linear craniectomy is a thing of the past. Tubercular meningitis is usually secondary to tuberculosis of the lungs, vertebrae, joints or the peritoneum. It is rarely primary. The ventricles are distended; the sutures enlarged in the young; the miliary tubercles are usually found at the base, on the under side of the cerebellum; along the course of the circle of Willis, near the vessels. The exudate may be either serous or purulent, and is of moderate quantity. Sometimes the convexity of the brain is involved, which is indicative of a mixed infection. At times, the tubercles are small, while the exudate is large; in other cases, the reverse of this is true.

The patients are usually found to have been peevish at first. He feels that this is one of the most serious of diseases. It is an error to think that if the patient recovers, we have made an error in diagnosis. Tubercular meningitis, properly diagnosed, the diagnosis proved by lumbar puncture showing tubercular bacilli, has been followed by recovery. Tubercular disease can be of mild form in brain lesions as well as elsewhere. Lumbar puncture is the only method of relieving intercranial pressure; it is, however, only temporary and only useful for diagnostic purposes. We can not open the abdomen with the same degree of success as we can the abdominal cavity. The serum treatment seems to offer more hope for the future than any other. Surgeons do not like to operate in cases known to be hopeless. Surgery is unjustified in this class, according to our present knowledge. Irrigation is very ineffective, or entirely so, and this is also true of the use of iodoform emulsion. Of lumbar punctures, 80 per cent. have shown the tubercle bacilli, and yet the puncture was of no therapeutic value. The very nature of the exudate found shows the hopelessness of operative procedures. It is to be hoped that the future of operative work may be brighter, just as it has been in general surgery, even though the methods are very radical. The prognosis is not entirely hopeless; there is a long list of recoveries.

DR. C. C. ALLISON said that the medical men had been the pioneers in the treatment of tubercular meningitis and, having met with no success, were perfectly willing to make the surgeons a present of their cases. He was not sure that the surgeons would accept the gift. The analogy between the surgical treatment of tubercular peritonitis and meningitis

will not hold. In the one, we flush and drain, and meet with fair success; in the other, there is a much smaller surface capable of being reached. Flushing and drainage are, of necessity, much less thorough. He had operated on one patient who had a typical case excepting the lack of the proof of the bacillus; much improvement took place but the child died some months later.

DR. W. O. HENRY said that tuberculin ought to be used as a means of diagnosis, just as it is in cattle. Since operative measures are only of use in tubercular peritonitis, which is primary in character, analogy will teach us that they will only be effective in those minority cases of tubercular meningitis which are primary.

DR. W. R. LAVENDER said that, as regards the differential diagnosis, it must be borne in mind that there are two varieties, the circumscribed and the general. The former often shows nothing macroscopically and very little microscopically; at the same time, it is very fatal. The general variety manifests itself in the pia mater and fissure of Sylvius. The vessels are soft, infiltrated, and thrombi are present; the lateral ventricles show soft masses and there is no obstruction to the flow of fluid in the spinal canal. This is just the opposite of the condition found in ordinary meningitis, in which there is obstruction to the flow of spinal fluid. Typhoid fever is so often the diagnosis erroneously made that we must always remember that in the fever we have a higher temperature; a slight irritability or none whatever of the patient; a dorsal decubitus; that the patient does not attempt to cover himself with the bed-clothes if they are pulled down; that we have tympanites and, later, an eruption. In gastro-enteritis, the vomiting is not the explosive, persistent form which we see in the brain lesion.

The blood in tubercular meningitis shows a slight increase of leucocytes filled with vacuoles; active amoeboid movements; the red blood-corpuscles are of normal shape and tend to agglutinate; pigment is found among them; lumbar puncture, best made at the margin of the third lumbar vertebra, is the best possible method for differential diagnosis; the cover-slips may show the bacilli; if they are not seen here, inoculation of guinea-pigs or rabbits will develop them if present. This is the best test for them.

DR. J. E. SUMMERS, JR., said that in his experience this disease is not always an acute one. It is usually secondary and often without prominent symptoms. The glands along the jugular vein are often involved. The head mirror may show pus in the Eustachian tubes. Middle-ear trouble is often responsible for it. He has never operated in hopeless cases, but feels that it might with propriety be done. He recalled that Gross reported, in 1883, eleven operations with recovery in 25 per cent.

Cleveland Medical Society.

Quarterly Meeting, March 26, 1900.

Presiding Officer—Dr. J. B. McGee, vice-president.

APPENDICITIS.

DR. ROBERT T. MORRIS, of New York, addressed the Society on this topic. He said that if we were able to find a small focus of infection in every case of typhoid, or pneumonia, or scarlet fever, and if it could be readily recognized and removed there would be no discussion in regard to the advisability of removing it in order to save an individual from the suffering entailed by the disease. As appendicitis is such a disease, he thinks no one should be allowed to die from it without recourse to operation. He estimates that approximately 200,000 cases of appendicitis occur every year in the United States. The cause of infective appendicitis is anything that produces a break in the cells of the mucosa. This may be a concretion, or a sudden twist of the appendix, or the desquamation of the epithelium such as occurs in typhoid fever, in colitis or catarrhal infection of the intestinal mucosa. As soon as the mucosa swells there occurs an anemia due to compression of the blood-vessels, in consequence of which the leucocytes are able to reach the site of infection and combat it. After the attack the site of the ulceration contracts and closes the lumen of the appendix, thereby insuring further attacks of the disease. Behind this structure mucous

inclusion occurs in nearly 80 per cent. of cases, while in about 12 per cent there are concretions.

In making the diagnosis few points need to be remembered, and the chief dependence should be placed on palpation. Rigidity of the abdominal muscles is a significant sign. As the progress of the infection can be promptly stopped by proper operation, it should be done as soon as the diagnosis is made. This reduces the death-rate, the suffering-rate and the loss-of-time-rate. In operating, a short incision is sufficient, no matter whether there are adhesions or not, so long as there is no pus inside the appendix, but every surgeon should make the incision as long as he needs for his best work. He advocates using hydrogen peroxid to blow out the pus. In treating cases of general septic peritonitis the indications are to remove the chief toxin-bearing fluid by washing out the pus from the pelvis through small incisions, washing out the cavity with several gallons of hot saline solution and then giving an intravenous injection of three or four pints of the same solution. He does not believe in the use of gauze packing or in handling the intestines. He noted that iodoform poisoning frequently occurs from the use of iodoform gauze in the abdominal cavity, and that it then passes for septicemia. In the latter condition, however, the wound does not look clean as it does in iodoform poisoning.

DR. HUNTER ROBB said that in probably one-fifth of all cases of pelvic disease on which he had operated he had removed the appendix for associated disease of that organ. He had often found that in these cases where the appendix is extremely adherent to the surrounding structures no histologic change could be found in the structure of the organ. He had therefore concluded that some degree of appendicitis might arise apparently without infection of the lining epithelium. His own experience in operative work led him to indorse the opinion of Dr. Morris as to the disadvantage of using gauze drainage. In a series of twenty-nine consecutive cases in which there has been pus in the abdominal cavity, every case recovered, although drainage was not employed in a single case in any form. One explanation is that he found this pus free from bacteria.

DR. L. B. TRICKERMAN asked what the essayist did with the multiple openings made for general peritonitis, as to whether he closed them all or whether any were left open for subsequent drainage.

DR. O. B. CAMPBELL asked whether the large majority of the successful series reported by the essayist would not also have recovered under medical treatment.

DR. C. B. PARKER emphasized the importance of the non-use of drainage in abdominal operations. For some time the only drainage that he has employed has been the ends of the ligatures used in closing the incision, thoroughly sterilized and twisted into a bundle and introduced into a small opening left in the incision.

DR. A. F. HOUSE asked the essayist how he dealt with abscesses of which one wall was formed by the omentum and the other by the parietal peritoneum.

DR. W. H. HUMISTON said that he is a believer in early operations in these cases, as many of them survive after a first attack only to have a second or third, during which there is much suffering and loss of time and increasing danger. He noted the fact that some years previously conditions at the City Hospital had compelled him to abandon drainage in pus cases previous to the publication of the article by Dr. Clark in which this practice was advocated.

DR. F. E. BURNS said that he had given up the use of hydrogen peroxid because he found that after it had been employed it was nearly always possible to find some pus remaining. He is inclined to think that a pus cavity can best be treated by mopping it out with dry gauze and then washing it out with normal saline solution. He has noted that while it seemed better not to employ gauze drainage it was hardly true that collapse was avoided simply by placing gauze in the abdominal cavity. He thought that many of the serious symptoms following the introduction of gauze were due to the fact that the pus in the abdomen contained streptococci.

DR. N. STONE SCOTT asked what method the essayist employed in the management of bad cases of appendicitis which were

seen from a third to the tenth day of the attack. He also asked as to his experience with the frequency of chronic appendicitis and as to his treatment of the stump of the appendix.

DR. H. J. LEE said that, speaking as a general practitioner and after considerable experience, he was a firm believer in operating on every patient with appendicitis, when the diagnosis was made. He had seen three who were not operated on, in whom a subsequent attack occurred under conditions where an operation was impossible and the attacks resulted fatally. He asked Dr. Morris if he had observed, in cases of appendicitis, that pressure on the left side of the abdomen frequently caused pain on the affected side.

DR. A. B. WALKER, of Canton, asked whether or not all cases of streptococcus infection are fatal, and what the essayist's experience had been with the use of antistreptococcus serum.

DR. ROBERT T. MORRIS, in closing, said that appendicitis does occur by infection from the peritoneal side, but that in such cases it is only the slowly progressing disease. He has found the pus sterile in many cases, in others the colon bacillus, streptococci, sometimes staphylococci and in one case a pure culture of staphylococcus albus. In certain ones he employed a drain consisting of a small piece of wick, instead of the gauze packing. In the multiple openings for general septic peritonitis he usually closes them all but the one opening into the pelvis, in which he used a wick drain. While many of his serious ones would have recovered without operation, statistics show that in such cases the first attack is fatal in 10 per cent., and subsequent attacks in 15 per cent. In addition to greatly reducing this death-rate, there is a great saving of time, suffering and anxiety. He said he used the hydrogen peroxid for its mechanical effect in blowing the pus out of the abdominal cavity, and that it left the cavity cleaner than he could leave it with any sponge. In answer to Dr. Scott, he said that he would operate in such cases without waiting for a safe interval, and the word "safe" in these cases is meant to apply to the surgeon's reputation and not to the welfare of the patient. He said that when he spoke of appendicitis he referred essentially to infective appendicitis.

In treating the stump he inverts it in all cases in which it is possible, and when the tissues are fragile, he endeavors to bring the omentum nearer the surface and suture it there, so that in case a second perforation occurs it will escape externally. He advocates allowing the patient to decide as to whether an operation should be done or not.

Philadelphia Pathological Society.

March 23, 1900.

President, Dr. F. A. Packard.

HEMORRHAGIC PANCREATITIS.

DR. J. A. SCOTT presented specimens from a case of this in a man 50 years of age, who had presented symptoms of intestinal obstruction. His personal history was good, and he was not addicted to alcohol. Three days previous to entry into the Pennsylvania Hospital, he began to vomit and later suffered from pain in the epigastric region, referred to the left iliac fossa. There was general abdominal tenderness, but no jaundice. An exploratory incision was made, but death occurred. On opening the abdomen the omentum was found studded with areas of fat necrosis, a condition nearly always found in hemorrhagic pancreatitis. In these areas fat droplets and fat crystals were found microscopically. The gland was swollen to about three times its natural size, and its head looked grayish. In the areas not affected by the recent hemorrhages there were evidences of old hemorrhagic foci. An interesting feature was the appearance of the blood-vessels—the endothelium showing evidences of marked proliferation. The kidney was swollen and pale. Cultures were made and showed colon bacilli present.

DR. SIMON FLENER stated that the specimen presented very much resembled the condition produced in cases of experimental pancreatitis but the vascular changes were different. In the case presented the blood-vessels resembled those found in tubercular meningitis. In these cases it might be an interesting point to know whether or not the agent which produced the inflammatory change was the one which brought about the hemorrhage.

SARCOMA OF MEDIASTINUM.

DR. J. A. SCOTT also exhibited a specimen of sarcoma of the anterior mediastinum from a woman 32 years old, in whom the tumor first made its appearance shortly after confinement. Later there was great pallor, cough, distended veins of the neck, and effusion in the pleural cavities. The heart was not displaced. The glands of the axilla were enlarged, but there was no enlargement of the inguinal ones. The lower extremities were not edematous, but emaciated. The blood examination showed: red cells, 5,400,000; leucocytes, 38,000; hemoglobin, 69 per cent. Death occurred suddenly. Post-mortem showed the spleen enlarged and a large amount of abdominal fluid. The tumor was divided into two lobes, and had extended into the lung substance. It was found that the superior vena cava had been compressed just before its entrance into the auricle. The liver was enlarged, and showed a nutmeg appearance. On microscopic examination the growth proved to be a lymphosarcoma. Many multinuclear cells were found in the tumor.

HEMORRHAGE INTO THE PONS.

DRS. W. S. WADSWORTH AND WM. G. SPILLER presented a specimen of this condition, from a man aged 50. Death occurred about one-half hour after the hemorrhage. As to symptoms, the face was cyanotic and the pupils contracted. The respiratory failure caused death. It has been found that in these cases the hemorrhage has a tendency to occupy the median line of the pons. There had been no hemorrhage into the ventricles.

DR. A. A. ESHNER expressed the opinion that hemorrhage into the pons is of more common occurrence than recognized. Last year he found two such cases, and shortly afterward Dr. F. A. Packard showed specimens.

TUBERCULOSIS OF THE SKIN.

DR. JAY F. SCHAMBERG reported a case of tuberculosis of the skin of the hand, resulting from accidental inoculation. The case was one in which a physician had a year previously treated two patients for tuberculosis of the throat, and it is supposed inoculation of the hand occurred in making the applications. A scratch at first occurred and a small tumor developed on the knuckle, which afterward underwent necrosis in certain areas—the size of pinpoints. The tumor was excised and, on microscopic examination, showed giant cells, and hyperplastic areas. No tubercle bacilli were found. Small particles of the tumor were inoculated into the abdominal region of guinea-pigs. One of them died on the 16th day, and tuberculous nodules were found in the lymphatic glands. The second one was killed on the 118th day, and at the site of the wound a cold abscess was found. There were other areas showing evidences of tuberculous invasion.

American Laryngological, Rhinological and Otological Society.

Southern Section, Louisville, Ky., March 30, 1900.

(Concluded from p. 1003.)

ACUTE THYROIDITIS.

DR. D. B. KYLE, Philadelphia, presented a paper with this title. He had seen two cases within two weeks, the only ones he had ever seen, and in reviewing the literature of this trouble emphasized the rarity of this condition. There are two forms, suppurative and simple. The latter is more common in females between 20 and 30 years of age, with sudden onset, vague pains in the neck, swelling of the thyroid to the size of a hen's egg; marked fever; the swelling and fever begin to abate in three or four days. The suppurative form occurs in septic diseases, has a characteristic fever and general symptoms and local signs of suppuration. There is often an infection of bacterial origin, but most frequently the causal factor has not been located.

Two cases were reported, with recovery in both. The treatment was the administration of calomel for several days, salines, and cold continuously with ten minutes' intermission each half hour, and stimulating nourishment.

DEATH FOLLOWING OPERATION FOR NASAL SYNECHIAE.

DR. J. A. WHITE, Richmond, Va., reported a case of death in four days following a simple operation for nasal synechia, and inquired whether it was a sequence or coincidence. The case

was that of a young man presenting himself on December 8, with symptoms of constant headache, nasal obstruction and hyperopic astigmatism. Dr. White first corrected the astigmatism and then broke up the adhesions of the deflected septum. After a few days the headache returned but was less severe and there was still some nasal obstruction. A little chromic acid was then used. On the 23d he was looking very bad, but nothing out of the ordinary was found. The temperature was 103.6, but under quinin it came down readily. The next day he was found unconscious, having been sitting in the same place for sixteen hours. The temperature was 101, pulse 90, slight contraction of the tendons of the left hand, no eye symptoms. All efforts to arouse him failed. Eight ounces of urine were drawn and found to be almost solid albumin. Dr. White at once thought of meningitis and of uremic poisoning; as to the former, he had never heard of a case of nasal traumatism or inflammation of the ethmoid cells or frontal sinuses non-purulent in character the cause of meningitis. He did not think it could have been a thrombosis, and was inclined to the belief that death was due to nephritis. He thought the rapidity of the man's death precluded meningitis. No autopsy was permitted. Dr. White admitted that simple operations on the nose are very often followed by consequences out of all proportions to the traumatism, but did not believe that this was the cause of death.

DR. D. B. KYLE, Philadelphia, thought Dr. White was right in ascribing death to kidney lesion; it was either that or thrombosis.

DR. L. B. GRADY agreed that it must have been a case of advanced albuminuria.

DR. N. H. PIERCE expressed his confident that it was a case of chronic nephritis. He called attention to the apparent intimate connection between albuminuria and nasal operations, mentioning the case of a young man, meeting with a nasal traumatism, who developed a serious condition of albuminuria, yet whose urine had been examined for life insurance three days before the accident. He reported another case where the application of chromic acid increased the albumin to an alarming extent.

DR. WM. CHEATHAM did not think Dr. White's operation had anything to do with the death of the patient. He emphasized the occurrence of serious symptoms occasionally from the most trivial operation on the nose, illustrating by the case of a patient who rapidly developed erysipelas after a trifling operation. He does not believe in predisposition playing a part in these troubles, and said that the only predisposition he believes in is an abrasion of the nose.

DR. J. A. WHITE, closing the discussion, expressed disappointment at not receiving more information regarding the relation of the operation to meningitis. He was anxious to know whether it would be possible for meningitis to have developed in such a short time without previous suppuration in the nose. He was fully aware of the dangers following nasal operations, and said that it is his invariable rule to take the temperature the next day. He has seen violent attacks of tonsillitis follow within twenty-four hours, but has never been able to determine the connection between the two. He thought the case of erysipelas reported by Dr. Cheatham came too quickly to have been due to the operation, yet he had seen cases where there seemed to be connection.

NASAL ANGIOMA.

DR. T. V. FITZPATRICK, Cincinnati, Ohio, presented a paper on this subject. He reported the case of a woman, 20 years of age, with no nasal injury nor disease. There had been hemorrhages for six months; not much obstruction to respiration; pulsation in the nose. The tumor was attached to the inferior turbinate, with a slough on its anterior surface. The case was reported, as the literature on the subject showed true angioma to be rare.

DR. D. B. KYLE stated he believed these tumors to be a dilatation of the original blood-vessels. The tumor referred to in literature is a mixed tumor spoken of as a fibroangioma or other combination. If it is a true blood-vessel tumor it is not a new growth; it is benign.

DR. N. H. PIERCE said one is apt to confound these growths

with those on the vascular turbinates. He referred to two patients in whom there was recurrent hemorrhage; in one the tumor was the size of a pin, the other of a pea.

ANGIOFIBROMA OF NOSE AND PHARYNX.

DR. M. F. COOMES, Louisville, presented a clinical case. When first seen the patient was exsanguine, a mass protruded from the mouth and nose, a piece hung in the larynx, interfering with the breathing, and the tongue was concave to accommodate the growth in his mouth. The greater part of the mass that could be reached was removed piecemeal, by snaring, cutting and ligating. A Jarvis snare was pushed back on the growth, tightly applied and left on from sixty to 120 hours, then punctured and removed. The patient recovered, but still has a large mass showing externally.

NASAL HEMORRHAGE.

DR. T. V. FITZPATRICK, Cincinnati, Ohio, reported a case of persistent nasal hemorrhage. It followed the removal of a hypertrophied turbinate on the right side by the galvanocautery. It is his custom to always ask a patient, before a cutting operation, if he has been a bleeder, and this one had stated that he bled freely ten years before, but not since that time. Two days after the operation he was found to be bleeding profusely, almost exsanguinated. It was controlled by a gauze packing, but after the second one the bleeding occurred around it, due he believed to a subsidence of the swelling of the vessels, a consequent loosening of the packing and bleeding. A general pulsation all over the body was felt before each attack of hemorrhage. This vasomotor disturbance was seen to precede each hemorrhage. A hypodermic injection of ergotin, given by the nurse caused dizziness, faintness and convulsive body movements lasting fifteen minutes. Thirty-grain doses of bromid of sodium were given, with a disappearance of the vasomotor disturbances and bleeding, and the packing removed without recurrence.

LARYNGEAL VERTIGO.

DR. J. A. WHITE, Richmond, Va., reported two cases of uncertain diagnosis. One was a man, 45 years of age, who contracted whooping-cough, but was apparently well of it for 2½ months when this peculiar condition developed. After attacks of coughing he would have a period of unconsciousness, whether standing or sitting. The Doctor was consulted because of an injury received by a fall following a spell of coughing. At the end of a coughing spell his head would swim, with a sensation of choking and a flushing of the face present. His diagnosis was laryngeal vertigo. He found nothing that did any good. In a succession of these cases what would do one good would fail in another.

The other case was a fibroid growth of the tonsil in a woman of 18 years. Examination of a piece removed for that purpose showed it to be a fibroma. A peniculated or encapsulated growth can be cut down upon and removed, but this occupies the right half of the throat, extending down to the epiglottis, is a solid hard mass, without any evidences of the growth externally. He suggested external incision for removal, but this was refused, and as a last resort he used electrolysis. The lower part of the tumor had disappeared but the upper portion remains the same.

DR. H. W. LOEB, speaking of the first case, believed it to be true laryngeal vertigo. A case he knew of, occurring in the practice of Dr. Mulhall of St. Louis, had been much improved by a simple hygienic plan of treatment.

DR. D. B. KYLE reported the case of a man, 60 years of age, who had contracted whooping-cough from his grandchildren, would gasp following a paroxysm until unconsciousness supervened, gradually beginning breathing again. Free purgation, and the exhibition of podophyllin and sodii phosphate gave great relief. In whooping-cough the only lesion that is discoverable is an enlargement of the glands at the back of the pharynx and esophagus; during a fit of coughing pressure is increased on the recurrent laryngeal nerve.

DR. M. F. COOMES reported the case of a woman, 65 years of age in whom there was a growth similar to the one reported by Dr. White. He had advised operative interference, but upon cutting down on the tumor and finding the true condition he desisted and advised against further interference.

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DEFORMING ARTHRITIS.

Of the obscure nature of this disorder evidence is afforded by the contrariety of names that have been given to it, namely, arthritis deformans, rheumatoid arthritis, rheumatic gout. The condition is, however, generally believed to be in no way related to either rheumatism or gout, so that the preferable name for the present would seem to be arthritis deformans, or its English substitute, deforming arthritis. We have in a previous article described a morbid process—chronic villous arthritis—attended with hyperplasia of the articular synovial membrane, and which, while it presents a certain superficial resemblance to deforming arthritis, is characterized by features that serve to distinguish it from the latter disorder. These points of differentiation were recently fully discussed by Schüller.¹ In deforming arthritis the morbid process involves essentially and principally the articular cartilage. It consists in a proliferative hyperplasia of the cartilage-cells, swelling of the cellular spaces, fibrillation of the cartilage toward the free surface of the joint, and also destruction and eburnation of the altered cartilage at the center and at points of contact or friction in the joint, and in ossifying prominences at the periphery of the hyperplastic cartilaginous tissue at the margins of the articular extremity. In the soft parts adjacent to the articular extremities ossifying induration occurs at times, which has been designated para-arthritis ossification. These changes are responsible for the attending deformity, while the alteration in the shape of the joints in cases of chronic villous arthritis is due not to changes in the articular extremities of the bone, but essentially or exclusively to the formation of villi and other chronic inflammatory alterations in the synovial membrane or the capsule of the joint. It is true that deforming arthritis may be attended with villous hyperplasia of the synovial membrane, but this is less marked and of subordinate importance and it does not determine the anatomic condition of the disease. The villi, further, present macroscopic and microscopic differences in the two disorders. The villi of deforming arthritis are firmer, consist of connective or fatty tissue in a state of simple chronic inflammation, often with a deposition of cartilage, but without the abundance of blood-vessels seen in villous arthritis, without dumb-bell shaped bacilli and without the peculiarly grouped and diffuse large-cell and extremely abundant cellular hyperplasia. Deforming arthritis always begins in the cartilage, never in the synovial membrane, and the essential pathologic alterations consist in

changes in the cartilages and in the articular extremity of the bones, while these are wanting in villous arthritis. These differences can be distinguished clinically on physical examination, especially on palpation; although sometimes the characteristic appearance of the joint, and particularly in marked cases the irregular, often bladder-like prominence or dilatation of the joint-capsule permits the recognition of the disorder on inspection; while in marked cases of deforming arthritis the altered form and position are sufficient for diagnosis. On careful palpation of the diseased joints it may be possible to detect the villi and their arrangement, the character of the synovial membrane and the condition of the articular cartilage on the one hand, or the want of accentuation or prominence of the free margins of the articular extremities on the other. X-ray examinations may disclose the conditions present in marked cases of deforming arthritis, but the results are uncertain in cases of villous arthritis, particularly when other methods of examination fail, and they are thus only of negative value. Villous arthritis is generally attended with considerable pain in the joints, both spontaneously and on pressure on the swollen capsule and on the villi. In women the pain is increased at the menstrual period. The pain of deforming arthritis is in general slight, and it is usually present only on functional use of the part. Further, in spite of often not inconsiderable impairment of mobility due to deforming arthritis, the functional use of the affected parts is interfered with much less and much later than in cases of villous arthritis, which early induces profound disturbances. Further, deforming arthritis occurs generally in life, in the second half, and only exceptionally earlier, and not rarely involves a single joint, particularly after an injury. On the other hand, villous arthritis develops preferably in the first half of life, at a vigorous age, and often in youth. Traumatism is exceptionally or not at all a predisposing cause for villous arthritis involving a single joint. This variety appears much less commonly than deforming arthritis in a single joint. The general condition suffers much less in connection with multiple deforming arthritis than with multiple villous arthritis.

Believing that the ossifying change in the articular extremity in cases of deforming arthritis depends on disturbance in the excretion of the bone-salts, Schüller has examined the urine in all cases that have come under his observation, and has almost constantly found marked diminution in the lime-salts and the earthy phosphates. The urine has generally a low specific gravity, and rarely an acid reaction, being usually neutral and sometimes alkaline. While the normal elimination of lime-salts is from three to six grains daily, in cases of deforming arthritis it was found to be from $\frac{1}{4}$ to $1\frac{1}{4}$ grains. It has been discovered also that the amount of calcium, magnesium and phosphoric acid, not only in the urine, but also in the stools, is diminished in cases of deforming arthritis. These changes must be referred to a derangement in metabolism, and they suggest that lime is re-

¹ Berliner Klin. Woch., 1900, Nos. 5, 6, 7.

tained in the joints or is deposited therein in increased amount, and it was found by histochemic means that the cartilage contained an excess of lime-salts. The deposition of lime-salts in the cartilage exerts both a destructive and an irritating influence, causing nutritive disturbances, fibrillation and necrosis, as well as cellular proliferation. These histologic alterations give rise to the characteristic anatomic changes in the joint that develop under the influence of pressure and friction in the course of functional use, while at the same time, in consequence of the continued abnormal supply of lime-salts, the swellings and prominences resulting from proliferation of the cartilage-cells and inflammatory irritation of the periosteal tissue undergo ossification. The evidence suggests further that the changes that take place in the synovial membrane in cases of deforming arthritis are due, in part at least, to abnormal deposition of lime-salts. Possibly also the free cartilaginous or bony bodies found in joints in cases of deforming arthritis have a similar origin. It would be expected that the changes described would occur more readily in a joint whose nutrition had been impaired, and it may be that deforming arthritis occasionally follows previous articular disease for this reason. Deforming arthritis involving a single joint is, further, not rarely observed in the sequence of traumatism or fracture.

Deforming arthritis is believed not to be of bacterial origin, but to be a metabolic disturbance characterized in part by the deposition of lime-salts in the bone, cartilage and soft parts of joints, with diminished elimination of lime-salts in the urine. These abnormalities must in turn be referred to disturbances in nutrition, and it will be found that most patients presenting this disorder are constipated or exhibit irregularity in bowel movement, with flatulence, dyspeptic symptoms and digestive derangement of various kinds. It may be that in consequence of fermentative processes in the digestive tract, or other undetermined metabolic disorder, lime-salts are taken up in excess from food and carried to the joints.

Deforming arthritis has hitherto proved extremely resistant to treatment, and physicians have generally been satisfied to relieve the pain of the acute stage or exacerbations and, if possible, to stay the progress of the disease. Sometimes the disorder seems to reach a stationary period, but this can not often be attributed to therapeutic intervention. Many remedies have been recommended, as in all chronic and obstinate affections. Hydrotherapy, together with the provision of the best hygienic and dietetic conditions, comprises perhaps the best general measure. Among drugs, arsenic, cod-liver oil, phosphorus, iodids and salicylates may be employed. Active and persistent counterirritation has at times seemed to yield beneficial results. Quite remarkable results have been reported from the use of hot air in the treatment of deforming arthritis, and while the procedure is one that requires time and perseverance, it should receive the application of which it has proved worthy. As a result of his studies Schüller believes that for cases of deforming

arthritis a milk diet is not indicated, as milk contains considerable lime. Kefyr should not be employed for the same reason. A mixed, easily digested diet, with a deficiency of lime is best. All food that is capable of readily undergoing fermentation in the digestive tract is to be avoided. Carlsbad water or salt is advisable, employed for about four weeks, and then followed by massage and hydrotherapy, with douches and baths. This plan of treatment may be repeated from time to time. As a result the pains in the joints are lessened. The tumefaction diminishes, mobility is increased and locomotion is rendered easier. In mild cases local articular manifestations recede, while even in severe cases amelioration of the symptoms results. As a rule, also the amount of calcium in the urine increases under this treatment. Occasionally operation may be required.

UNUSUAL LESIONS OF VERMIFORM APPENDIX.

According to the statistics brought forward by A. O. J. Kelly,¹ it appears that "of 1391 cases of carcinoma of the intestine, the rectum was the seat of the new growth in 988 cases, the large intestine in 251, the cecum and the appendix in 79, the ileum in 32, the jejunum in 17, and the duodenum in 24." Of the 79 cases involving the cecum and the appendix it is not possible to learn how many were primary in the appendix; Kelly could find but five cases in this series in which the carcinoma was clearly limited to the appendix; in addition he enumerated thirteen other cases of carcinoma of this structure. Among 706 appendices, removed by Deaver and examined by Kelly, he found three instances of carcinoma and one of endotelioma. These four cases are of interest because in all the operations by which the appendices were removed were undertaken for the relief of the clinical symptoms of appendicitis, and in three cases inflammatory changes were present in addition to the neoplasms, which were microscopic in size and undoubtedly primary in the appendix. In the fourth case, which ended fatally, the exact origin of the tumor—carcinoma—could not be established, the probabilities, however, pointing to its origin in the appendix. In view of the fact that the symptoms were those of appendicitis and the tumors were microscopic in size, it seems not unlikely that systematic examination of appendices removed by operations would reveal a larger number of tumors in the appendix than our present information indicates. The occurrence of repeated inflammation in a structure like the appendix would seem to tend to establish conditions favorable for tumor growth.

The presence of worms in the appendix has been occasionally noted. At a recent meeting of the Philadelphia Pathological Society Frazier² reported a case of removal of an appendix which was found filled with oxyures vermiculares. Frazier points out that while worms could not per se cause appendicitis, yet their presence in large number might play the part of predisposing

¹ Proc. Phila. Path. Soc., 1900, iii, 109; THE JOURNAL, April 7, p. 876.

² *Ibid.*, 129.

causes, interfering with the drainage of the appendix and creating conditions favorable for microbial growth. At the same meeting G. G. Davis³ reported an instance in which a segment of tapeworm was found lodged behind a constriction in an acutely inflamed appendix, and Beyea referred to the presence of a single oxyuris in an appendix. Kelly recalled the fact that Saracenus, in 1642, described an abscess in the right iliac region, with discharge of fecal matter and fourteen lumbricoid worms, this being the first case of appendicitis—perityphilitis—recorded.

Another rather unusual but interesting abnormal condition of the appendix is its presence in hernias. Jopson⁴ describes a case of inguinal hernia that contained the appendix, which was gangrenous from strangulation near its origin; the patient died from general peritonitis. Peterson⁵ recently estimated the number of cases of hernia of the appendix reported in the literature at 116. Jopson goes over the facts in regard to hernia of the appendix with great detail, and many interesting features are recounted, which are not suitable, however, for repetition at this time. The appendix may occur in inguinal as well as in crural hernias, but the case recently described by Bouglé and Dartigues⁶ is probably quite unique. It concerns a strangulated, right femoral hernia, containing the appendix, in a woman, age 63; laparotomy was made and the appendix, which was healthy, reduced; three days later a strangulated inguinal hernia developed, which also contained the appendix, but this time it was inflamed. A second laparotomy was made, the hernia reduced, and the appendix removed. The patient died. The autopsy showed a normal peritoneum, the heart dilated and fatty, and the kidneys sclerotic. In this case, as in so many of appendiceal hernia, the strangulation of the appendix gave rise to complete intestinal obstruction, due most likely to reflex action.

These observations serve to illustrate the variety of important pathologic conditions in which the appendix, though such a small structure, plays the essential rôle.

ACTION OF HEAT AND COLD ON CELLS AND TISSUES.

Some time ago two interesting and rather novel investigations into the action of heat and cold on certain cells and tissues were published, the principal results of which follow. Hochhaus¹ points out that comparatively little is known about the microscopic changes that develop after the action of very low temperature on the tissues. He therefore arranged a set of experiments by means of which he exposed circumscribed areas of the kidneys and the liver to the action of intense cold produced by carbonic acid gas under high pressure. Two hours after the application of cold there developed swelling of the protoplasm of the renal cells and evi-

dences of nuclear disintegration; four hours later the nuclei disappeared, the vessels became hyperemic and some hemorrhage took place; in twenty-four hours leucocytes had emigrated only to disintegrate; after a few days calcification of numerous renal cells had taken place, which was followed by connective-tissue proliferation and ultimate encapsulation of the calcified area without any attempt at regeneration of the surrounding tubules. In the liver the early changes were similar to those in the kidney, but the connective-tissue proliferation began earlier and was more marked than in this organ; within four to eight days numerous multinuclear giant cells appeared, whose fate is not followed any further than to note their disappearance in some way. Eventually an external scar resulted.

Fuerst² studied the changes in the human and animal epithelium, that result from the action of moderate degrees of heat and of cold. The experiments were originally undertaken in order to study the results, on cell proliferation, of pure hyperemia, uncomplicated by traumatism and inflammation. According to the views of Ribbert, under whose direction this investigation was carried out, increased blood-supply to an organ separates the cells from each other, diminishes the normal tension and thus liberates, as it were, the latent proliferative energy of the cells. The preliminary results³ obtained from the study of the action of moderate cold produced by a spray of ether on the ears of rabbits and guinea-pigs, were such that an elaboration of the experiments so as to include the changes produced by repeated applications of moderate degrees of cold and of heat on both the animal and human epidermis was undertaken. The degree of heat applied did not exceed 52 C. for two minutes at one time. It was found that brief, frequently repeated applications of mild degrees of heat and cold produced, both in man and the animals employed, a marked thickening of the epidermis; this was due especially to an enormous hypertrophy of the cells as well as, in the second instance, to cell proliferation. The changes of the corium are limited to hyperemia. In the cells of the epithelial covering of the milk and sebaceous glands numerous and large multinuclear giant cells make their appearance early; it is assumed that the abnormal temperature produces an injury to the protoplasm while the nucleus remains normal; this damage to the protoplasm removes the normal hindrance to the proliferation of the nucleus, which now is given full sway to proliferate.

It was found that thermal stimuli of this sort in the guinea-pig hasten regeneration threefold. The action of high temperature can be successively increased without damage, up to a certain degree, for the tissues adapt themselves to the new conditions and acquire a relative immunity. Fuerst also found that the application of cantharidin and chemical agents in weak solution induces

³ THE JOURNAL, April 7, p. 576.

⁴ Proc. Phila. Path. Soc., 1900, iii, 119.

⁵ THE JOURNAL, 1899, xxxiii, 1407.

⁶ Bull. et Mem. de la Soc. Anat. de Paris, 1900, lxxv, 73.

¹ Virchow's Archiv, 1898, 154, 320.

² Ziegler's Beiträge, 1898, xxiv, 415.

³ Embodied in Fuerst's inaugural thesis, Ueber die Veränderungen der Epidermis durch leichte Kälteeinwirkungen. Königsberg, 1897.

similar proliferations without inducing giant cell formation. It is concluded that the hypertrophic processes observed are not so much attributable to any direct "formative" action of the thermal stimulus, nor to hyperemia, but are rather the results of primary tissue lesions; and as such examples of excessive regeneration. Fuerst suggests that the increased capacity for regeneration under these circumstances may be of advantage in clinical surgery, and recommends further experiments with this end in view.

QUARANTINE APPROPRIATIONS.

The Secretary of the Treasury has recently asked for an additional appropriation of \$200,000 to prevent the introduction and spread of epidemic diseases, the previous appropriation of \$300,000 being almost exhausted. In these days of large things this sum may not appear great, but it would be a very respectable fortune by itself. It is none too much, however, to pay for adequate protection, and is in this light an economical investment. The fund is used for quarantine purposes and the maintenance of a corps of medical inspectors at the various foreign ports whence infection is likely to come, including a large number of South and Central American stations, as well as those in Europe and Western Asia. The continued and increasing danger of the bubonic plague, as well as the permanent one of yellow fever, furnish ample means of utilizing this appropriation or even a still larger one.

MEDICAL THEOLOGY.

The Archbishop of Montreal is said by the *British Medical Journal*, to be thinking of founding a course on medical theology in Laval University. Our contemporary does not know just what medical theology is, but hopes that it may not be added to the already overburdened curriculum of the student. The term is new to us also, but if we may venture a guess, we would think the course might include certain questions of medical deontology such as those arising in connection with abortion, baptism, etc., which have been more or less extensively discussed by Roman Catholic theologians. The medical profession has generally held that the proper application of the recognized ethical principles is sufficient for all emergencies, but there are still some doctrinal points on which the church may deem some special instruction required, and that will also come within the compass of the proposed course. This is offered in default of an express definition as our idea of what is meant by "medical theology." In this or a similar sense we might have a Judaic or a Mormon medical theology as well as a Roman Catholic one. It is not probable, however, that their introduction into medical courses will be general or that they will cause theologic discord in the medical profession.

WATER-BORNE TYPHOID AND TEMPERATURE.

While it has been shown that many bacterial germs, as well as some higher organisms, will resist almost any known or applicable degree of cold and retain their vitality after subjection to the temperature of liquid

air, it is also true that low temperatures do have a certain restrictive action on their growth. Even more than this, it appears to be also true that the ordinary cold of winter temperature has a destructive influence on certain pathogenic germs. Thus, while the pollution of ice used for dietary purposes has been known to cause intestinal disturbance, it appears that there is in the literature no record of any epidemic of typhoid fever having been caused this way. Sedgwick and Winslow¹ have investigated the action of freezing on Eberth's bacillus, with special reference to this point. While it is known that cultures of this germ are not sterilized by freezing, the question of its quantitative reduction by this agency has been little investigated. They experimented therefore by freezing a large number of test tubes of water inoculated with four different races of this bacillus and determined the reduction after various periods. The results, twenty tubes being averaged for each period, showed a rapid reduction ranging from 30 to 60 per cent. in the first hour and then decreasing to over 99 per cent. in two weeks. The last two or three bacilli in the thousand appeared excessively resistant, some remaining even after twelve weeks of freezing. Alternate freezing and thawing were found only slightly more destructive than constant freezing, and a water temperature a little above the freezing point not much less. Finally a few experiments on the formation of ice on a free surface showed that 90 per cent. of the germs present were excluded by physical processes. It would appear from these studies that the old popular notion that water purifies itself by freezing has in it more truth than some ardent sanitarians have been willing to admit. As a practical illustration, it would appear that a winter typhoid germ starting from Chicago via the drainage canal would in ninety-nine cases out of a hundred be frozen to death before reaching St. Louis, let alone any other perils it would meet with on its way.

CHARTER OF THE NEW YORK STATE MEDICAL ASSOCIATION.

During the recent session of the legislature of the State of New York, an act was passed granting a charter to the New York State Medical Association. The objects of the Association are defined to be "The Cultivation and Advancement of the Science of Medicine, the Promotion of Public Health and the Establishment of a Death Benefit Fund for the Dependents of Its Members." The Association was organized in 1884 as an incorporated Association of members of the medical profession of the state who adhered to the Code of Ethics of the AMERICAN MEDICAL ASSOCIATION, which had been discarded by the medical society of the state. During this long period of sixteen years the Association has maintained a vigorous growth, as its large membership of nearly 700 and its fifteen portly volumes of annual transactions abundantly attest. It has also gradually assumed a leading position among the medical organizations of the state and now ranks second to none in influence and power on all questions relating to medical education, public hygiene and other interests of the profession that require legislation. It has been for some time apparent that the Association would have to become

¹ Jour. of Boston Society of Med. Sci., March 20.

a chartered body to enable it to meet its increasing obligations to the profession and to the public. Accordingly a charter was prepared giving it needful powers in the management of its property, in the establishment of a "Death Benefit Fund" for the dependent of its members, to enable it to form distinct branches and subordinate county associations, and, finally, to give to it that legalized character necessary to the furtherance of cordial professional relations and fellowship between the medical profession of the state and of other states and of foreign countries through the medium of their chartered medical societies. We foresee that, with the granting of a charter by the New York legislature, a new era in the history of the Association is about to begin. Having the vantage ground of a chartered corporation, its power in the profession, in legislative halls, and in medical organizations at home and abroad will be greatly enhanced. Not the least of the benefits which will result from the larger activities of this Association will be realized by the AMERICAN MEDICAL ASSOCIATION. Sustained by the profession of the Empire State, compactly organized in district and county associations, the New York State Medical Association is certainly to become a powerful factor among the forces which will in the future direct and control the destinies of the great central organization.

HEMATOZOON INFECTION IN RATS.

Lydia Rabinowitch and Walter Kempner's¹ study of the flagellate parasite of the rats' blood, the trypanosoma, establishes another example of hematozoon infection, like malaria and Texas fever, in which the infection is carried by suctorial insects, in this case by the flea especially. These insects draw the blood of the infected rats; the trypanosoma has the power of remaining alive for a time in the body of the insect, whence it is again deposited into a healthy rat during the act of sucking blood. The full cycle of development of the parasite has not been wholly traced, but based on analogy with malarial and similar infections we undoubtedly have here an instructive example of a hematozoon which requires two hosts for its existence, the rat and an insect like the flea. The complete demonstration of this double existence of animal parasites of the blood, through the work of such men as Manson, Theobald Smith, Ross, Grassi, Bignami and others, has introduced a new departure in the study of etiology and parasitology, with the immediate result that a clear insight has been obtained into the natural mode of infection in malaria, etc. It is of interest to observe that the above writers also show that in the case of the white rat, which does not seem to be spontaneously susceptible to the trypanosoma infection, experimental intraperitoneal inoculation with the blood of infected gray rats is followed by the development of a well-marked active immunity, the serum possessing protective and curative powers for both gray and white rats. Agglutinating phenomena were not present in the trypanosoma serum.

CONDITIONS OF TERROR IN CHILDREN.

The young are peculiarly susceptible to emotional influences, and these may be of intrinsic or extrinsic origin.

Children are readily startled and easily frightened, and in them the imagination responds quickly to stimulation. These facts find their explanation in the irritability and instability of the nervous system in early life, and its prompt reaction to various stimuli. Indiscretions in diet and gastrointestinal, nutritive and metabolic disturbances, constitute the most common etiologic factors in the development of derangements of nervous functional activity in childhood. A not uncommon disorder, whose exact nature is unknown, but which is at times attributable to such an origin, consists in the occurrence of attacks in which the little patient cries out during sleep as if in fright, and is perhaps awakened in great terror. A similar condition of fright, without tangible or at least adequate cause, occurs, though less commonly, during the waking hours, either independently of or in conjunction with the disturbance during sleep. Three cases of this kind are reported by Still,¹ who enters on an interesting discussion of the nature of the disorder. He points out that children who suffer from so-called day-terrors are of excitable nervous temperament. Neurotic heredity is an important predisposing influence, and a family history of rheumatism is not uncommon. By some these states of terror have been thought to be related to epilepsy and mania, but the former are much more amenable to treatment than the latter. Mucous disease, probably with catarrh of the large intestine, is believed to be especially provocative of night-terrors, and often the nervous disturbance will cease when the intestinal disorder is corrected. Adenoid hyperplasia in the pharynx may play a similar rôle. It is not impossible that the same facts apply also to day-terrors. From a comparative and prognostic point of view these may be considered a more ominous disorder than night-terrors. In treatment, the most important factor is the removal of the exciting cause. Chronic intestinal catarrh will require rigid dieting, with the exclusion of potatoes, pastry and sugar, and the administration of alkalies, such as potassium citrate, perhaps with iron and compound decoction of aloes. Thread-worms, if present, or other cause of irritation, should be removed by suitable treatment. Sedatives, such as bromids, may be required for a time, and they may be combined advantageously with belladonna.

Medical News.

THE CONSTANT decrease in the number of medical students in France still continues. From 2212 in 1891, the number rose to 8897 in 1894, and has since then fallen gradually to 8230 this year, which includes 817 foreigners.

ARBITRATION OF SCIENTIFIC QUERIES.—Arbitration has never been applied to scientific questions, but three scientists at Buenos Ayres have agreed to adopt it to decide to which belongs the credit of the discovery of the microbe causing the disease among sheep known as "lombriz" or worms. Dr. Lignières first described it and, later Mercanti and Dessy described another, which Lignières claims is identical with his. The director of the bacteriologic laboratory, Dr. Rivero, has accepted the task of deciding the question after thorough investigation. Dr. Lignières is now experimenting on a large

¹ Zft. f. Hyg. u. Infektionskr., 1896, xxxi, 251.

¹ The Lancet, February 3, p. 292.

scale with his vaccin against Texas fever—which he calls "bovine malaria"—under the supervision of a committee appointed by the department of agriculture.

THE INTERNATIONAL sanitary council of Egypt has been advertising for four physicians for the quarantine stations at Suakin, Kosseir, Damietta and Moses' Springs, and one woman physician for the station at Suez. The salary is about \$120 to \$140 a month.

BELGIAN PRACTICE.—As previously mentioned, our Belgian exchanges recently advocated that professors should give up family and general practice and confine themselves to teaching and to consultations. The *Berliner Aertze Corr.*, March 3, reports that twenty-five young physicians in Budapesth have signed a petition to this effect, presented to the medical faculty, calling attention to the fact that the members of the law faculty are prohibited from private practice, and that the over-worked medical professors now leave most of their clinics and lectures to their assistants. The Berlin journal adds that the professors and specialists in Berlin have also a more or less extensive general practice and that only the energetic protests of the profession will put an end to this "Unsitte." "When the general practitioner refuses to join in a consultation with such competitors, the evil will soon disappear of itself."

FOREIGN PHYSICIANS IN ITALY.—The Italian government has about decided to insist that all foreign physicians wishing to practice in Italy must first pass the examination required of native physicians, unless from a country in which duly accredited Italian practitioners are allowed to practice without restrictions, which is not the case in England or Germany. The only exception to be allowed is when a physician accompanies or is sent for by a special patient or family and limits his attention to these individuals. The wealthy "resorters" in Italy are now treated by their countrymen settled in Italy, and this the Italians propose to share in. They also claim that some of the most successful foreign practitioners are not regularly graduated men. The younger Italian physicians, we are told, are familiar with English and German, and Italian science as a whole takes a high rank. It is peculiar in that it is not centralized as in other European countries, but groups of scientific workers are scattered over the country, clustering around men like De Renzi and others of international fame, connected with the numerous universities.

DISTRICT OF COLUMBIA.

AT THE Casualty Hospital the following medical work was done during the past three months; emergency department, 175 cases, 149 operations and 26 cases admitted to the wards; dispensary service, 336 cases treated, 59 operations performed, and 1517 prescriptions compounded.

AN AMENDMENT to the District appropriation bill has been offered by Senators McMillan and Gallinger, granting \$100,000 for the purchase of ground and the construction of a building to be used as a municipal hospital under the direction of the District Commissioners.

DWELLINGS FOR THE LABORING CLASSES.

One of the appendices to the report of the Health Officer of the District of Columbia (Document No. 7 of the present Congress) deals with the housing of the laboring classes in the city of Washington. From this it appears that a very successful experiment is in progress in that city. Several years ago inquiries were instituted into the insanitary conditions affecting the dwellings of the poor by certain local societies interested in the public welfare. The result of this investigation showed the existence of many insanitary dwellings in the alleys of the city, including houses without cellar or attic, drainage, sewage or piped water-supply, with the interiors

greatly over-crowded and the surrounding air foul-smelling from box-prives and stables. Immorality and crime were found to be prevalent in these alleys, some of which were narrow cul-de-sacs hidden by neighboring buildings and their very existence unknown except to the initiated. For such undesirable accommodations the rentals were found to be relatively much higher than those of better conditioned dwellings in other and better localities. The recommendations based on this investigation were the speedy conversion of all alleys containing a sufficient number of houses into minor streets and places, and the condemnation of those which could not be straightened, widened to thirty feet and provided with an exit at each end.

The Commissioners of the District appointed a committee, one of the duties of which was to consider the need of sanitary dwellings for the poor. Surgeon General Sternberg submitted, from this committee, a report which, after reciting the condition of the alley dwellings, announced the opinion that there was need for legislation by Congress, by which tenements unfit for human use should be condemned and destroyed, blind alleys opened, narrow ones widened, branch sewers constructed and gas and water introduced so that sanitary tenements might be constructed in the minor streets and alleys "to be rented to the poor as low or lower than are the insanitary dwellings now occupied by many of them." Pending legislation on the subject the Committee recommended the organization of a sanitary improvement company. This company was formed and incorporated in April, 1897, and since then twenty-eight houses, containing fifty-six sanitary flats, each consisting of four or five rooms with bathroom, cellar and closets, have been built and occupied to the material advantage and comfort of the occupants as well as to the financial advantage of the philanthropic individuals who took stock in the company to promote its objects, for during the past three years it has proved a safe 5 per cent. investment. The report of the health officer gives plans of the buildings, which are two-storied, each story constituting a flat, with separate entrance, cellar and yard. The lighting and ventilation are good and the plumbing the best. Each has three large closets and the kitchen is provided with a range, a hot-water cylinder, dressers and sinks. To promote care of the property on the part of tenants, one month's rent in each year is allowed for interior repairs, and if the money is not required for this purpose the tenant receives the benefit of the allowance or of so much of it as remains after required repairs have been paid for.

The success of this experiment shows how much may be done, with no financial risk, to improve the sanitary condition of the poor in certain localities. Where building ground is high-priced, large tenements may be a necessity, to keep the rentals within the financial ability of the individual tenants, notwithstanding the greater danger from the spread of infectious diseases and from fire in such large and crowded buildings; but there are many cities in this country where the poorer classes of the community would be benefited by action taken on the lines adopted by the Sanitary Improvement Company of Washington, D. C.

PENNSYLVANIA.

THE ANNUAL charity ball for the benefit of the Williamsport Hospital was held April 15.

THE STATE authorities recently examined fourteen cattle in Lancaster County, and five proved to be tubercular and were killed.

THE DEDICATION of the Phenixville Hospital occurred April 14. An ambulance was presented by James M. Crawford of Philadelphia.

HOSPITAL REPORT.

The annual meeting of the Presbyterian Hospital Association, Allegheny, was held April 17. The reports showed that 249 patients had been admitted to the hospital during the year. There is a total of \$40,000 in the endowment fund. The balance in the current fund last year was \$265.93; the income from pay patients was \$6446.19. The receipts from all sources amounted to \$11,141.19.

Philadelphia.

THE LATE Joseph H. Gillingham left \$1000 to the Woman's Hospital.

A PATIENT at one of the hospitals of the city recently leaped from the third story of the building and sustained a fracture of the leg.

DR. CHAS. W. BURR has resigned from the Medico-Chirurgical College, his resignation to take effect at the close of the present term.

BY THE will of Mrs. Margaret Carter, \$13,000 is left to the Jefferson Hospital, Philadelphia, for the establishment of a free bed.

THE RESIDUARY estate of Frederick Muchlig, who died in this city some time ago, amounting to \$5,000, has been left the German Hospital of Philadelphia, for endowing a free bed.

DURING the past week the new Nurses' Home of the Hospital of the Protestant Episcopal Church was dedicated. Its completion was largely made possible by the gift of \$100,000 from J. Vaughan Merrick; \$4,000 is being asked for toward the purchase of current literature for the home.

BY THE will of Ann K. Horner, \$2,000 has been left to the following named institutions: Germantown Dispensary and Hospital, Episcopal Hospital and Home for Aged and Infirm Colored People; \$14,000 to the Home for Incurables.

THE PURE BUTTER Protective Association is waging warfare against offenders of the laws restricting the sale of oleomargarin. During the past week thirteen persons were arraigned for violations of the law, and in each instance a fine of \$50 was imposed.

SEVERAL hospitals, by the will of the late George W. Miles, will in time become beneficiaries as follows: Hospital of the Protestant Episcopal Church, Presbyterian and St. Joseph's hospitals, each \$8,000. The Pennsylvania and the Children's Hospital, the Home for Consumptives and the Germantown Dispensary and Hospital, each \$5,000; Maternity Hospital, \$6,000.

THE TOTAL number of deaths during the week just closed was 739, an increase of 48 over the preceding week and an increase of 234 over the corresponding period of last year. The principal causes were: cancer, 12; tuberculosis, 84; heart disease, 46; influenza, 31; pneumonia, 23; measles, 24; nephritis, 36.

OHIO.

CONNELT'S Board of Health has adopted a resolution requesting the Board of Education to pass an ordinance requesting the vaccination of all school children.

THE REPORT of the Columbus Health Department for March shows 162 deaths during the month. There were 12 fatal cases of typhoid fever, 1 of measles, 3 of diphtheria, 1 of croup, 19 of consumption and 22 of pneumonia.

Cincinnati.

DR. OTIS CAMERON has been appointed city bacteriologist and attached to the Health Department.

DR. JOHN M. ADAMS has been appointed physician to the city infirmary, vice Dr. Thomas P. Hart.

DR. H. H. HINES has been appointed surgical clinician to the Miami Medical College. He has just finished his service at the City Hospital.

THE HEIRS of the late Dr. John A. Murphy have turned over his large collection of medical books and pamphlets to the City Hospital's library.

THE HEALTH officer has adopted plans for more perfect sanitation among the tenement houses, which require district physicians to investigate more thoroughly and file written reports in the health office.

Toledo.

FOR MARCH the Health Department reported 159 deaths.

THE LATE Robert Hunter devised \$1,000 to the Protestant Hospital, on condition it be held, invested or expended by the officers of the hospital in such manner in and about the institution as may be directed by the Toledo Medical Association.

MARYLAND.

DR. J. F. H. GORSUCH, of Fork, has been appointed director of the Female House of Refuge.

THE RESIDENCE of Dr. Wm. H. H. Campbell, Owings' Mills,

was destroyed by fire April 17. The Doctor's loss is about \$5,000, partly insured.

PLANS HAVE been prepared for the erection of the Frederick Hospital. The structure will be of brick, equipped with all modern improvements, and will cost about \$10,000.

HOSPITAL IMPROVEMENTS.

NOW that the large bequest of the late Enoch Pratt is available through the decision of the Supreme Court of the United States, noted in these columns last week, plans for the improvement of the Sheppard and Enoch Pratt Hospital, in the suburbs of Baltimore, are being formed. A casino will be built on the grounds, about 300 yards from the main building. It will be a low building, with a large porch and will be fitted up with bowling alleys, pool and billiard tables, and other games. The ground around will be laid off in tennis courts and for other sports. The building will cost about \$20,000. The water-supply, for which reliance has hitherto been placed on the numerous springs in the place, will be increased by several artesian wells. Enlarging of the lighting plant is under consideration, to permit of lights on the driveways and a railroad station in connection with the Baltimore & Lehigh R. R., is another design. No additional buildings to the hospital proper are contemplated, as only curable cases are admitted and the present accommodations are considered sufficient.

Baltimore.

THE COMMENCEMENT of the College of Physicians and Surgeons was held April 24. There were 35 graduates.

THE SUPERVISORS of city charities, who have by law the control of the appropriations to these institutions, have adopted the plan of having visitors look after their management.

AT THE nineteenth annual commencement of Baltimore Medical College, held April 17, 61 received diplomas, one "*magna cum laude*," and 6 "*cum laude*." It is the custom of this institution to administer the Hippocratic oath to all graduates. A banquet followed in the evening.

DR. JOHN F. MANGER has filed a petition in the Court of Common Pleas, for a writ of mandamus requiring the State Board of Medical Examiners to issue him a permit to register as a physician, in accordance with the act of 1896 and the decision of the Court of Appeals in his favor. (See previous mention in THE JOURNAL.)

NEW YORK.

THE GOVERNOR has signed the bill authorizing the city of Buffalo to spend \$50,000 on a quarantine hospital.

APPOINTMENTS.

Governor Roosevelt has appointed the following gentlemen to serve as trustees of the New York State Hospital for the Treatment of Incipient Pulmonary Tuberculosis: Howard Townsend, Manhattan, for the term of five years; John H. Pryor, Buffalo, for four years; Willis G. Macdonald, Albany, for three years; Walter Jennings, Manhattan, for two years, and Frank E. Kendall, Saranac Lake, for one year.

BILL FOR DRUG CLERKS.

THE legislature has at last passed the bill granting shorter hours to drug clerks and guaranteeing to them certain privileges of importance to their health. The new law provides that in cities of one million or more inhabitants drug clerks shall not work more than seventy hours per week, or more than 136 hours in two consecutive weeks; that one hour shall be allowed for each meal; that they shall receive at least one full day off in two consecutive weeks, and that they shall not sleep in the drug store or in an apartment connected with such store.

APPROPRIATION DECREASED.

THE action of the legislature in cutting down the appropriation for the State Pathological Institute for this year, from \$36,000 to \$20,000, means that the studies being carried on there will have to cease altogether, or that the scope of the work must be materially curtailed. The real reason for this action of the legislature is to be found in a difference of opinion between members of the lunacy commission regarding the character of the work done at the institute. Dr. Peter M. Wise, the head of the present commission, is a staunch believer in the old clinical method of studying insanity, while the past

work of the institute has been purely experimental and largely speculative.

INSPECTION OF CHARITY INSTITUTIONS.

Mr. Elbridge T. Gerry has once more shown conclusively that he is a powerful and successful lobbyist, for his victory in the contest between his society and the State Board of Charities is generally conceded to have been the result of his personal influence and work. It will be remembered that last January the Court of Appeals decided that the Society for the Prevention of Cruelty to Children was not a charitable institution, and that the State Board of Charities had no right to inspect institutions which are supported by private benevolence. This decision was so unexpected and so sweeping in its effect that a motion for a reargument was made. The Court of Appeals has, by a vote of 4 to 3, denied this motion, thus confirming the former opinion. This will have the effect of greatly crippling the powers of the State Board of Charities. It is estimated that 600 charitable institutions in the state will thus be freed from the inspection of the board.

New York City.

A CASE of elephantiasis in a woman of 48 years, a resident of New York City, and a native American, is now being treated in the Bellevue Hospital.

DRS. GEORGE B. FOWLER, ex-commissioner of the health department, and E. R. L. Gould, have been appointed by the governor on the Tenement House Commission.

THE FRIENDS and professional associates of Dr. A. Jacobi are arranging for a fitting celebration of his 70th birthday, next month.

ONE OF a group of acrobats, while attempting a triple somersault fell and dislocated the sixth vertebra. Dr. B. Farquhar Curtis cut down on the injured part, and reduced the dislocation. The vertebral column was then supported by a plaster-of-Paris jacket, and there is every indication that the operation will be a success.

AMONG the missionaries present and to speak at the Ecumenical Conference, April 21 to May 1, is Dr. Jacob Chamberlain, who began his work in India in 1859.

NEW MT. SINAI HOSPITAL.

A gift of \$200,000 has been made for the new Mt. Sinai Hospital, for the erection of a special building as a memorial to a deceased member of the family of the givers. This makes the total amount promised for the proposed buildings more than \$1,500,000, leaving only about \$400,000 to be provided for. Other recent gifts include \$125,000 for a children's pavilion, \$20,000 for an operating theater and \$55,000 for a dispensary building, the three latter also being memorials.

UNSANITARY HOSPITAL.

The unsanitary state of Gouverneur Hospital is just now attracting the attention of the public, and well it may, for there are several inches of water in the cellar, and this is the third time in the past few months that the basement has been flooded. Superintendent O'Rourke is disposed to make light of it, and says that it is no worse than most other buildings in that part of the city. The old building was long ago condemned for hospital purposes, and a new building has been erected, but owing to some trouble with the contractors it remains unfurnished and unoccupied.

CHEST ABNORMALITY.

An Italian, 42 years of age, a patient at the Long Island College Hospital, is exciting much interest among the physicians and surgeons there because of a peculiar developmental abnormality of the chest. It is reported that after an X-ray examination it was determined positively that on the right side of the thorax three ribs are only partially developed, and, as a result, there is an area measuring four by three inches in which the bony wall is lacking. The man insists that this strange deformity has not materially interfered with his work.

ILLINOIS.

Chicago.

DR. E. J. SENN will return from his wedding tour June 1.

DR. THUMAN W. MILLER, who has been suffering from la grippe for the past six weeks, is now convalescing.

DR. CHARLES H. BEARD has been appointed a member of the international jury of awards at the Paris Exposition.

It is reported that nearly half of the Red Cross Ambulance Corps, which was organized in this city, deserted the corps and took up arms in behalf of the Boers, on their arrival in the Transvaal.

THE TOTAL mortality during the past week was 561, an increase of 3 over the week preceding. The infant mortality was 24 in excess of last week. Pneumonia claimed 125 victims, and consumption 52.

INDIANA.

HOSPITAL ADDITION.

A joint meeting of the members of the Indianapolis Board of Public Works and of the Health Department was held April 14, to investigate the needs of the city hospital. It was decided to erect, if possible, a new wing on the east and north sides of the present building, to be 40 feet wide and 135 feet long. The wing will be similar in construction to the rest of the building. It was also decided to build a new contagious disease ward.

WISCONSIN.

DR. C. L. KISSLING has been appointed a member of the Milwaukee School Board.

A PUBLIC hospital will shortly be established by the Madison Hospital Association, which has purchased four lots in the city for this purpose.

NEW JERSEY.

THE SUM of \$50,000 has been appropriated for building a new wing for the reception of female patients at the State Hospital for the Insane, Morris Plains.

ANTHRAX is reported in Salem County, and four cattle belonging to one person have been killed. The daughter of the owner is believed to have become infected by drinking milk from the diseased animals.

THE ANNUAL meeting of the Bridgeton Hospital Association was held in Bridgeton, April 17. Since the opening of the hospital last June, 67 patients have been treated and 50 operations performed. Receipts from all sources were \$3207.57, and at the present time there is \$753.53 in the treasury.

MISSOURI.

PATHOLOGY SPECIMENS DESIRED.

Dr. Hugo Summa has been appointed to arrange the individual exhibit of the state in the pathologic section at the Atlantic City meeting of the AMERICAN MEDICAL ASSOCIATION, Missouri being allowed an exhibit of not more than one hundred specimens. Dr. Summa requests the members of the profession of the state to inform him of their willingness to loan rare or important specimens for this purpose. Each specimen should be plainly labeled, with the diagnosis of the lesion, the contributor's full name and address and the number corresponding with the accompanying case history. Professor Summa will be glad to furnish any particulars that may be desired. His address is 2249 St. Louis Avenue, St. Louis.

SPECIMEN FROM HIP-JOINT.

An interesting specimen was presented at a recent scientific session of the St. Louis Medical Society—bone removed from the hip-joint by resection—doubly interesting as involved in a case of malpractice brought against two homeopathic physicians of St. Louis, connected with the Good Samaritan Hospital. The point was thoroughly discussed as to the propriety of physicians giving testimony as experts on one or the other side of such cases, Dr. Fairbrother questioning the advisability of giving such evidence and Dr. Broome maintaining that while it was a delicate question, yet there were cases where no honorable physician could decline to give evidence when called on, no matter whose interests the evidence might affect.

INCREASED CHARTER RIGHTS.

There having been an impression in the St. Louis Medical Society for some years that it did not have full power to expel members guilty of unprofessional conduct, on account of the fact that some years ago an expelled member secured a mandamus, from the courts, demanding his reinstatement, the officers of the Society last week made application to the circuit court for greater powers and privileges along these lines. The court granted an enlargement of the charter rights. The real cause of the Circuit Court twenty years ago,

in the case of Dr. Adam Hammer, granting him the injunction for which he applied against the St. Louis Medical Society for expelling him, was not based on the ground that the Society did not have the right to expel him, but that it had appointed a committee to investigate his case and that he was tried not by the Society, but by the "committee on ethics," and that a committee composed of a limited number might easily be prejudiced, so that the member should be tried in an open session of the Society, with full opportunity for presenting his defense. This decision of the court should have prompted the Society to have pursued this method in other succeeding trials against recalcitrant Fellows; instead it gave them a case of flight and non-action was the result.

CALIFORNIA.

THE MONTHLY report of the Oakland Board of Health shows that there have been thirty cases of contagious diseases in the city during the past month. No deaths therefrom have occurred.

THE ALAMEDA Board of Education has adopted a rule forbidding employment as a teacher in the public schools of any person who is afflicted with tuberculosis.

CLAIRE C. YOUNG, assistant demonstrator of chemistry in the medical department of the University of Southern California, Los Angeles, had the misfortune to lose his right eye through an explosion which occurred while he was demonstrating phosphureted hydrogen. The eye was so much injured that enucleation was necessary; the left eye was not affected.

MASSACHUSETTS.

THE DIRECTORS of St. Mary's Infant Asylum and Lying-in Hospital have decided to erect, on the grounds of the institution, a larger and more commodious building, to be used exclusively for children. It will be five stories high, 100 feet long and 50 wide.

Washington.

ACCORDING to the report of the Seattle Board of Health, the month of March witnessed more deaths than any month this year. There were twenty deaths from pneumonia. Forty cases of scarlet fever were reported.

CANADA.

SEVERAL CASES of actinomycosis were discovered last week among cattle near Montreal.

DR. LEVERETT PRICE, Monckton, N. B., who went to South Africa with the second contingent, has been given a position by the Imperial Government, at St. Helena, to help look after the health of the Boer prisoners.

THE CITY health officer of Winnipeg reports that city as freer from contagious diseases than for many years. There are at present no cases of infectious diseases in the city.

THE REPORT of the resident physician at the Victoria (B. C.) Jubilee Hospital, shows that, on March 31, there were 37 patients; admitted during the month, 53; treated, 90; discharged, 45; deaths, 5.

IMMIGRANTS landing at St. John, N. B., are being subjected to a very strict surveillance, as it is believed that some of the foreigners afflicted with favus, to whom the U. S. authorities refused passports, have found shelter in St. John and also in Sydney, C. B.

SCARLET FEVER still continues very prevalent in Montreal. The Civic Hospital is full of these patients. The health department attributes the prevalence of the disease to the filthy condition of the streets of the city. Several new cases of typhoid fever have also been reported during the last week.

TORONTO UNIVERSITY ALUMNI.

Graduates of the provincial university, from all over the province, assembled in the chemical building of Toronto University on the evening of the 17th, for the purpose of organizing an alumni association. During the course of the remarks of President London, who was called to the chair, he stated that the graduates of the University in all departments numbered something like 10,000, and that heretofore they had been as so many units, not in a position to promote the in-

terests of the University hence the need for organization. A draft constitution was unanimously adopted and, as evidence of the part which the medical department will take in the organization, Dr. Reeve, the dean of the faculty, was elected the first president of the association, and Dr. Otto Klotz of Ottawa, the first vice-president. Several medical graduates were also elected on the Council.

THE MEDICAL COUNCIL OF CANADA.

A draft of the proposed Act to incorporate the Medical Council of Canada has been published, and deals in detail with the purposes, etc., of this long-sought-for end. The composition of the Council is identical with the published statement reported in THE JOURNAL early last fall, viz., three members from each province of the Dominion (the Northwest Territories being counted as a separate province), these to be chosen as follows: One from each such province shall be appointed by the Governor-General-in-Council, one from each such province shall be elected from each such medical council of such province, and the president of each provincial medical council shall be *ex-officio* a member of the Council. The term of office for appointed members shall be four years. The Council may acquire and hold such real estate and personal property as may be necessary, the annual value not any time to exceed \$100,000. The officers are to be a president, a vice-president, an executive committee and a registrar, who may be secretary and treasurer. The first meeting will be held in Ottawa, and thereafter as the Council decides. It will have power to appoint a board of examiners to be known as "The Medical Council of Canada Examination Board." The proposed bill provides for two classes of examinations, viz., the preliminary or matriculation examination and the professional examinations. Candidates may elect to be examined in the English or in the French language. All of the practical and clinical examinations shall, until otherwise decided by the Council, be held in Montreal and Toronto, alternately. Registration according to this bill is similar to that already outlined in THE JOURNAL referred to. It is stated that several French practitioners in the Province of Quebec are not in favor of the legislation.

TORONTO ASSOCIATION FOR PREVENTION AND TREATMENT OF CONSUMPTION.

While this association has commenced an active campaign looking toward the establishment of sanatoria in and about the city, and further doing something toward educating the people as to the prevention of this disease, there are not a few who assume that it will and does antagonize the work of the National Sanitarium Association, as already manifested in its work at Gravenhurst. In sending out its constitution and literature broadcast throughout the province of Ontario, the Association seeks to complete and perfect its organization, and in addition secure a large membership. In it the clergymen of different denominations seem to figure prominently, several medical men and not a few laymen, also exerting themselves in its behalf. The prosecution of the work is an indication of the interest the community is commencing to display in the prevention and treatment of tuberculosis. The provincial secretary of health, Dr. Bryce, has stated that he is in accord with the objects of the Association. From the address which Dr. Sheard delivered at the last meeting of the executive, it is evident that the city medical health officer favors undertaking this work on a larger scale than by the experimental and piecemeal plan. The first general meeting of the Association was held in Toronto on the 23d.

HAWAIIAN ISLANDS.

THE SUSPICIOUS case of illness reported early in the month from Hilo proved not to be bubonic plague.

THE TWO cases reported as plague, at Makao, Koolau, on the 6th, proved to be other than this disease.

REPORTS FROM Kahului, Maui, March 21, show there had been no case of plague reported for twenty-four days.

Honolulu.

A PUBLIC morgue is to be built, the Board of Health having appropriated \$10,000 for the purpose.

THE EXPENSE lists now being rendered, for "necessaries" in stamping out the plague, include many things usually considered luxuries—everything, in fact, from soda water, cigars, liquors, etc., to an enameled bath tub at \$40.

DR. WOOD, president of the Board of Health, largely through whose efforts the plague epidemic in the islands was stayed, proposes to resign from the Board.

THE AVERAGE expense for fumigation and disinfection for March was \$25 a day. It is estimated that the average will be \$22 a day for April.

FOR INOCULATIONS by Haffkine's prophylactic serum, at \$2 per capita, the Board of Health has taken in \$1640.

THREE PARTIES have been fined \$25 each for adulterating coffee, and one \$5 for selling oleomargarin without a label.

DR. CHAS. A. PETERSON has retired from the position of chief physician to the Board of Health, and will resume his former duties as inspector of immigrants.

CERTAIN of the rice and taro patches in the city limits have been ordered filled to grade level, by the Board of Health, for sanitary reasons.

AT A MEETING held by the Victoria Hospital Association, the by-laws for the Hospital for Incurables were discussed and adopted and officers elected for the ensuing year.

DR. CARAMEL, of the U. S. Marine-Hospital station, has furnished the health authorities with 2000 doses of antipest serum, as the supply at the headquarters of the Board of Health was very low.

ABOUT 800 Japanese have petitioned the Board of Health to remit their taxes for 1900, as they are unable to pay them on account of the hardships suffered from the burning of Chinatown during the plague epidemic.

THE MORTALITY report for March gives 112 deaths, consumption leading the list with a total of 21, while bubonic plague is credited with 6. The deaths from typhoid fever numbered 19. As usual, the greater mortality was among the Hawaiians.

REPORTS on April 9 show that no cases of plague had been reported here for eight days, the first record of two Sundays passing with no cases reported, since the beginning of the epidemic. The seventy-first case was reported on the 2nd, the patient being a white girl 13 years of age.

NINETY-SIX inspections of milk samples taken on the street were made during February. The highest percentage of solids found was 12.5, the lowest 9.75; the highest percentage of butter fat 3.5, the lowest 1. The policy of warning milk dealers on first offense has been continued and sixteen warning letters sent out.

QUEEN'S HOSPITAL.

There are at present 68 patients in the hospital, 27 being Hawaiians. Those admitted during the past quarter numbered 185, 66 of whom were Hawaiians, 7 Chinese, 21 Japanese, and 91 other nationalities. Of these 166 were discharged and 27 died. The causes of death were: abscess of liver, anemia, asthma, cancer of stomach, fracture of skull, gangrene, peritonitis and stab wound, each 1; pneumonia, 7; meningitis, 6; railroad injury, 2; typhoid fever, 3. There were 9 major and 5 minor operations and three post-mortem examinations.

RATS AND THE SPREAD OF PLAGUE.

The efforts of the Board of Health to bring about the destruction of rats and so avoid dissemination of the plague, have not met with the results desired. Chickens, Chinese and children seem to have eaten about as much of the rat poison placed throughout the city as did the rats, and the smallness of the bounty allowed for dead rats has been another factor in preventing their general destruction. The Board has therefore decided to appoint a "professional rat-catcher," and one Duval, a Frenchman, has completed a device for corralling the rodents, and has been authorized to make six rat-traps after his pattern at the Board's expense, experiments to be made there-with before he is officially appointed.

LOSSES FROM PLAGUE MEASURES.

On April 7 the Court of Claims to take evidence on losses caused by the burning of Honolulu's Chinatown and to make awards and judgments on such losses, was appointed by President Dole. It consists of a presiding member and four associates. The chamber of commerce took action opposing the

appointments on the grounds that the appointees were all lawyers and that plague losses should be adjusted by business men. A mass meeting was also held by the Chinese and Japanese, who passed resolutions to the effect that no claims for damages should be presented to the court for adjustment, as under the existing rules, justice could not be obtained. An appropriation bill presented to the Council of State, providing for the expenses of the recently appointed court was tabled. Some of the members have offered to serve gratuitously.

April 9, 1900.

Correspondence.

The Rich Specialist.

DETROIT, MICH., April 10, 1900.

To the Editor:—The following letter has given me an opportunity to express my views on the subject of the big fees received by specialists. We often hear from general practitioners, in a jocosse manner, and sometimes with an envious expression, about the fees received and the money accumulated by specialists. I have frequently talked with those of the latter class in the various departments of specialism, and have been convinced for many years that very few are getting rich. Perhaps it is their own fault. They spend too much, and still, to keep in the front rows, they must do it or drop by the wayside. As soon as they strive to make money and cease trying to advance and improve the practice of medicine, their usefulness as teachers ceases. Few are so situated that they can be workers, innovators, and financiers at the same time. In fact, the whole question of financial success is to a great extent a personal one. It is a question of personality and, as a rule, the great men of the world have not been successful financiers.

BROOKLYN, MICH., February 12, 1900.

DR. J. H. CARSTENS,

DETROIT, MICH.

Dear Doctor:—Can you give me, without too much trouble, the number of hysterectomies and laparotomies you performed during the year 1899, in which you received no fees? I am preparing a reply to the speech of the Hon. L. D. Watkins at the Association of Farmers Clubs, at Lansing, in which he uses your charges in Culver and Dunn cases as an argument—"to regulate the fees of physicians by law." Yours truly,

E. N. PALMER, M.D.

DETROIT, MICH., March 1, 1900.

DR. E. N. PALMER,

My Dear Doctor:—In answer to your letter, I will say that you have my reprint reporting 234 cases of abdominal sections during 1898. (I made an error in addition. The reprint gave ten less than the actual number.) Of these, 83 paid. The rest of them I did for nothing or received a small consultation fee only, when they first saw me. I have just looked up last year's work as you requested. You remember I was sent as delegate to the International Congress of Gynecologists at Amsterdam and was away nearly three months, and lost at least a month before and after in my work, so that for 1899, I can only figure that I did two-thirds of the work. In hastily looking over the records—there might be a mistake in a case or two—I find that during that year I operated on 172 cases of abdominal sections of various kinds. Of these, 52 paid as follows: 1, \$600; 2, \$300; 2, \$250; 5, \$200; 6, \$150; and 36 paid \$100. The latter seems to be the usual figure that people expect to pay, and that they are told by their family physicians they must expect to pay. This is entirely wrong. If able, they ought to pay a great deal more.

Besides this, there were 16 patients who agreed to pay but did not, and I gave the bills to a collector and he did the best he could and compromised, taking for the bills whatever he could, from \$10 to \$50. Seventeen of the non-paying patients also paid me a consultation fee of \$5, \$10, or \$25, when they first saw me, but when it came to the operation, they were unable to pay. I never agree to do abdominal section for less than \$100. I will do it for nothing, for glory and love of the race, but I will not belittle such an operation by accepting \$25 or \$50, as some are very glad to do. I try to uphold reasonable prices.

According to our fee-bill, abdominal sections are placed on

the list as \$500 to \$3000 operations, but certainly in this city no such fee as the latter figure has ever been paid. If I think people are able, I charge them the minimum fee-bill price, but generally I find that people are not as rich as they appear to be. They keep up appearances on a limited income, and I am obliged to take half. With people in fair circumstances, who have permanent positions or an income of about \$2000, I always insist that they pay \$150 or \$250 for an operation, but the mass of your patients have small incomes, from \$50 to \$65 a month, probably with a large family, and for them it means quite a hardship to pay even \$100 when you add to it the hospital expenses. They probably have to pinch and economize for two years to make it up. So that, as I stated above, a great number can only pay \$100. What would you do with all the other poor patients? Here comes a working man with appendicitis. If he is not operated on, I am sure he will be dead in twenty-four hours. I try to save his life. He earns \$1.25 a day and he has six children. How he must save during the next year to pay for his three weeks hospital expenses! Here comes a poor "schoolmarm" from the country, who earns \$15 a month and has a fibroid tumor. Do you suppose I have the heart to send her home and tell her that she must have \$150 or \$200 first, before I can operate on her? You know I have not, but operate. Here comes the poor widow with three children, working in a store, or as a cook in a hotel, eking out an existence. Can I charge her, or can I charge the riff-raff, the paupers, sent in at the county's or state's expense?

So you see that I average less than \$50 apiece for my work in abdominal surgery. It all seems great at a distance, but when you are doing the work yourself, you will find it is entirely different. They hear of isolated cases paying a fair fee, and expect they all do. Certainly if they would all pay \$500 or even half that much it would be an immense income. But when you consider that my expenses, office rent or interest, my horses and coachman, stenographer, printing, stamps enough to support a family, books, instruments, reprints, having plates made, photographs, making experiments, and paying men to do them for you, attending medical societies all over the country, keeping posted and trying to be up to date: that all these things cost me about \$7000 a year, and that before I have even anything to eat or clothes for my family, then you can readily see that the specialists are not getting rich very fast. In fact, they often have to look out to pay their running expenses.

In fact, my dear doctor, I have often stated that if I wanted to make money and be easy and comfortable and not have to worry, nor have a dozen men pulling at my coat-tails and trying to pull me down out of pure envy and enviousness, if I wanted to lead a nice comfortable life and leave my family in good circumstances, I would be a general practitioner—or a farmer. I could do away with nearly all the expense, keep a few good journals, keep well posted and up to date, treat everything that comes along, charge a fair fee and get my money; if I had a special case which I could not handle, turn it over to a specialist in whatever department it belonged.

From my observations I have found that the men who do general practice have the best financial success. They have less worry and anxiety, calling in counsel to share the responsibility when they have a difficult case. In the long run they make the most money.

The few *real* specialists I know simply make their living, and sometimes have trouble to do that. They spend too much trying to advance the practice of medicine and teaching their fellow-practitioners newer methods, newer views of treatment and prevention of disease. *The lot of the innovator is always a hard one.* The leaner or the one who floats with the stream does not have to exert himself very much. I sometimes ask myself, "Does it really pay?" I often have my doubts.

You will remember that for nearly twenty-five years I was a general practitioner, that after a dozen years' practice I drifted to a great extent into obstetrics, having as many as 200 cases a year, and this prevented me, in the course of time, from doing much general work. In the process of evolution, my practice developed into abdominal surgery. When I had to do more abdominal surgery, it was impossible for me to do an operation and do justice to the patient if I was up all night with a case of confinement. So I finally, about ten years ago, gave up all general practice and obstetrics and have absolutely limited my practice to abdominal surgery and gynecology.

The large general and obstetric practice which I have given up has been distributed among the physicians of the city. There is not one, I believe, who does not have a patient I

formerly had, or has not a case of obstetrics in the course of a year which I would have if I was still competing with him, and when I see some of these same men who have increased their practice and income because I am not competing with them; when I see these men take their cases to men who are competing with them in different lines of practice, I then ask myself, "Does it really pay to be a *REAL* specialist?"

Why should you not be a general practitioner or a general surgeon and treat anything that comes along? For instance: measles or whooping-cough, if it is in the grandchild of a millionaire; or dyspepsia or throat troubles or conjunctivitis, if the patient is wealthy; why should not I treat ingrowing toe-nails, chaneres, or simple fracture, if the patient can pay a good fee?

There are all kinds of sides to the question. Again, when I have physicians bring their wives, or their daughters, or their sons, to me for operations (and if there is any kind of cases I delight to treat and help, it is these of my professional friends), I operate on them with great pleasure and take great pains, but when in the future these same physicians forget to send me other patients who might pay or, even if they did not pay, simply show their good will; when they forget to do this, then again I ask myself, "Does it really pay?" They do not mean any harm. They feel grateful but they are thoughtless. They allow patients who can pay to pass out of their hands and drift somewhere else. I would remind you that they are not all that way by any means, but we meet them quite often. But when some physicians ask a percentage of my fee, then I rebel and talk right out; despicable and discouraging, is it not?

Perhaps I could get better prices. It may be my own fault, but I will not be imposed on if I can help it. I insist on a good fee if people can pay, but will not take people aside, and the first question, ask, "How much can you pay for this?" I never ask them. If they ask me how much I charge, I tell them that we will settle it after the operation, but expect them to pay a fair fee, according to circumstances. After the work is done, I try to find out their financial condition and charge them accordingly. Once in a while they lie and impose on me, but not very often.

There is another thing I abhor, i. e., to have some wealthy persons edge up to me and say: "How much will you charge?" I tell them: "Why do you ask me how much I charge? Why should you not write out a check for a fair amount, as is the custom to a great extent in Europe, and say, 'Here, my dear doctor, I am under everlasting obligations to you for saving my life (or that of my wife, or daughter, or son, or whatever it may be) and here is an honorarium to help you along in your noble work.'" Then people state and open their eyes. They can not understand it. They say they are not philanthropists. They are willing to pay a fair fee, but they do everything on business principles. It makes me "tired," sometimes, as the boys would say. I wish they had less "business principles" (which means mathematical calculations of interest and filthy here), but had more sentiment, gratefulness, and the milk of human kindness.

I have the figures of my own practice and can make that a basis for argument. Mine is simply a reflex of other *real* specialists. I know that *real* specialists, be it in laryngology or neurology, be it in ophthalmology or orthopedic surgery, be it in dermatology or gastroenterology, are all the same. They can tell you about the same story that I have, except a few who are in very large medical centers. I can show you that the *honest real specialist* does not get rich from his practice. The, what you might call, "pseudo-specialists," who *pretend* to be specialists but who treat anything that comes along, provided there is money in it, may be a great financial success, but those who try to contribute their mite to the advance of the science of medicine, are to a great extent financial failures. But we are not discouraged. We keep on in the chosen path with the motto, *Speramus meliora*—"we hope for the better"—that some time in the future we may find somebody whose gratitude will be greater than his love for money.

My dear doctor, I am as optimistic as ever. I am perfectly satisfied. I find a great deal of glory in the practice of medicine. Some of the greatest fees I ever received were the grateful tears of patients. I find, after all, there is a good deal of gratitude. I am under a world of debt to members of the medical profession who have encouraged and supported me by sending me patients; those members who are honest and uphold the Hippocratic oath, "The highest good of our patients shall be our constant endeavor;" those members of the profession whose continual effort is to relieve suffering humanity, who are honest and, if they do not have the facilities to treat

the patients themselves, carefully look around and select whom they think is the most competent; men who never think of self but of the good of the patient, who never ask for percentage but ask that the patient have the best care. I have any number of such noble friends, who continually send good paying patients to me and for whom I have never been able to do any favor. I often feel guilty, but some time hope to reciprocate, and be able to do them favors.

I take special pains to instruct the patients to return to the physician who sent them to me, for after-treatment, often giving them a note or sending a letter direct. It happens, however, occasionally, that the patients do not want to return. They have become vexed at something, and think they have been neglected. They have all kinds of notions. I am obliged to defend the physician and insist that they return for after-treatment. Thus I try to uphold the reputation of the general practitioner and save his patients to him. I try to be a real specialist.

In the meantime, I try to keep up the good work, and hope that the time will come again, when this wild struggle for the mighty dollar will lessen, and men will be gauged by the good deeds they do, by their mental capacity and not by the amount of money they can make.

Your truly,
J. H. CARSTENS, M.D.

National Therapeutic Society.

WASHINGTON, D. C., April 16, 1900.

To the Editor:—The attention of the Therapeutic Society of the District of Columbia having been called, through several articles recently published, to the formation of a national therapeutic society, at a recent meeting it was decided to take the initiative steps, with representatives of other therapeutic societies, looking toward the formation of such a national body. I have been instructed to ask that THE JOURNAL aid us in this movement. We would suggest that all therapeutic societies, or as many as desire, throughout the United States, elect and send delegates, with such an object in view, to meet in this city, May 1-4, at the time of the meeting of the Association of American Physicians. The Eighth Decennial Convention for Revision of the U. S. Pharmacopoeia holds its session here at the same time. The D. C. Therapeutic Society will be pleased to meet all such delegates at the medical department, National University, No. 1328 I Street, N. W., on Tuesday, May 1, 3 p. m., to take preliminary steps in this direction.

D. OLIN LEECH, M. D., Corresponding Secretary,
Therapeutic Society, District of Columbia.

Paris and the Midnight Sun.

Members of the ASSOCIATION who intend crossing the Atlantic to be present at the Thirtieth International Medical Congress should read the following, which explains itself:

WAR DEPARTMENT, SURGEON-GENERAL'S OFFICE.

WASHINGTON, D. C., April 13, 1900.

HENRY GAZE & SONS, 113 BROADWAY, NEW YORK, N. Y.

Gentlemen: I have received your circular headed "Paris and the Midnight Sun" and stating that a committee has been organized to arrange for this trip. Will you kindly inform me by what authority my name has been included among the members of this committee? I have no knowledge of my appointment upon such a committee, or of such a committee having met to consider the matter referred to, and I have no intention of making the trip which you advertise.

Very truly yours,

GEO. M. STERNBERG, Surgeon-General, U. S. Army.

Association News.

The Official Program.—In order to avoid misunderstandings and to protect the interests of advertisers, attention is called to the fact that there is but one official program. This program is copyrighted by the Board of Trustees and contains no advertising matter.

Section on Obstetrics and Diseases of Women.—The program of this Section is now full. Wednesday morning, June 6, will be given up to a "Symposium on Obstetrics;" Wednes-

day afternoon to one on "The Relation of Pelvic and Intra-Abdominal Diseases to Nervous Diseases." Thursday morning, June 7, will be devoted to the subject of "Cancer of the Female Generative Organs, Including the Breast;" Thursday afternoon to "Inflammatory Diseases of the Female Genitalia." The afternoon of Tuesday, June 5, and the morning of Friday, June 8, will be devoted to general papers.

Amendments to Constitution.—The following was offered by Dr. Dudley S. Reynolds, Louisville, Ky., at the last meeting of the ASSOCIATION: Proposition to amend Article 2 of the Constitution, by adding to the qualifications of membership in those societies eligible to send delegates to this ASSOCIATION. After the words "Marine Hospital Service of the United States," at the conclusion of the second paragraph; provided, however, that no State, county or other auxiliary body sending representatives shall receive into its membership any one who may after 1900 have received the degree of Doctor of Medicine on less than four years of graded instruction or an equivalent requirement (laid over for one year).

Committee on National Legislation.—Attention is again directed to the call to the National Legislative Conference of the ASSOCIATION, to be held in Washington, May 1 and 2 (see THE JOURNAL, April 21, p. 1019). The Chairman of the Committee on Arrangements of the Congress of American Physicians and Surgeons has extended an invitation to members of the National Legislative Conference to be guests of the Congress during the May meeting. Those wishing to accept this courtesy should call at the Bureau of Registration, in the Arlington Hotel, on their arrival in Washington, and on registration they will also receive cards to the reception, to the smoker to be given by the Cosmos Club on the evening of May 1, and the program for the meetings of the Congress. According to the by-laws, a physician may be accredited as a visitor by any one of the constituent societies and the certificate of the secretary of one of the societies that he is thus accredited will enable him to register on payment of the registration fee, but not to take part in the deliberations of the Congress.

Railroad Rates for Atlantic City Meeting.—The Committee on Transportation, of the AMERICAN MEDICAL ASSOCIATION, reports that the Trunk Lines Association has granted one-fare and one-third on the certificate plan, as the rate for the meeting in June. Tickets will be on sale in territory of these lines at this rate from May 30 to June 7, and are good to return to June 23. The Trunk Lines Association has invited the other railroad associations to concur in the rate and time limit. The Committee has been very much taxed in answering communications from nearly every section of the country suggesting means for securing a one-fare rate for the round trip on this occasion, and has adopted every expediency for securing the one-fare rate, but has been unable to obtain it. For the information of many of those who have written recently on this subject, we quote from the final communication from the Trunk Lines Association, dated April 4. After announcing the rate and time limit above noted, the secretary adds: "It is noted that you say it is still claimed by many, that the reduction of one fare should be granted for your meeting. I may state that your application has been twice before the Committee, and any greater reduction than fare and one-third on certificate could not consistently be granted; it would be a discrimination against other bodies." When the other railroad associations act on the rate, etc., of the trunk lines, the committee will make a full report announcing the rates throughout the states. H. L. E. JOHNSON, M.D., Chairman.

Section Headquarters at Atlantic City.—Following is a correct list of the hotels selected as headquarters for the different Sections. These hotels, with two exceptions, are all located on the board walk, directly fronting the ocean, and are considered the best hotels. Every effort will be made by the proprietors and their managers to furnish proper and pleasant accommodations to all who elect to stop with them. Each Section has been located separately, with a view of avoiding the crowding and general annoyance that has characterized a number of the previous meetings. The hotels are all well located

and are comparatively near the place of registration and the general meetings in the assembly hall, as well as the meeting places of the different Sections, hence no member need hesitate to arrange his accommodations at the one selected as the headquarters for his Section. The names and addresses of the presidents and secretaries of the different Sections have been placed in the hands of the managers of the respective hotels, and the latter have been requested to correspond with the former, asking for a list of the Sections' membership, that they may address each member and ascertain early about how many will be in attendance, and acquaint themselves as near as possible with the desired accommodation expected by each individual. Every member of the AMERICAN MEDICAL ASSOCIATION and all other physicians who expect to be in attendance should arrange for their quarters as soon as possible, as this will assure to them satisfactory accommodation and avoid disappointment at the last moment.

AMERICAN MEDICAL ASSOCIATION, Hotel Dennis.
American Academy of Medicine, Hotel Shelburne.

SECTION HEADQUARTERS.

Section on Practice of Medicine, Hotel Traymore.
Section on Surgery and Anatomy, Hotel Windsor.
Section on Obstetrics and Diseases of Women, Hotel Garden.
Section on Materia Medica and Therapeutics, Hotel Luray.
Section on Neurology and Medical Jurisprudence, Hotel Brighton.
Section on Ophthalmology, Hotel Haddon Hall.
Section on Laryngology and Otology, Hotel Seaside.
Section on Physiology and Diagnostics, Hotel Islesworth.
Section on Diseases of Children, Hotel St. Charles.
Section on Cutaneous Diseases, Hotel Rudolph.
Section on Stomatology, Hotel Senate.
Section on State Medicine, Hotel Pennhurst.

Deaths and Obituaries.

S. E. SHELDON, M.D., Topeka, Kan., died of heart disease, April 19. He was born in Carlisle, Ohio, in 1837, receiving his early education at Baldwin University. He was graduated from the Cleveland Medical College in 1860. He entered the army as assistant surgeon of the 32d Ohio Vol. Inf., in 1862, being transferred to the 104th Ohio the next year and promoted to surgeon with rank of major, serving with that regiment to the close of the war. He was taken prisoner at Harper's Ferry in 1862, afterward exchanged, and was with Sherman's army at the siege of Atlanta. He was also a prominent member of the Masons, created Knight Templar in 1869 and in 1876 elected Grand Commander of Kansas. He was a resident of Topeka for many years and at one time represented that city in the state senate. He was professor of gynecology in the Kansas Medical College, a member of the Western Surgical and Gynecological Association, and a prominent figure at the meetings of the state and national organizations.

JAMES STANBURY MARTIN, M.D., died in Baltimore, Md., April 14, aged 76. He was born in that city April 2, 1824, being the son of Dr. Samuel B. Martin, a surgeon of the War of 1812. He was educated at the Baltimore College, took his M.D. at Washington University, Baltimore, in 1844, and was resident physician to the Baltimore Almshouse, 1846-7. He resided in California from 1849 to 1855, and was surgeon to the Pacific Mail Steamship Company, and founder of Sutter's Fort Hospital. He returned to Baltimore in 1859, where he remained until 1861, when he removed to Brookline, Md., and practiced there four years. He then returned to Baltimore, where he remained until his death. He was one of the oldest members of the Medical and Chirurgical Faculty.

JOHN JOSEPH CRANE, M.D., born in Elizabeth, N. J., in 1851, died April 18, in the Adirondacks, from tuberculosis, after an illness of two years. He was a graduate of Princeton University and, in 1876, of the College of Physicians and Surgeons, N. Y. He practiced medicine in New York City for twenty years. He was at one time an assistant surgeon in an Illinois state insane asylum.

JAMES GUINAN, M.D., President of the Nevada State Board

of Health, died in Chicago, March 24, after undergoing an operation for stricture of the bowels. He was born in Manchester, Mich., and served with the 17th Michigan Infantry during the Civil War. He was a member of the Nevada State Board of Medical Examiners, and of the ASSOCIATION.

ISAAC C. HARING, M.D., Albany Medical College, N. Y., 1850, died at the Nyack Hospital April 16. He had undergone an operation several days before. For fifty years he had practiced in Rockland County. West Nyack was his home for the past thirty years.

CHARLES E. TURNER, M.D., committed suicide on the 17th, at his home near Rising Sun, Md. His mind is said to have been affected from ill-health. He was born in Chester Co., Pa., and was graduated from Jefferson Medical College, and was about 42 years old.

A. BAILLIE PRICE, M.D., University of Maryland, 1867, died at Frostburg, Md., April 15 of pernicious anemia at the age of 59. He was born in Charles County, Md., and was educated at Charlotte Hall Academy. He first practiced three years at Stephens City, then for a short time at Ocean Mine, and for the rest of his life at Frostburg.

ORSON BUELL, M.D., dropped dead April 15, at South Norfolk, Conn. He was entering his home just after a professional visit. He was 71 years old.

H. DWIGHT BLISS, M.D., Holley, N. Y., died April 13, aged 46 years. He was graduated from Jefferson Medical College in 1883.

THOMAS P. HOSSIE, M.D., Queen's University, Kingston, Ont., 1878, died at Gouverneur, St. Lawrence County, N. Y., April 14, aged 41 years.

D. L. MUSTARD, M.D., died at Lewes, Del., April 2, aged 64. He leaves one son.

MARRIAGES.

BOLKCOM—GALES.—Dr. G. W. Bolkcom and Mrs. Ella C. Gales, Cedar Lake, Wis., April 13.

CARTER—SHERMAN.—Dr. Edwards Perkins Carter, Williamstown, Mass., and Miss Sarah Rathbone Sherman, Cleveland, Ohio, April 18.

DE NEEN—RENTZ.—Dr. D. E. De Neen, Reily, Ohio, and Miss Laura Rentz, Winton Place, Ohio, April 11.

SENN—LAROUSSINI.—Dr. E. J. Senn, Chicago, and Miss Alys Laroussini, New Orleans, La., April 24.

SLOCUM—CRAVER.—Dr. Charles E. Slocum, Defiance, Ohio, and Dr. S. Belle Craver, Toledo, Ohio, April 5.

Miscellany.

Acting Assistant-Surgeons, U. S. Army.—During the last session of Congress an effort was made to have the medical staff of the United States Army increased in proportion to the increase in the numerical strength of the army authorized at the beginning of the Spanish-American War. This effort failed, however, and chiefly because of the argument that when extra medical assistance is required for the army it can be obtained under the contract system. Under this system a medical man "promises and agrees to perform the duties of a medical officer agreeably to Army Regulations" for the sum of \$150 per month, with quarters and the traveling allowances of a first lieutenant. From the governmental point of view a serious objection to this system is found in the inability of the United States War Department to secure experienced medical assistance under it. Young graduates in medicine are ready to take a contract for the sake of making a start in life and seeing something of the world; but when they have served long enough to gain experience in military methods and to be valuable additions to the medical strength of the army they hesitate to renew a contract which offers no promotion for continued service. A first lieutenant of the medical corps looks forward to a captaincy, with increased pay at the end of five years' service, but the surgeon on contract has no inducement of this kind. To remedy this Surgeon-General Sternberg has recommended the enactment of the following "Bill for the Appointment of Assistant-Surgeons of Volunteers:

Section 1. That "contract surgeons" who have rendered faithful and satisfactory service with the Army of the United States for a period of one year, and who have passed a satisfactory examination as to their physical and professional qualifications, shall be commissioned by the President as assistant-surgeons of volunteers with the rank of first lieutenant, subject to honorable discharge from the service whenever their services are no longer required.

Sec. 2. That at the end of two years' service as first lieutenants assistant-surgeons of volunteers, appointed in accordance with Section 1 of this act, who have rendered faithful and satisfactory service, shall be commissioned by the President as assistant-surgeons of volunteers with the rank of captain, subject to honorable discharge from the service whenever their services are no longer required.

In his letter to the Secretary of War the Surgeon-General urges that the proposed legislation be enacted during the present session of Congress, both in the interests of the service and in justice to the large number of contract surgeons who are now in the service and on whom, to a large extent, devolves the duty of caring for the sick of our armies at stations in the United States, in Cuba, in Puerto Rico, in Alaska and in the Philippines. He represents also that these acting assistant-surgeons, although serving as civilian physicians under contract, have all the responsibilities of commissioned medical officers, and that it is the natural and proper ambition of every one of them who has rendered faithful service to obtain a commission from the President of the United States. Owing to the small number of volunteer surgeons (34) at present authorized, few of the contract surgeons have any prospect of being commissioned under existing laws. So far as pay is concerned, an acting assistant-surgeon would be a loser if commissioned as an assistant-surgeon of volunteers with the rank of first lieutenant, as the pay of the lieutenant is less than that of the surgeon under contract. The bill submitted, however, proposes to promote those who have been in active service for three years to the grade of captain if their services have been faithful and satisfactory. This is a good bill. Its passage would remove many of what have been called the grievances of the acting assistant-surgeons, and would materially improve the efficiency of the medical department.

AMERICAN NEUROLOGICAL ASSOCIATION.

- The twenty-third annual meeting is to be held at The Normandie, Washington, D. C., May 1-3.
Address by the President, Edward D. Fisher.
Christian Pseudocience and Psychiatry. Smith Baker.
Imperative Ideas in the Same and Their Management. Edward B. Angell.
Case of Wernicke's Conduction Aphasia, with Autopsy. Howell T. Berhing.
Case of Bullet Wound of the Spinal Cord. Joseph Sailer.
Contribution to Study of Plantar Reflex, Based on 750 Tests, Made with Special Reference to the Babinski Phenomenon. G. L. Walton.
Tumor of Superior Parietal Lobule, Accurately Localized and Removed by Operation. Charles K. Mills and W. W. Keen.
Case of Polio-Encephalitis, with Autopsy. Charles L. Dana.
Autopsy of a Case of Adiposis Dolorosa, with Microscopic Examination. F. X. Dercum.
Report of Committee on Neonymy. Burt G. Wilder.
Comments on Current Figures of Mesal Aspect of Brain. Burt G. Wilder.
Studies in Astereognosis. F. X. Dercum.
Case of Adiposis Dolorosa, with Autopsy. Charles W. Burr.
Report of Case of Progressive Muscular Atrophy which Clinically Presented Symptoms of Amyotrophic Sclerosis. Joseph Collins.
Amelioration of Paralysis Agitans by Means of Systematized Exercises. J. Madison Taylor.
Epilepsy and Auto-intoxication. Smith Baker.
Anatomico-Cytologic Relationship of Neuron to Disease of Nervous System. L. F. Barker.
Pathologic Changes in Neuron, in Nervous Disease. William G. Spiller.
How Far Does it Affect Our Conception of Nervous Disease and Its Treatment. B. Sachs.
Physiologic Significance of Size and Shape of Neuron. H. H. Donaldson.
Focal Cerebral Symptoms Without Gross Anatomic Changes as Seen in: 1, Uremia and 2, Malaria. James Hendrie Lloyd.
Case of Malaria Presenting Symptoms of Multiple Sclerosis, with Necropsy. William G. Spiller.
Revised Interpretation of Central Fissures of Educated Suicide's Brain Exhibited to Association in 1894. Burt G. Wilder.
Regeneration of Cerebral Nervous System. Joseph Sailer.
Cases of Nourasthenia. Phillip Zenger.
Communication on Comparative Study of Spinal Ganglia in Various Diseases and Ages. Adolph Meyer.
Obstetric Paralysis. H. M. Thomas.
Therapeutic Value of Sunlight in Neurasthenic Invalidism. Frank Hallock.
Report of Case of Brain Injury with Peculiar Whistling Spells Following Operation. William C. Krauss.

- Erythromelalgia and Allied Disorders. B. Sachs and A. Wlener.
Case of Multiple Sclerosis, with Autopsy. Charles W. Burr.
Clinical Study of Reflexes. Joseph Collins and Joseph Fraenkel.
Clinical and Anatomic Analysis of Cases of Diffuse Myelitis. James J. Putnam and E. W. Taylor.
Section of Posterior Spinal Roots for Relief of Pain in Case of Neuritis of Brachial Plexus; Cessation of Pain in Affected Region; Later Development of Brown-Sequard Paralysis in Area and Pain in Other Areas as Result of Laminectomy. Morton Prince.
Demonstration of a Few Reconstructions of Parts of the Nervous System. Adolf Meyer.
Two Cases of Tumor of Spinal Cord. John Jenks Thomas Springomyelia, with Exhibition of Microscopic Specimens. Graeme M. Hammond.
Prognosis of Hysteria. Joseph Fraenkel.
Relative Merits of *Metencephalon* and *Myelencephalon* as Designations of the Last (Olongatal) Segment of the Brain. Burt G. Wilder.
Derivatives and Applications of the Word *Neuron*. Burt G. Wilder.
Exhibition of Dr. Stroud's Head-Rest for Removal of the Brain. Burt G. Wilder.
Some Unusual Types of Dementia Paralytica. Theodore Diller.
Note on Occurrence of Multiple Neuritis and Beri-Beri in Alabama. E. D. Bondurant.

AMERICAN DERMATOLOGICAL ASSOCIATION.

- The program of the twenty-fourth annual meeting, to be held at the Hotel Gordon, Washington, D. C., May 1, 2, and 3, is as follows:
Address by the President, H. W. Stelwagon.
Bullous Dermatitis (dermatitis Herpetiformis?) in Children. Five Cases Following Vaccination. J. T. Bowen.
Dermatitis Vesico-Bullosa et Gangrenosa Mutilans. G. W. Wende.
Loss of Hair: Clinical Study Founded on 500 Private Cases. G. T. Jackson.
Unusual Phenomenon of Syphilis: Othematoma. Jos. Zeisler.
Report of Committee on Nomenclature.
Case of Brocq's erythrodemic pityriasisque en plaques disseminees. J. C. White.
Prophylaxis and Control of Leprosy in this Country. P. A. Morrow.
Case of Tinea Tomurans Resembling Tinea Favosa, with Remarks. L. A. Dahl.
Frequency of Parasitic Diseases of the Skin, and Measures Advisable for Limiting Their Spread. W. T. Corlett.
New Type of Cutaneous Tuberculosis. J. C. Johnston and B. Lapowski.
General Discussion: Malignant Diseases of the Skin: 1. Their classification and clinical features. E. B. Bronson. 2. Their etiology and pathology. M. B. Hartzell. 3. Their treatment. F. J. Shepherd.
Endothelioma and Angiosarcoma of the Skin. J. A. Fordyce.
Etiology and Pathology of Cutaneous Cancers. A. Ravogli.
Report of Committee on Statistics.
Lantern-Slide Exhibit Illustrating 1. Some Clinical and Pathologic Features of Malignant Diseases of the Skin and Affections. J. A. Fordyce. 2. Clinical and Pathologic Features of Blastomycetic Infection of the Skin. J. N. Hyde and F. H. Montgomery. 3. A Few Rare Diseases of the Skin. G. H. Fox. 4. Pathologic Features of Cutaneous Cancers. A. Ravogli.
Case of Nevus Cancer; Metastasis; Operation; Cure. S. Pollitzer.
Syphilitic Lesions of the "Whien" Type. H. G. Klotz.
Report of a Case of Multiple Tumors of the Skin. W. A. Hardaway and M. F. Engman.
Two Cases of Rhinoscleroma and an Unusual Form of Epithelioma of the Scalp. C. W. Allen.
Case of Xanthoma Tuberculatum Diabeticorum, Showing Rapid Disappearance of Lesions Under Antidiabetic Regimen and Treatment. S. Sherwell and J. C. Johnston.
Brief Report of Two Cases of Persistent Exfoliation of the Lips. H. W. Stelwagon.
Case of Protozoic Dermatitis. D. W. Montgomery.
Blastomycetic Dermatitis and Its Relation to Yaws. I. Dyer.
Three Cases of Blastomycetic Infection of the Skin, One of Them Producing a "Tumor" of the Lower Lip. F. H. Montgomery and H. T. Ricketts.
Review of the Subject of Blastomycetic Infection of the Skin with a Report of Two New Cases. J. N. Hyde.
1. Some Experimental Observations on Urticaria Faciilis; 2. Report of Case (Title to be Announced). T. C. Glichter.

AMERICAN GYNECOLOGICAL SOCIETY.

- The twenty-fifth annual meeting of this Society is to be held in Washington, D. C., May 1-3, in the Columbian University. The program is as follows:
Address of Welcome. Joseph Tsher Johnson, Washington, D. C.
Technique of Operations for Intraligamentous Tumors. W. H. Wathen, Louisville, Ky.
Fecal Fistula. I. S. Stone, Washington, D. C.
A Study of the Remote Results of Conservative Operations on the Ovaries and Tubes. W. L. Burrage, Boston.
Internal Secretion of the Ovary. A. W. Johnstone, Cincinnati, Ohio.
Techniques, Indications, and Ultimate Results of Suturing Round Ligaments to Vaginal Wall for Retroversions and Flexions of Uterus. Hiram N. Vineberg, New York City.
Comparison of Vaginal and Abdominal Operations. G. Richelot, Paris, France.
Demonstrations of Casts Illustrating the Anatomy of Pregnancy and Labor, also Models Used in Gynecologic Teaching. J. Clarence Webster, Chicago.
Combined Nephrectomy and Utererectomy. E. E. Montgomery, Philadelphia.
Anastomosis of Ureters with Intestines. An Historic and Experimental Research. Reuben Peterson, Chicago.
Critical Survey of Uteral Implantation. J. W. Bovée, Washington, D. C.
An Application of Kelly's Method of Removing Fibroids of the Uterus. A. Laphorn Smith, Montreal.

Migrated Ovarian Tumors. George M. Edebohn, New York City.
 Best Method of Extirpating Fibroid Uteri. Howard A. Kelly, Baltimore, Md.
 Bronchial Disease not Invariably a Contraindication for Ether Anesthesia in Abdominal Surgery. Thaddeus A. Reamy, Cincinnati, Ohio.
 Treatment of Full Term Ectopic Gestation. Should not the Child Receive More Consideration? Edwin B. Cragin, New York City.
 President's Address. G. J. Englemann, Boston, Mass.
 Relationship Between Dysmenorrhoea and Appendicitis. Archibald McLaren, St. Paul, Minn.
 Clinical Data Relating to: 1. Urinary Toxemia. 2. Operative Treatment of Uterine Displacements. 3. Ectopic Gestation. 4. Certain Complications of Uterine Fibroids. Egbert H. Grandin, New York City.
 1. Demonstrating the Utility of a Certain Chart for the Determination of Pelvic Asymmetry from a Very Simple Method of External Pelvimetry. 2. Advantages of Employing a Certain Background in Photography of Pathologic Specimens. Philander A. Harris, Paterson, N. J.
 Contribution to Management of Face Presentations, with Report of Two Cases. Malcolm McLean, New York City.
 Perilous Nausea of Pregnancy, with Report of Cases and Autopsy. E. P. Davis, Philadelphia.

ANNIVERSARY EXERCISES.

Personal Reminiscences Associated with Progress of Gynecology. E. Addie Emmet, New York City.
 Status of Gynecology in 1876 and in 1900. Alexander J. C. Skene, Brooklyn, N. Y.
 Reminiscences of the Foundation and Early Years of the Society. James H. Fowler, Boston, Mass.
 Personal Factor in Work of American Gynecological Society. E. Van de Warker, Syracuse, N. Y.
 Some Kaleidoscope Pictures in Rhyme. Thaddeus A. Reamy, Cincinnati, Ohio.

THE AMERICAN GASTRO-ENTEROLOGICAL ASSOCIATION.

The third annual meeting of this Society will be held at the Shoreham, in Washington, D. C., May 1. The following papers are announced:
 Occurrence of Mould in the Stomach and its Probable Significance. Max Einhorn.
 Sugar, as such, in the Dietary of Dyspeptics. Wm. Gerry Morgan, Concerning Nature of Biologic Cell Process in Malignant Neoplasms, and Their Significance for Early Diagnosis of Cancer of Stomach. J. C. Hemmeter.
 Appendix and Cecum from the Standpoint of the Gastro-Enterologist. A. L. Benedict.
 Feeding the Sick. A. P. Buchman.
 Starvation vs. Feeding in Diseases of the Stomach—Illustrated. Frank H. Murdoch.
 Case of Cancer of Esophagus; Perforation into Left Pleura; Death from Pyopneumothorax. Exhibition of Specimen. Julius Friedenwald.
 Some Clinical Observations on Position and Topography of Stomach. G. W. McCaskey.
 Remarks on Stenosis of Pylorus. Henry W. Bettman.
 Report of an Interesting Case. E. G. Cutler.
 Mechanics of Digestion. F. B. Turck.
 Epigea. Charles D. Aaron.

AMERICAN CLIMATOLOGICAL ASSOCIATION.

The seventeenth annual meeting of the Association will be held in the banquet room of the Arlington Hotel, Washington, D. C., on May 1, 2 and 3. The sessions will be at 10 a. m. The program is as follows:
 President's Address. Abraham Jacobi, New York City.
 Modern Physician's Duty to His Tuberculous Patients. Frederick I. Knight, Boston, Mass.
 Construction and Management of Small Cottage Sanatoria for Consumptives. Arnold C. Klebs, Chicago.
 Report of Certain Cases of Tuberculosis Which Were Apparently Due to the Nature of the Soil. Richard Cole Newton, Montclair, N. J.
 Educational and Legislative Control of Tuberculoals. Charles Denison, Denver, Colo.
 Some Phases of the Tuberculous Problem in Colorado. Sherman G. Tonney, Denver, Colo.
 Some Personal Observations on the Effect of Intrapleural Injection of Nitrogen Gas in Tuberculosis. H. P. Loomis, New York City.
 Bacterio-Therapeutics, with Special Reference to Tuberculosis. E. R. Baldwin, Saranac, N. Y.
 Subsequent Histories of Patients Apparently Cured by Ad-tubercle Serum. J. Edward Stubbert, Liberty, N. Y.
 Stomach Conditions in Early Tuberculosis. Boardman Reed, Philadelphia.
 Phebitis of Advanced Phthisis, with Report of Cases of Phthisis Following Advances of Hand. R. G. Curtin, Philadelphia.
 Diagnostic Value of Tuberculin in Tuberculosis. James S. Anders, Philadelphia.
 Spleno-myelogenous Leukemia with Pulmonary Tuberculosis. Report of Case. H. L. Elsner and Wm A. Groat, B.S., Syracuse, N. Y.
 Hydratic Treatment of Tuberculosis. J. H. Kellogg, Battle Creek, Mich.
 Petroleum Oil in Treatment of Phthisis. W. D. Robinson, Philadelphia.
 Stimulants: The Special Benefit of Fat, of one Kind or Another, as a Necessary Article of Diet to Fortify the System Against Tubercle Bacilli. A. N. Bell, Brooklyn, N. Y.
 Inadequacy of Physical Signs as Indicating Gravity of a Pneumonia. Andrew H. Smith, New York City.
 Blood Changes in High Altitudes. S. E. Solly, Colorado Springs, Colo.
 The Bath in Gond. Charles C. Ransom, New York City.
 Case of Neural Endocarditis. Harold Williams, Boston.
 Exercises Suitable for Children Suffering from Heart Disease. J. Madison Taylor, Philadelphia.
 Prognosis in Disease of the Heart. James B. Walker, Philadelphia.

Report of Case of Dissecting Aneurysm Causing Death by Rupture into Pericardial Sac. Judson Deland, Philadelphia.
 Some Thoughts on Nervous System in Phthisis as a Basis for Treatment. Thomas J. Mays, Philadelphia.

AMERICAN SURGICAL ASSOCIATION.

The program of the next meeting, at the Columbia University Building, Washington, D. C., May 1-3, offers the following papers:
 President's Address: "Perforating Ulcer of the Duodenum." Robt. F. Weir.
 Gastric Cancer: Non-perforating; Hemorrhage. Wm L. Rodman, Philadelphia.
 Perforating Ulcer of Stomach. J. M. T. Finney, Baltimore, Md.
 Renign Obstruction of Pylorus. Frederick Kammerer, New York City.
 Malignant Disease of Stomach and Pylorus. Wm. J. Mayo, Rochester, Minn.
 Gastric Dilatation; Gastropnoxis. B. F. Curtis, New York City.
 Hongglass Contraction of Stomach. F. S. Watson, Boston.
 Diagnosis of Cancer of Stomach. John C. Hemmeter, Baltimore, Md.
 Traumatism of Stomach, including Foreign Bodies, Rudolph Matas, New Orleans, La.
 Adhesions of the Stomach. A. T. Cabot, Boston.
 Stricture of Esophagus following Typhoid Fever; Gastrostomy. Frederick S. Dennis, New York City.
 A Series of Demonstrations on the Cadaver, illustrative of the Mechanism of the Various Dislocations of the Hip. Oscar H. Allis, Philadelphia.
 Methods of Closing Abdominal Incisions. M. H. Richardson, Boston.
 Strangulated Hernia through Traumatic Rupture of Diaphragm. Laparotomy. Recovery. E. W. Walker, Cincinnati, Ohio.
 Case of Subpubic Hernia of Bladder through Pelvic Floor. Operation. F. B. Harrington, Boston.
 Case of Acute Tuberculosis of Mesenteric Glands of Ileoecol Coil. Removal. Permanent Recovery. M. H. Richardson, Boston.
 Successful Removal of Acutely Inflamed Tubercular Mesenteric Glands. J. M. Elliot, Boston.
 Congenital Cystic Tumor of Pelvis. DeForest Willard, Philadelphia.
 Extirpation of Very Large Aneurysm of Renal Artery. W. W. Keen, Philadelphia.
 Carcinoma of the Rectum. John B. Deaver, Philadelphia.
 Spontaneous Disappearance of Carcinoma of Lip. Union following Pathologic Fracture of Femur due to Secondary Carcinoma. Leonard Freeman, Denver, Colo.
 Multiple Ovary Fibromata. H. R. Wharton, Philadelphia.
 Removal of Seminal Vesical. N. B. Carson, St. Louis, Mo.
 Complete Absence of Uterus and Vagina, with Creation of New Vagina. N. B. Carson, St. Louis, Mo.
 Study of Twenty-four Cases of Laparotomy for Peritoneal Infection in Typhoid Fever. Reported by George B. Shattuck, J. Collins Warren, Farrar Cobb, Committee of Boston Society for Medical Improvement. Presented by J. Colline Warren, Boston.

BOOKS AND PAMPHLETS RECEIVED.

BOOKS.

DISEASES OF GENITO-URINARY SYSTEM. A thorough Treatise on Urinary and Sexual Surgery. By Eugene Fuller, M.D., Professor of Genito-Urinary and Venereal Diseases in the New York Post-Graduate Medical School. Cloth. Pp. 774. Price \$5. New York: The MacMillan Co. 1900.
 MEDICAL DISEASES OF CHILDHOOD. By Nathan Oppenheim, A.B. (Harv.) M.D. (Col. P. & S. N. Y.). With 101 Original Illustrations in Half-Tone and 19 Charts. Cloth. Pp. 653. Price \$5. New York: The MacMillan Co. 1900.
 REFRACTION OF THE EYE. A Manual for Students. By Gustavus Hatridge, M.D., Senior Surgeon to the Royal Westminster Ophthalmic Hospital. With 105 Illustrations. Tenth Edition. Cloth. Pp. 264. Price \$1.50 net. Philadelphia: P. Blakiston's Son & Co. 1900.
 PLEA FOR A SIMPLER LIFE AND FADS OF AN OLD PHYSICIAN. By George S. Keith, M. D., LL.D., F.R.C.P.E. Cloth. Pp. 173. Price \$1.25. New York: The MacMillan Company, 1900.
 PROCEEDINGS OF PHILADELPHIA COUNTY MEDICAL SOCIETY. Vol. xviii-xix. Session of 1897. Augustus A. Esbner, M.D., Editor. Cloth. Pp. 237. Philadelphia: Printed for the Society, 1897.
 TRANSACTIONS OF AMERICAN DERMATOLOGICAL ASSOCIATION. TWENTY-THIRD ANNUAL MEETING, Philadelphia, May 30 to June 1, 1899. Official report of proceedings, by George Thomas Jackson, M.D., Secretary. Paper. Pp. 176. Concord, N. H.: The Rumford Press, 1900.
 REPRINTS, ETC.
 AN EQUATION OF RESPONSIBILITY. By Edwin W. Pyle, Jersey City, N. J. Hansen & Co. Press. 1900.
 ANNUAL REPORT OF ST. ELIZABETH'S HOSPITAL. From Jan. 1, 1899, to Jan. 1, 1900. PAPER. LAFAYETTE, IND.
 A STUDY OF AURAL VERTIGO—INFLUENCE OF TUBERCULAR HYPER-TROPHY ON THE PHARYNX—LATE CONSECUTIVE OROPHARYNGEAL SYPHILIS. By Lewis S. Somers, M.D., Philadelphia. Reprints.
 RETRACTIO OTIS MALARIA-FRAGE. By Carl Schwabe, M.D. Heft 1. Die Malaria, die Mosquitoes. Paper. Pp. 19. Berlin W. 30. Verlag Otto Salle, 1900.
 CONTUSED AND PERFORATING INJURIES OF EYEBALL: WITH REPORT OF CASES. By Thomas A. Woodruff. Reprint from Med. Standard.
 ECONOMIC DISPOSAL OF SEWAGE WITH PURIFICATION BY SMALL COMBINATION FILTERS. Robert F. Moore, Ph. D. Paper. Pp. 11. Supplement to N. H. Sanitary Bulletin, April, 1900.
 HEADACHE FROM EYE-STRAIN: Its Diagnosis and Treatment. By Casey A. Wood, M.D., Chicago. With Astigmatic Chart. Reprinted from N. Y. Med. News.
 TUBERCULAR PELVIS AS A FACTOR IN CAUSATION OF PERINEAL INJURIES. By Joseph Brown Cooke, New York City. Reprinted from Med. News.
 NERVE MECHANISM OF PELVIS AND ASSOCIATED REGIONS.—THE VAGINA: DESCRIPTIVE AND APPLIED ANATOMY. By Byron Robinson, Chicago. Reprints.

PROCEEDINGS OF PATHOLOGICAL SOCIETY OF PHILADELPHIA, March, 1900. Paper. Published by the Society.
 PROCEEDINGS OF PHILADELPHIA COUNTY MEDICAL SOCIETY. FOR JANUARY and FEBRUARY. Paper. Published by the Society.
 REMARKS ON EXTRA-UTERINE PREGNANCY.—REMARKS ON INFLUENCE OF TECHNIQUE ON RESULTS OF CLOSURE OF WOUNDS OF ABDOMINAL WALL.—REMARKS ON NEPHRECTOMY WITH A PLEA FOR THE MORE CERTAIN AND EARLIER DIAGNOSIS OF CONDITIONS REQUIRING IT. By Charles F. Noble, M.D., Philadelphia. Reprints.
 NEW METHOD OF DIAGNOSIS OF TUBERCULOSIS OF KIDNEY. By Charles P. Noble, M.D., and W. Wayne Babcock, M.D., Philadelphia. Reprinted from Am. Gyn. and Obstet. Jour.
 REPORT OF KENSINGTON HOSPITAL FOR WOMEN. From Oct. 10, 1898, to Oct. 6, 1899. Philadelphia.
 VARIATION OF TYPE IN DIPHTEHRIA AND SCARLET FEVER. By Henry D. Fulton, Pittsburg, Pa. Reprinted from Med. Council. TRADE PAMPHLETS.
 ANTI-DIPHTHERITIC SERUM, KRYOFINE, AMINOFORM AND OTHERS. New York: C. Bischoff & Co.
 THE ACID DIATHESIS, TONO SUREMBL CORDIAL, GRANULAR EFFERVESCENT SALTS, INGLUVIN, A HARMLESS REMEDY FOR GRADUALLY REDUCING OBESITY. By William T. Cathell, A.M., M.D., Baltimore, Md. New York: William R. Warner & Co.
 UROTROPIN; COLLARGOLUM AND UNGUENTUM CREDE; XEROFORM; BETA-EUCALIN, AND OTHERS. New York: Schering & Glatz, 1900.

NEW PATENTS.

Patents granted April 3-10, of interest to Physicians, Etc.
 646,723. Hernial truss, Alfred Edson, Paterson, N. J.
 646,793. Medical galvanic battery, Harry Bentz, New York, N. Y.
 646,491. Spray-tube for atomizers, Harley M. Dunlap, Battle Creek, Mich.
 646,574. Operating table, George E. Gorham, Albany, N. Y.
 646,579. Truss, Irvén E. Johnson, Woodhull, Texas.
 646,544. Manufacturing water-resisting products from casein, Wilhelm Helm, Hannover, and A. Spitteler, Wolfrauschhausen, Germany.
 646,580. Hot-air or vapor bath cabinet, Joseph H. Lennon and A. C. Whaley, Buffalo, N. Y.
 646,611. Disinfecting apparatus, Michael Sheridan, New York, N. Y.
 646,631. Phenol ether of quinin carbonic acid, Albert Weller, Frankfurt-on-the-Main, Germany.
 647,130. Disinfecting device, Jules B. Bengue, Paris, France.
 647,372. Truss, Joseph W. Bradford, Los Angeles, Cal.
 647,075. Making catenoids of paraplentidin, Wm. H. Claus, A. Roe, and L. Marchlewski, Manchester, England.
 647,294. Hot-water bag, Hattie C. Cropley, Washington, D. C.
 646,962. Forming sacks for suspensory bandages, Richard Dove, Westville, N. J.
 647,392. Oxyputrin and making same, Emil Fischer, Berlin, Germany.
 647,263. Eater of acetylputryglycinortho carbonic acid, Bernhard Heymann, Elberfeld, Germany.
 647,006. Special apparatus for electric baths, Antonio Maggiorani, Italy.
 647,003. Pessary, Martha J. Kuznik, Chicago, Ill.
 647,001. Battery case for electromedical apparatus, James H. Mahler, and C. F. Dunderdale, Chicago, Ill.
 Copies of above patents may be obtained for ten cents each by addressing John A. Saul, Solicitor of Patents, Fendall Building, Washington, D. C.

Queries and Minor Notes.

SIGN ALL COMMUNICATIONS.

If "subscriber," Kansas City, will send his name, his query will be answered.

REQUIREMENTS FOR PRACTICE.

KEOSHA, WIS., April 23, 1900.
 To the Editor:—I would like to ascertain what the requirements are to enable an M.D. to practice in the different states. I believe I have seen it in THE JOURNAL, or elsewhere, but the article is not in my possession. Very truly, J. M.
 ANSWER:—Requirements for practice were published in THE JOURNAL of Nov. 12, 1898, p. 1195. They were correct at that time, but there have been a number of changes since, and some are or were very recently still pending in the different legislatures. The State Board of Health of Illinois, in its report for 1898, also published a complete list of the different state requirements.

ARMY AND NAVY JOURNALS.

NEWTONVILLE, ALA., April 18, 1900.
 To the Editor:—Will you inform me where I can get a journal of the army and navy? I wish to subscribe for a medical journal published by the respective corps of each service, but do not know where to get this. Very truly, T. W. J.
 ANSWER:—We are not aware of any special medical journal published by either the army or navy in this country. Papers are occasionally published by medical officers, in the various journals and also in the report of the surgeon generals of the two services.

UNION OF BLOOD-VESSELS.

DODD, UTAH, April 10, 1900.
 To the Editor:—Will you kindly inform me as to the present status of experimentation for the union of severed blood-vessels, etc., and refer me to the literature of note on this subject. Very respectfully, H. B. F.

ANSWER:—Suture of the larger arteries has been demonstrated, by experiments on animals as well as by actual operations on the human subject, to be a successful surgical procedure. Following

is a list of cases reported to date: Heidenhain, in 1894, sutured the axillary artery, with recovery; v. Zoega Mantouffel, 1895, the common femoral, with recovery; Israel, 1895, the common iliac, with recovery; Ssabanjeff, 1896, the femoral, with subsequent amputation of the leg, and death; Orlov, 1896, the popliteal, with recovery; Murphy, 1897, the femoral, with recovery; Snider, 1898, the femoral with recovery; Garré, 1898, the internal carotid, and the brachial, with recovery in both cases. The best article on the subject are by Murphy (*Medical Record*, 1897, Vol. II, No. 3); Silberberg (*Inaug. Dis.*, 1899); Dörfler (*Beiträg. zur Klin. Chir.*, 1899, xiv., p. 781). In Dörfler's article will be found the literature of the subject up to date.

A QUESTION OF ETHICS.

GRAND ISLAND, NEB., April 19, 1900.
 To the Editor: Please state your views as length as to the right or wrong in the following case. Dr. A. had been attending a patient some three days, and though the case was serious Dr. A. had maintained a hopeful prognosis. Consultation was requested by the patient and his friends, to which Dr. A. readily agreed and suggested the name of Dr. B. Dr. A. takes Dr. B. with him, at the patient had asked that Dr. X. be called. Two consultations were thus held, and once, with the knowledge and consent of the patient, Dr. A. had Dr. B. visit him alone, although Dr. A. continued in charge of the case, and at no time was there any change in not giving satisfaction. Nor did Dr. B. suggest any hint that he was treatment, and the patient continued to improve, though he was advised by both that it would be slow. Three days after the last take charge of the case, and did so without advising Dr. A. of it, and continued in attendance, incidentally mentioning the fact to Dr. A. several days later. Both doctors are members of the AMERICAN MEDICAL ASSOCIATION.

ANSWER:—If "ethics" has given an impartial statement of the unpleasant occurrence there can be only one reply, viz., that Dr. B. had no right to accept the case under the circumstances.

The Public Service.

ARMY CHANGES.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., April 7 to 20, 1900, inclusive.
 John S. Fogg, acting asst.-surgeon, from Washington, D. C., to Columbus Barracks, Ohio, for temporary duty.
 William C. Gorgas, major and surgeon, U. S. A., assigned as chief surgeon, Department of Havana and Pinar del Rio, Cuba.
 Jefferson B. Gorden, major and surgeon, U. S. A., from duty as chief surgeon, Department of Havana and Pinar del Rio, to report to the commanding officer, Division of Cuba, for assignment.
 George F. Shields, major and surgeon, U.S., honorably discharged on his own request, to take effect June 10, 1900; he meanwhile will report for temporary duty in the Department of California.
 Edwin P. Wolfe, lieutenant and asst.-surgeon, U. S. A., leave of absence extended.
 Alfred A. Woodhull, lieutenant-colonel, deputy surgeon-general, U. S. A., from Somerville, N. J., to Washington, D. C., reporting in person to the surgeon-general.
 James L. Bevans, acting asst.-surgeon, from temporary duty at the general hospital, San Francisco, Cal., to Seattle, Wash., for duty in the Department of Alaska.
 William C. Borden, captain and asst.-surgeon, U. S. A., to represent the Medical Department of the Army at the Ninth Annual Meeting of the Association of Military Surgeons of the United States, to be held in New York City, May 30 to June 2, 1900.
 Charles C. Byrne, colonel and asst.-surgeon-general, U. S. A., aa Borden, see above.
 Robert E. Caldwell, acting asst. surgeon, from temporary duty at Alcatraz Island, Cal., to Seattle, Wash., as transport surgeon on the transport *Roscarvan*.
 William D. Crosby, major and surgeon, Vols. (captain and asst.-surgeon, U. S. A.), relieved from further duty in the Philippines and assigned as attending surgeon and examiner of recruits in New York City, N. Y.
 Calvin DeWitt, lieutenant-colonel and deputy surgeon-general, U. S. A., from New York City, to Washington, D. C., to report to the surgeon-general on instructions.
 Euclid E. Frick, captain and asst.-surgeon, U. S. A., to represent the Medical Department of the Army at the meeting of the AMERICAN MEDICAL ASSOCIATION, to be held at Atlantic City, N. J., June 5 to 8, 1900.
 Charles M. Gandy, captain and asst.-surgeon, U. S. A., as Borden, see above.
 Thomas W. Jackson, acting asst.-surgeon, from New York City to West Point, N. Y., for temporary duty at the U. S. Military Academy.
 James M. Kennedy, captain and asst.-surgeon, U. S. A., relieved from further duty in the Department of California, to report about May 10, 1900, at San Francisco, Cal., for transportation to Manila for duty in the Division of the Philippines.
 William Stratton, captain and asst.-surgeon, U. S. A., as Frick, see above; also relieved from duty as attending surgeon and examiner of recruits at New York City, and assigned to the Department of California.
 Harrison W. Stuckey, acting asst.-surgeon, now en route with troops to San Francisco, Cal., will report to the commanding general in that city for assignment to duty with troops going to Manila; on arrival at which place he will report for assignment in the Division of the Philippines.
 Alfred A. Woodhull, lieutenant-colonel and deputy surgeon-general, U. S. A., as Frick, see above.
 In addition to the above, Special Orders, No. 93, of April 20, 1900, directs the following named acting asst.-surgeons to proceed from

the places indicated to San Francisco, Cal., and report in person to the commanding general, Department of California, for temporary duty: Thomas Z. Bull, from Wayland, Ind.; James L. Day, from Lebanon, Mo.; Paul T. Dessze, from Washington, D. C.; Robert L. Felts, from New York City; Alva R. Hull, from New Sharon, Iowa; Frederick W. Hulseberg, from New Haven, Conn.; Frederick C. Jackson, from Columbus, Ohio; Wendell A. Jones, from Westerville, Ohio; James H. Kelly, from Philadelphia, Pa.; Sanford B. McClure, from Cincinnati, Ohio; Lewis B. Porter, from New Haven, Conn.; Thomas L. Rhoads, from Boyertown, Pa.; John L. Shepard, from Galesburg, Ill.; John M. Sheperd, from Brooklyn, N. Y.; Edmund D. Shortledge, from Wilmington, Del.; Edwin R. Tenny, from Kansas City, Kan.; Charles F. Sanborn, from Willard, N. Y.

NAVY CHANGES.

Changes in the Medical Corps of the U. S. Navy for the week ended April 14, 1900.

P. A. Surgeon F. W. Olcott, ordered to duty at the naval recruiting rendezvous, Philadelphia, Pa.

MARINE-HOSPITAL CHANGES.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the United States Marine-Hospital Service for the seven days ended April 12, 1900.

Surgeon J. H. White, detailed as inspector of quarantine stations.

P. A. Surgeon J. O. Cobb, detailed as delegate to attend the meeting of the American Climatological Association at Washington, D. C., May 1-3, 1900.

Asst.-Surgeon C. E. Decker, bureau letter of March 31, 1900, granting Asst.-Surgeon Decker leave of absence for 29 days on account of sickness, amended so that the said leave shall be for 23 days only.

Asst.-Surgeon John McMullen, to proceed to the South Atlantic quarantine station (*en route* to Tortugas) and report to the medical officer in command for temporary duty.

Asst.-Surgeon D. H. Currie, granted leave of absence for 10 days from May 4, 1900.

Asst.-Surgeon A. J. McLaughlin, to report to medical officer in command of the service at New York City, for duty and assignment to quarters.

Asst.-Surgeon J. D. Long, to report to medical officer in command of the service at Boston, Mass., for duty and assignment to quarters.

Asst.-Surgeon N. W. Glover, to report to the medical officer in command of the service at Baltimore, Md., for duty and assignment to quarters.

Asst.-Surgeon B. H. Earle, to report to the medical officer in command of the service at Chicago, Ill., for duty and assignment to quarters.

Asst.-Surgeon B. J. Lloyd, to report to the medical officer in command of the service at Mobile, Ala., for duty and assignment to quarters.

Acting Asst.-Surgeon S. B. Hutter, granted leave of absence for two days.

Hospital Steward E. R. Hanrath, upon being relieved from duty at St. Louis, to proceed to New York City, and report to the medical officer in command for duty and assignment to quarters.

Hospital Steward S. W. Richardson, relieved from duty at Cleveland, Ohio, and directed to proceed to St. Louis, Mo., and report to the medical officer in command for duty and assignment to quarters.

APPOINTMENTS.

John D. Long, of Pennsylvania; Mervin W. Glover, of the District of Columbia; Baylis H. Earle, of South Carolina, and Bolivar J. Lloyd, Texas, commissioned as assistant-surgeons April 9, 1900.

BOARD CONVENED.

A board of officers will be convened at the Service Building, 378 Washington Street, New York City, Wednesday, May 23, 1900, for the purpose of examining candidates for admission to the grade of assistant-surgeon in the United States Marine-Hospital Service. Candidates must be between 21 and 30 years of age, graduates of a reputable medical college, and must furnish testimonials from responsible persons as to character.

The following is the usual order of the examination: 1, physical; 2, written; 3, oral; 4, clinical.

In addition to the physical examination, candidates are required to certify that they believe themselves free from any ailment which would disqualify for service in any climate.

The examinations are chiefly in writing, and begin with a short autobiography of the candidate. The remainder of the written exercise consists in examination on the various branches of medicine, surgery and hygiene.

The oral examination includes subjects of preliminary education, history, literature and natural sciences. The clinical examination is conducted at a hospital, and when practicable candidates are required to perform surgical operations on a cadaver.

Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order as vacancies occur.

Upon appointment the young officers are as a rule first assigned to duty at one of the large marine hospitals, as at Boston, New York, New Orleans, Chicago or San Francisco.

After five years' service, assistant-surgeons are entitled to examination for promotion to the grade of passed assistant-surgeon.

Promotion to the grade of surgeon is made according to seniority, and after due examination, as vacancies occur in that grade. Assistant-surgeons receive \$1600, passed assistant-surgeons \$2000, and surgeons \$2500 a year. When quarters are not provided commutation at the rate of \$30, \$40, or \$50 a month, according to grade, is allowed.

All grades above that of assistant-surgeon receive longevity pay, 10 per centum in addition to the regular salary for every five years' service up to 40 per centum after twenty years' service.

The tenure of office is permanent. Officers traveling under orders are allowed actual expenses. For further information, or for invitation to appear before the board of examiners, address, Supervising Surgeon-General, U. S. Marine-Hospital Service, Washington, D. C.

HEALTH REPORTS.

The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ended April 20, 1900.

SMALLPOX—UNITED STATES.
Alabama: Mobile, April 7-14, 1 case.
District of Columbia: Washington, April 7-14, 1 case.
Florida: Jacksonville, April 7-14, 1 case.
Illinois: Chicago, April 7-14, 1 case.
Indiana: Evansville, April 7-14, 4 cases.
Kansas: Wichita, April 1-7, 5 cases; Wichita, 7-14, 14 cases.
Kentucky: Covington, April 7-14, 9 cases; Lexington, April 7-14, 3 cases.
Louisiana: New Orleans, April 7-14, 51 cases; 19 deaths.
Maine: Portland, April 7-14, 1 case.
Maryland: Baltimore, April 7-14, 1 case.
Michigan: Detroit, April 7-14, 1 case.
Minnesota: Minneapolis, April 7-14, 20 cases.
Nebraska: Omaha, April 7-14, 4 cases.
New York: New York, April 7-14, 1 case, 1 death.
Ohio: Cleveland, April 7-14, 11 cases, 2 deaths.
South Carolina: Greenville, April 7-14, 2 cases.
Utah: Salt Lake City, April 1-14, 3 cases.
Virginia: Portsmouth, April 7-14, 1 case.
Washington: Spokane, April 7-14, 3 cases.
SMALLPOX—FOREIGN.
Austria: Prague, March 17-24, 4 cases.
Belgium: Antwerp, March 24-31, 2 cases, 2 deaths; Ghent, March 24-31, 2 deaths.
Brazil: Rio de Janeiro, February 23-March 2, 15 deaths.
Canada: Quebec, Bonaventure County, April 5-12, 25 cases.
Colombia: Barranquilla, March 24-31, 5 cases, 5 deaths.
Egypt: Cairo, March 11-18, 8 cases.
England: Liverpool, March 24-31, 21 cases, 1 death; London, March 17-31, 8 cases, 1 death.
Gibraltar, March 26-April 1, 3 cases, 1 death.
Greece: Athens, March 24-31, 10 cases, 6 deaths.
India: Bombay, March 6-13, 222 deaths; Kurrachee, March 4-11, 17 cases, 6 deaths.
Italy: Palermo, March 17-24, 1 death.
Mexico: City of Mexico, March 18-April 1, 40 cases, 22 deaths; Vera Cruz, April 1-7, 3 deaths.
Russia: Moscow, March 10-17, 9 cases, 2 deaths; Riga, January, 1-31, 33 deaths; St. Petersburg, March 3-10, 20 cases, 8 deaths; Warsaw, March 10-17, 2 deaths.
Spain: Corunna, March 24-31, 1 death; Madrid, March 16-24, 6 deaths; Valencia, March 24-31, 3 cases, 3 deaths.
Straits Settlements: Singapore, February 10-March 3, 14 deaths.
YELLOW FEVER.
Brazil: Rio de Janeiro, February 23-March 2, 18 deaths.
Colombia: Barranquilla, March 24-31, 1 case, 1 death; Panama, March 27-April 10, 3 cases.
Cuba: Havana, March 1-April 17, 2 cases, 4 deaths.
CHOLERA.
India: Bombay, March 6-13, 222 deaths; Kurrachee, March 4-11, 17 cases, 6 deaths.
PLAQUE—INSULAR.
Philippines: Manila, February 24-March 3, 7 deaths.
PLAQUE—FOREIGN.
India: Bombay, March 6-13, 736 deaths; Kurrachee, March 4-11, 90 cases, 63 deaths.
Japan: Formosa, Tamsui, January 1-31, 53 cases, 43 deaths; Formosa, Tamsui, February 1-28, 46 cases, 39 deaths; Osaka, April 16, present.
Paraguay: Asuncion, February 8-15, 6 deaths.
Persia: Djiranj, March 29, present.

CHANGE OF ADDRESS.

Dr. C. F. Allen, from Milwaukee to Middleton, Wis.
Dr. M. W. Bland, from Hotel Morrison to 239 Ogden Avenue, Chicago.
Dr. R. L. Black, from 3013 Perry Ave. to City Hospital, Kansas City, Mo.
Dr. J. Bixby, from Diller to Strong, Neb.
Dr. T. J. Blakeley, from Cuyahoga Falls to St. Johns, Ohio.
Dr. H. W. Clements, from Mulltown to Havana, Ga.
Dr. R. Daniel, from Augusta to Hillis, Ga.
Dr. W. E. Frank, from Keokuk, Ia., to Trivoli, Ill.
Dr. W. A. Funk, from Baltimore, Md., to 25 E. 112th St., New York City.
Dr. G. E. Garwood, from Toledo to Desher, Ohio.
Dr. C. S. Hendricks, from 915 to 927 W. North Ave. Chicago.
Dr. E. C. Hamley, from 1031 Taylor St. to 238 Winchester Ave., Chicago, Ill.
Dr. W. S. Hull, from New Market to Faucett, Mo.
Dr. R. H. Hartley, from Condon to Prairie City, Oregon.
Dr. C. E. Houston, from Charleston to Florence, S. C.
Dr. T. H. Jameson, from Enfield, Ill., to Wellington, Kansas.
Dr. J. F. Jones, from Sherman, Texas, to Cardena, S. L. P., Mexico.
Dr. F. C. Kovats, from 222 S. Paulina St. to 640 Jackson Boul., Chicago, Ill.
Dr. A. F. Kemp, from St. Louis to Veule, Mo.
Dr. T. W. Little, from Keokuk to Lone Grove, Iowa.
Dr. W. A. Leaps, from Milwaukee to Loyd, Wis.
Dr. W. J. Lonergan, from Oshkosh to Princeton, Wis.
Dr. F. E. McLaughlin, from Nashville to Lebanon, Ill.
Dr. F. Le Moyné, from Sagertown to 503 Castleman St., Pittsburg, Pa.
Dr. J. A. Patton, from 2082 Congress St. to 2271 Harrison St., Chicago, Ill.
Dr. D. H. Pelletier, from Chicago to St. Anne, Ill.
Dr. E. D. Piper, from 2116 Monroe St. to 2141 Jackson Boul., Chicago, Ill.
Dr. C. S. Roach, from Augusta to Johnston Station, Ga.
Dr. A. N. Sloan, from Sioux City, Ia., to Franklin, Neb.
Dr. A. H. Steubins, from Marlan and Zacks Sta. to 413 Florida St., Tampa, Fla.
Dr. J. T. Toney, from St. Martins to Big Bend, Wis.
Dr. H. H. Wehrs, from St. Louis to Bouef Creek, Mo.

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Original Articles.

FURTHER OBSERVATION ON THE TREATMENT OF THE ABDOMINAL VISCERA THROUGH THE COLON.*

BY FENTON B. TURCK, M.D.

CHICAGO.

In a paper on this subject, before the AMERICAN MEDICAL ASSOCIATION, in June, 1899, I presented a summary of experiments on animals demonstrating the physiologic results of certain methods of treatment applied to the colon.¹ It was there shown that the introduction of small quantities of water at a temperature of 55 C.—131 F.—through the rectum into the colon produced marked effect not only on the abdominal organs but also on the heart and general circulation. These experiments and the results of clinical observation along lines indicated by them demonstrate, in a variety of cases, the great value of the procedure. In connection with these experiments and resultant clinical data, the present communication proposes to discuss other methods of colonic therapeutics original with myself.

In the first of these new methods, air—hot or cold—is forced into the colon through a double tube, and allowed to escape. This hot or cold air, through its stimulant power, produces what has been well styled gymnastics of the colon. By a second method colon massage is obtained. By a third colonic electrization is secured. Through a fourth method direct medication of the colon is applied. A fifth secures dietetic and other therapeutics through the colon.

As an introduction to the clinical evidence of the value of hot water lavage of the colon, a résumé of the technique seems necessary. The patient is placed in a dorsal position on a table so adjusted that the hips may be raised or lowered to any required angle without discomfort. The solution employed is usually a .9 per cent. salt solution at a temperature of 55 C.—131 F. This temperature is employed to secure the therapeutic effect of heat. A soft-rubber tube, either single or double, with end and side openings, is introduced into the rectum as far as the sigmoid flexure; 200 to 300 c.c. of water at a temperature of 50 C.—122 F.—is first introduced into the rectum. This is allowed to return through the tube into a receptacle, in order to prevent overdistention and to replace the water that has been lowered in temperature in the intestine. The procedure is then repeated and with each repetition the temperature is gradually raised until 55 C. is attained. For this purpose from three to six liters of water will be required. At no time is a large amount to be introduced into the intestine. The patient is then allowed to empty the

bowels. After this he is placed on the table and receives a similar short treatment with water cooled to 2 to 5 C.—35.6 to 41 F.—by means of ice. The quantity of water required and the duration of the treatment will depend on the character of the case.

Therapeutics here as elsewhere will depend on correct diagnosis not only of the disorder but of its type. Based on this, the procedure is eminently valuable. For continuous irrigation a double in lieu of a single tube should be used. The double recurrent tube or "needle douche" which I have described elsewhere has answered this purpose well in my hands and in those of Herschel, Treves, Gillespie and other gastro-enterologists.

Favorable results from the procedure thus described depend not so much on the amount of water introduced as on the reaction between the stimulation of heat and that of cold. A single large quantity of water is detrimental, while small quantities of hot water frequently repeated have remarkably beneficial effects. The colon mucous membrane, like that of the back of the throat and esophagus, will sustain a remarkable degree of heat without undesirable reaction.

The therapeutic indications are based on the vasomotor conditions which underlie certain pathologic disturbances. In a general way the cases which are benefited by this procedure may be divided into those where the liver is most markedly affected, those where the kidneys are, and finally those where an intestinal factor is most evident, as in appendicitis. In hepatic insufficiency, catarrhal jaundice, chronic hepatitis, the results of the treatment have been exceedingly satisfactory.

CASE 1.—J. B. M., a miller, 54 years old, complained of pain in "the pit of the stomach" and right side with a feeling of distress and of dull heaviness. In three months he had lost thirty pounds, but had been well up to three months prior to the first attack. He had often been obliged to go without breakfast, and had neglected to take lunches, and returning home ravenously hungry he had often eaten too much at one meal. He had also neglected exercise. Three months of this mode of living resulted in the symptoms described, together with slight icterus. Partial recovery occurred, but he was unable to attend to business and a month later a second attack occurred, followed as before by recovery, but with a longer interval than after the first attack. Three months after the first attack there was pain, icterus with clay-colored stools, and complete loss of appetite. He had been treated by all the usual hepatic medicinals as well as cold water enemata, but grew worse. I was called in consultation and the patient placed under my care. On careful examination it was found that glandular gastro-duodenitis existed. The liver was enlarged and hardened but not nodulated. The stools were light in color and the urine contained bile. The patient was placed under colonic lavage with water at 55 C., a normal salt solution being employed. In three weeks the symptoms had entirely disappeared and he had gained fifteen

*Read at the meeting of the Mississippi Valley Medical Association, Chicago, Oct. 3, 1899.

¹Turck: Treatment of Abdominal Viscera through the Colon. THE JOURNAL, xxxiii, 580.

pounds. Six months later there had been a complete recovery with a gain of thirty pounds in weight.

CASE 2.—Dr. W. R. F., aged 44 years, complained of pain in the region of the liver, loss of appetite and of weight. There was dizziness and ringing in the ears, as well as of depression. The skin was discolored at times, and he had frequent attacks of what had been diagnosed as cholemia. He had been under the usual treatment, medicinally, for this condition for six months. On examination there was found an increased hepatic area in the cardiac direction, reaching to the mammary line.

The urine did not contain albumin, sugar nor bile; 700 c.c. were passed in twenty-four hours; the urea was 1.87, the specific gravity 10.25. The diagnosis was hepatic hyperemia with resultant insufficiency. During one month he was treated with colonic lavage at 55 C., eighteen times. The symptoms all disappeared, the liver diminished in size, the urine was increased in quantity and contained an increased amount of urea, the appetite returned, the patient resumed practice and has continued well.

In the following case diabetes, evidently of hepatic origin, co-existed with hepatic insufficiency.

CASE 3.—A 59-year-old man complained of pain in the hepatic area, of belching gas and of disturbances of digestion one hour after meals. He was markedly depressed. On examination the liver area was found within normal limits, but on pressure was hard and resistant. The heart sounds were weak; the second sound at the base was accentuated. The gastric area reached 2 cm. below the umbilicus. On examination of the stomach contents there was found retention of food but no free HCl. The patient had been on strict anti-diabetic diet, and had visited Carlsbad several times with slight improvement. On return to the United States the symptoms reappeared. He was placed on a mixed diet, care being taken to select such food as was nutritious and was easily digested. There was a slight restriction in the carbohydrates. Colonic lavage was begun with normal salt solution at 55 C.

The treatment was continued every other day for two months. During the third month it was given twice weekly, after which the patient took only occasional treatment. When indicated, intragastric medication was given. The principal treatment, however, was colonic lavage. As a result all the symptoms disappeared, the bowels became regular, the urea returned to normal limits and the glycosuria disappeared. The patient has had no treatment for several months and has remained well. No sugar is detectable in the urine.

CASE 4.—E. H. L., a man 36 years old, complained of dizziness and depression which prevented him from attending to business. He was markedly constipated, had used alcoholics steadily for years and often to excess, and the skin was discolored, the heart area enlarged, but the valves intact. The liver area was enlarged and the liver was hard and resistant. On examination of the stomach contents, one hour after the Ewald test-meal, there was found: total acidity 45, free HCl .05 per cent. Seven hours after a regular meal the stomach was empty and mucus was present. The stomach was thick and not distensible, the gastric area normal. The diagnosis of hepatic cirrhosis was made. Colonic lavage—55 C.—was given daily for one week, then every other day for three weeks, then twice a week for the next month and once a week for the following three. The principal symptoms disappeared in one month; there was gradual improvement in the general condition. The patient now

attends to business and claims to be as well as ever.

Renal insufficiency, with or without albuminuria is frequent in many chronic cases, and these often present more or less complete evidences of the symptom-complex, uremia. In such cases colonic lavage gives brilliant results. Even in true nephritis the condition is much improved, and clinically the disorder seems to have disappeared. The following cases illustrate the prompt result and lasting benefit of this treatment:

CASE 5.—A 58-year-old woman suffered from acute renal congestion with suppression of urine. There were ominous symptoms of uremia, great depression and nervousness and headache. Her throat was markedly inflamed. During the first twenty-four hours no urine was passed, but during the second twenty-four 100 c.c., after which the quantity reached 300 c.c.; albumin + urea —. The usual medicinal treatment had had but slight effect. When I was consulted colonic lavage—55 C.—was ordered every hour for three or four, after which it was given every three hours. Under this treatment the urine greatly increased in quantity and the albumin diminished. The treatment was continued twice daily until recovery.

CASE 6.—A 45-year-old man had suffered from chronic nephritis and there was albuminuria with granular casts, with nausea and vomiting daily, headache and marked loss in weight. On examination of the eyes Dr. Casey A. Wood found an atypical albuminuric retinitis in the right one. He passed 500 c.c. of urine daily, containing 12.5 grams of urea, albumin and casts. After treatment by colonic lavage, the urine increased to 700 c.c.; the specific gravity was 1025. The test for albumin gave negative results, although there was albumosis. The urea had increased to 22.36 grams. The vomiting ceased. The treatment was continued at a regular interval for three months. The weight increased 18 pounds. The urine became free from albumin and casts and the amount excreted was within normal limits. One year afterward the patient remained in healthy condition and no albumin nor casts were to be detected.

During the past six years I have found colonic lavage with alternate hot and cold water useful in the early stages of appendicitis. In some cases where diagnosis can not be made at once, a waiting course is adopted. In such and in any event employment of the alternate hot and cold colonic lavage has given good results, since even where operation is indicated the danger of shock is lessened. The treatment, moreover, does not mask but accentuates the cardinal symptoms. The pain is lessened, the shock reduced, the circulation markedly improved, the temperature lowered, the gaseous distention reduced, the abdomen relaxed and rendered less painful to the touch. It thus becomes possible to make more thorough physical examination. In the following three cases the symptoms subsided within twenty-four hours. Operation had been refused in each case. As soon as adhesions are formed, colonic treatment should be used, if at all, very cautiously.

CASE 7.—Mrs. J. W., wife of a physician, had an acute pain in the right iliac region, with vomiting and shock and a temperature of 103 F. The bowels moved slightly after enema. On examination pelvic disease could be excluded. There was great tenderness on pressure over McBurney's point. The matter vomited consisted of duodenal contents. Continuous colonic lavage was given for thirty-five minutes, and this was repeated two hours afterward. The bowels moved, the temperature fell—100.5 F.—the vomiting ceased and the pain lessened. The patient was then removed to the Post-Graduate Hos-

pital and colonic lavage at 55 C. continued. On consultation with Dr. A. H. Ferguson, the diagnosis was confirmed and the patient prepared for operation. On account of the rapid improvement in the symptoms it was, however, decided to wait and continue treatment by colonic lavage. She made an uneventful recovery, without operation.

CASE 8.—A 16-year-old girl suffered from acute appendicitis, but operation had been refused. I was called in consultation and found her very weak, vomiting constantly and suffering from great pain with a temperature of 102 F. There was a diffused maximum tenderness over the right iliac region. Colonic lavage was undertaken at once. On account of great weakness care was taken to avoid overstimulation. Small quantities of water were used at short intervals; the temperature was gradually raised to 55 C. The pain gradually lessened and the temperature fell. Colonic feeding was instituted and no attempt made to feed by the mouth. Colonic lavage was continued twice daily, and she improved rapidly and made a good recovery. Consent to operation was obtained six weeks after recovery from the attack, the appendix removed and the patient made a complete recovery.

CASE 9.—Dr. H. E. P., aged 55, came under observation with a second attack of appendicitis, with great pain and vomiting. The temperature was 104 F. Preparations had been made for operation, which was refused. Colonic lavage at 55 C. was begun. Immediately after, the patient fell asleep. On awakening two hours thereafter colonic lavage was again given and a third treatment was given at night. The pain was much lessened, the shock was reduced and the temperature fell to 102 F. The treatment was continued next morning, noon and night. The temperature fell to 100 F., the pain ceased and the general condition was much improved. He made a good recovery and has remained well since.

Continuous irrigation produces effects slightly different from those of colonic lavage, and is indicated in impaction, acute gastro-enteritis and in the early stages of appendicitis. Rectal enemata have been used in appendicitis, but their effects have been more or less marred by deficiencies resultant on the technique employed. The *modus operandi* of colonic lavage and continuous irrigation is much more complex therefore than would at first be assumed. They not only affect that of the bowels but also the general abdominal circulation. This effect is produced through their influence on the plexuses of the intestinal walls and on the ano-genital center. This center is one of the last reflexes to be extinguished during coma of any kind, and hence what affects it has a powerful influence on the abdominal and pelvic organs and on the central nervous system. This center has the widely diffused action which results in the influence of therapeutic and pathologic procedures on the hepatic, renal and general circulation. The temperature as well as the mechanical influence of the procedures described plays a part in therapeutic results through their influence directly on nerve plexuses.

For several years, being convinced of its value by a lengthy experience I have advocated the employment of colonic lavage in typhoid fever. There is no danger resultant on the introduction of small quantities of water at a time, being allowed to siphon off before introducing more. There might be harm from using large enemata, by what is known as "high injections," "rectal and colonic flushings," etc. These methods may be of more advantage used as a douche. There have been advocates

of the use of large enemata of water in typhoid fever. The procedure has been warmly advocated by Schnell and Hensel²—Meseritz. These methods have been found to be especially of value in the early stages of typhoid fever. Despite the glowing eulogisms which this procedure has received, the introduction of large enemata (stretching the rectum and sigmoid flexure) has produced great weakening. This is not surprising when the fatigue attendant on the effort to expel from two to four pounds weight of water is remembered. With precautions with the technique already described, and with variations in temperature and time of treatment suited to each case, the rain or needle douche procedure will have decidedly potent effect in removing from the colon the toxin and contagious materials and in restoring the circulation. While it can not be definitely stated that duration of the disease is shortened, still there is such an improvement in the lassitude, delirium, pyrexia, and other constitutional expressions of typhoid fever, and such a lessening of complications, that the value of the procedure is demonstrable to any one employing it. After a careful practical study of the methods in vogue during the past decade I consider this method of colonic lavage of most value. The treatment is contraindicated in cases where dilated heart or other grave cardiac lesions exist. In severe proctitis and sigmoiditis very hot water sometimes acts as an irritant to the intestinal walls. Here water at the room temperature is preferable. Except in acute diseases—for the immediate physiologic action indicated even then only if there be proctitis—damage will not result unless the treatment be continued too long. In cases of marked arteriofibrosis, when danger from hemorrhage may result from the employment of any active procedure, lavage is contraindicated, as also in advanced tuberculosis, as well as in cirrhosis in which the conditions of the vessels may produce hemorrhage on slight strain. These contraindications are such as will occur in individual patients rather than in particular types of disease. They are therefore such as must be formulated by physicians as to the therapeutics of any patient.

In the treatment of the colon by water or air, single or double recurrent tubes are employed, according to the object to be obtained. One with but one opening at the end is useless for colonic lavage. The tube I have devised for this purpose has a caliber of 23 A. or 35 F., and is one meter long. The end is tapered and the edges of the opening are beveled. On either side of the tube is a row of four small openings; above is a large side opening with sunken eyes, to prevent irritation in introduction of the tubes. The distance from the end of the tube to the end of the uppermost opening is 1¾ inches. The advantages of the tube are: The rapid and immediate return of the water injected, the absence of danger of trauma of the mucous membrane by siphonage, and a more equable distribution of the water, a matter of importance in the introduction of food or in local medications as well as in lavage. The double recurrent tube and "needle douche," which has been previously described by me, is indispensable when prolonged irritation or lavage is needed. It is of value, as has been pointed out by Treves, Herschell, and Gillespie, in impaction as well as in obstruction from any cause. It is also useful in appendicitis. The sprinkler at the end of the tube is of value in atony of the colon and wherever hot or cold water is indicated as a spray, "needle" douche, single or alternating. The "needle" or "rain" douche or "sprinkler" has been employed for many years, in the treatment

² N. Y. Med. Jour., Sept. 2, 1893; Allgemeine Med.-Zeitung, 1896.

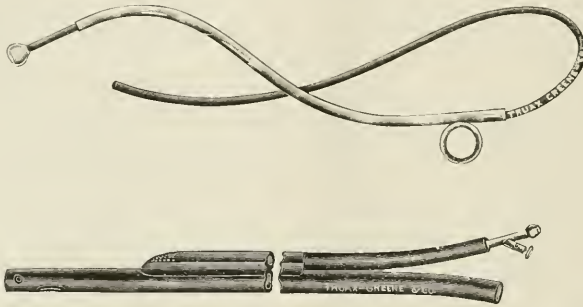
of gastric and intestinal disorders. Up to 1894, when I first presented this procedure to the profession, no proper method suited to emergencies and destitute of disadvantages when carefully employed was in use for douching the stomach and intestines. There was a method which employed a single tube with a large opening and several smaller openings which was denominated a "stomach douche." The disadvantages and lack of efficiency of this procedure have already been pointed out.

The "needle" or "rain" douche admits of being turned into an electrode by introduction of a gyromele cable, thus producing a combined recurrent rain douche, with electric addition. This procedure has been employed by me for years with benefit, in the treatment of the stomach.

It will often be found difficult to pass the sigmoid flexure, when this becomes necessary, with the ordinary rubber tube, as it is not adapted to this purpose. The passage around the colon, even as far as the

pressed air is introduced through a double tube into the colon. When the latter is distended, the air is permitted to escape through the outlet tube. Air heated to 55 C. reaches as far as the cecum. The air can, at need, be so medicated with menthol, clove-oil, etc., as to apply the method of nebulization to the bowel. The chief value of this is relief of atony through stimulation, with resultant benefit thereby to constipation consequent on the atony.

Like all other organs of the body, the intestine has its own system of nerves responsive to peripheral influences from its contents. These, as Langley has lately shown, react differently and independently from the general system of peripheral nerves. They require local stimulation as well as systemic in cases of atony. Hence abdominal massage can not fulfil all the claims made for it in this particular. To act on these nerves the bowel requires massage from the mucous surface. This is best accomplished by the gyromele or revolving sound adapt-



cecum, is now practicable with my colonic sound and irrigator. This consists of a double curved metallic tube about sixteen inches in length, of such design and construction that it may be passed through the sigmoid flexure. The tube not only serves for the return flow of fluids injected into the colon, but also as a sheath for the introduction of a flexible, hollow metallic cable, which is a portion of the instrument. This cable, at its distal end, has a perforated olive-shaped head which serves as a guide for passing the sound. The cable is hollow and may be employed for colonic distension. If this be done during the passage of the sound, the further introduction of the latter is assisted. The position of the cable tip can be determined by palpation, especially if the cable be rotated. The latter can also be employed as an electrode when necessary, and is of value as an adjuvant in both medicinal and dietetic treatment of the colon.

A frequent personal idiosyncrasy prevents introduction of water, especially hot water, into the colon. Its introduction is sometimes followed by collapse. The general atony of the bowel resultant on the enema habit is a comparatively minor though unpleasant expression of this condition.

In treatment of the colon, especially when atony exists, the objects are: application of heat, distension with resultant contraction and peristalsis, the last acting as a gymnastic exercise of the colon. To avoid the untoward effects of water, air may be employed. If needed the air can be heated by the methods described at the last session of the British Medical Association.³ Com-

ed to this purpose. Through the cable of the gyromele electricity may be added to vibratile massage. The flexible cable with the sponge attached is easily slipped into the bowels. The cable and sponge are rotated by a small drill. The cable can be readily turned into an electrode, placing the indifferent electrode on the abdomen. According to Herschell (*Constipation*, 2d Ed., 1899) this gyromele can not injure the bowel, nor is it necessary to inject previously with water. Well wetted and soaked, the sponge easily passes the sphincter and is readily pushed as far as the sigmoid flexure.

My conclusions are: Massage, systemic or abdominal electrization, while not destitute of good effects, achieve but partial success. The facts already cited as to the benefit of massage applied to the bowel's mucous membrane are peculiarly applicable to electrization, which can be applied to the mucous membrane of the bowel, as far as the colon is concerned. A large area can be reached through the cable and irrigator by the method already described.

Space does not permit the report of experiments, and observations on medical and dietetic treatment through the colon. These are reserved for a future communication.

THE PARIS millionaire philanthropist, Osiris, is building for his friend and physician, Paul Segond, a gynecologic pavilion in the gardens of the Salpêtrière Hospital. The *Figaro* describes it as presenting the appearance of a beautiful country villa, the abode of peace and happiness. It will undoubtedly be a model in every respect.

³ Turck: Pneumatic Gymnastics, etc. *British Med. Jour.*, No. 1974, p. 1:228.

PROTOCOLS OF MICROSCOPIC EXAMINATION
OF SEVERAL GASSERIAN GANGLIA.*

BY LEVELLYS F. BARKER, M.B.

BALTIMORE, MD.

(Continued from page 1041.)

1. *Control from Autopsy 1466: Ganglion semilunare sinistrum.* (From a man 39 years old, dead of chronic interstitial nephritis, arteriosclerosis, fibrous myocarditis and military tuberculosis of both lungs, with right-sided fibrinous pleurisy. No disease of the ganglion was suspected.) Formalin hardening and paraffin embedding were used and serial sections stained by various methods. Nerve-cells are present in normal numbers, the cells larger than the average, generally rounded or oval in shape, and they fill up the capsular spaces. In many of the sections there is a distinct group-like arrangement, several cells being closely crowded together. In some of these groups no capsular cells can be made out around the individual members of the group. The nuclei of the cells are as a rule centrally placed. The nucleoli are large and deeply staining; the nucleus itself is often fusiform or spindle-shaped, sometimes round, the alteration in shape being probably due to the fixation. The nucleus in Nissl preparations stains of a light blue tint. Tigroid is abundant in the cell protoplasm, chiefly in the form of rather minute masses. Some of the cells contain large masses of yellowish so-called "pigment substance" quite like that seen in the ventral horn cells of the spinal cord. Rather more of the cells show a brownish black, or almost black, pigmentation, this black pigment being arranged sometimes at the poles of the cell, sometimes in the form of a circle around the nucleus, sometimes in crescentic masses in the cell body. The cells vary in size and shape, large ones predominating. In a few cells the tigroid is scanty about the nucleus, but in the majority it is very evenly distributed throughout the cell body. A number of concentric bodies the size of nerve-cells and some larger, some smaller, are present. They are situated sometimes close to small nerve-cells, apparently crowding them. There is no change in the appearance of the capsular cells. They are not numerous and are for the most part flat and long-drawn out. The connective-tissue about the ganglion shows no alterations. The blood-vessels are not thickened.

2. *Control from Autopsy 1476: Ganglion semilunare dextrum.* (From a colored woman aged 65, dead of epithelioma with multiple visceral metastases. No disease of the ganglion was suspected.) The nerve-cells vary somewhat in size, but on the whole are tolerably uniform. They are distributed evenly in parts of the ganglion, in other parts they are arranged in definite longitudinal strands of from four to seven cells wide. The cells fill up the capsular spaces. The group-like arrangement met with in the ganglia of Autopsy 1466 is not seen here. The nuclei are nearly all centrally placed and on the whole stain normally, although the nuclear substance takes a slightly bluish tint in Nissl preparations. A number of the cells contain the black pigment mentioned. Very few contain the yellow pigment. The amount of tigroid varies in different cells, some staining much more deeply than others. The tigroid is chiefly present in the form of fine granules. At the periphery of some of the cells there are large bleb-like vacuoles in the cell protoplasm. There are also clear spaces devoid of tigroid at the edges of some of the cells. These may be identical with the *Vacuolen* of v. Lenhossek and the discs of Huber. The capsular cells are often irregularly arranged in the periphery, being higher and deeper staining at one or both poles of the cell. In a great many of the cells, however, they are flat and regularly arranged. Only occasionally is there a capsular space not filled up by the cell. A few cells are seen in which there is marked retraction of the nerve-cell body, so that it forms a small crescent at one edge of the capsular space, the rest of this space being either empty or partially filled with

a fine granular deposit which looks like coagulated albumin. Scattered through the ganglion are a few foci where small round cells have accumulated. These cells are nearly all small mononuclear elements of the lymphoid cell type. The majority of them are in the tissue between nerve-cells, but some of them are found invading the capsule and capsular space of nerve-cells. They may be between the capsule and capsular space of nerve-cells. They may be between the capsular cells and the membrana propria on which these rest; occasionally a garland of them is met with between the nerve-cell body and the capsular cells, and sometimes they are actually within the cell bodies of the capsular cells.

This ganglion contains very few of the concentric pale bodies. The connective tissue around the ganglion is not increased in amount. The walls of the blood-vessels show no marked alterations. Along some of the smaller arteries and veins cut longitudinally there is a distinct increase in the number of cells in the tissues just outside. These cells are typical plasma cells of Unna's type.

3. *Control from Autopsy 1480: man aged 39 years who died in status epilepticus following chronic traumatic meningitis; chronic nephritis, edema of the lungs.*

Ganglion semilunare dextrum: No disease of the ganglion was suspected. Nerve-cells are present in normal numbers and distribution, nearly all rather small, very few of the large type being present. There are a good many concentric bodies. Some of them are pale, some of them stain deep, dark blue in hematoxylin.

The nuclei are centrally placed. Most of them are round, but some are oval, and a few have jagged edges. The cells are rather pale, the tigroid being scanty. A number of cells show the brownish-black pigmentation; more contain a yellowish pigment. The capsular spaces are uniformly well filled by the nerve-cells. The capsule cells are numerous. An occasional nerve-cell is found far out in the trunk of the nerve. No increase of connective tissue is demonstrable. The blood-vessels are normal. There are no areas of round-cell infiltration or of plasma cell accumulation.

Ganglion semilunare sinistrum: Sections of this ganglion are similar in appearance to those of its fellow of the opposite side.

4. *Gasserian Ganglion from case of cerebrospinal meningitis:* The ganglion and nerves are swollen and bathed in pus. The latter consists chiefly of polymorphonuclear leucocytes, but there are also many small mononuclear leucocytes and a number of larger phagocytic cells containing several of the smaller cells within their protoplasm. The nerve-cells are present in normal numbers. The actual single nerve bundles and masses of ganglion cells are scarcely invaded by the purulent process, the pus lying between the individual nerve bundles and at the periphery of the various ganglion cells and masses. The cells stain intensely in Nissl preparations, and the tigroid is abundant. The capsular spaces are well filled. The nuclei as a rule are centrally placed, and they are distinctly swollen. The nucleoli are present and sometimes swollen; no evidence of general chromatolysis can be made out, the most marked alteration being the extreme swelling of the nucleus. Sometimes the nucleus is so swollen as to fill up most of the cell, leaving a rim of deeply staining protoplasm peripheral to it. In one mass of ganglion cells thus altered, the nuclei are excentrically placed, and in some of the cells the tigroid has almost disappeared. It is probable that the nerve-fibers connected with these cells have been injured in the inflammatory process. The blood in the blood-vessels shows a slight leucocytosis; the walls of the blood-vessels show no demonstrable alterations.

5. *Experiment on a dog's Gasserian ganglion.* (Operation by Dr. H. W. Cushing, with evulsion of the N. maxillaris on the right side): The right and left semilunar ganglion were fixed in alcohol at the end of fifteen days, with paraffin embedding, and staining by Nissl's method. In the ganglion on the right side are rows of ganglion cells chiefly situated in the middle of the ganglion, which show the typical "reaction at a distance;" that is, displacement of the nucleus to the side of the cell with chromatolysis. Where the changes are most in-

*Read in a Symposium on the "Fifth Nerve in its Neurological and Surgical Relations," before the College of Physicians of Philadelphia, April 20, 1900.

tense, nearly all the cells have undergone alteration. At the peripheries of this intense area altered cells are scattered in among healthy cells.

6. *Ganglion semilunare dextrum in case of tic douloureux.* (Removed by operation, by Dr. H. W. Cushing, Jan. 15, 1900): The ganglion has been removed entire along with the stumps of the N. ophthalmicus, N. maxillaris, N. mandibularis and N. trigeminus. In Marchi preparations of the N. trigeminus a number of the fibers are markedly swollen and show diffuse fine black droplets. Similar changes are found in the N. ophthalmicus and N. maxillaris, though not to so marked a degree. There is, however, no outspoken typical Marchi degeneration in any of the nerves. The nerve-cells in the ganglion do not appear to be diminished in number; the size of the cells varies; there are rather more of the very large ones than normal. A great many of the cells are irregularly retracted into diffusely staining chromophile masses, leaving wide capsular spaces. Some of the cells not contracted are paler than normal, having less tigroid in the Nissl preparations. Still, a good many of the cells appear to have the normal amount of tigroid. The peripheries of the cells are irregular. The nuclei are, as a rule, centrally placed, round and contain normal-looking nucleoli. Yellow pigmented cells are abundant. Black pigmented ones are far less numerous. Concentric bodies are abundant in this ganglion, some of them being very large. The changes in this ganglion are very much less marked than in the next case. There is no increase of connective tissue. No vascular changes are to be made out, and no accumulations of foreign cells in the ganglion. The capsular cells are for the most part low and flat.

7. *Ganglion semilunare sinistrum in case of tic douloureux.* (Removed by operation, by Dr. H. W. Cushing, Jan. 17, 1900. Surgical number, 2907): The ganglion was cut into serial sections, some of them being stained by Nissl's method; others by hematoxylin and eosin, others by Van Gieson's method. The ganglion has been removed *in toto*, but is somewhat lacerated. The nerve-cells are generally normal in size, though some of the cells look swollen. A large number of the cells are irregularly retracted, leaving a wide capsular space, portions of the cell protoplasm sticking out like prongs to the periphery. The cells stain very irregularly; a large proportion of the cells are chromophile in the sense of Nissl, that is to say, they stain, by Nissl's method, a deep, dark blue color so that it is very difficult to make out anything of their internal structure. The nucleus can not always be seen, owing to the dark staining, but sometimes it can be made out and then is usually centrally placed. Throughout the deeply staining blue substance, pale, vacuole-like areas can be made out, and masses of yellow pigment are also present in these chromophile cells. Of the cells which are not chromophile, a large proportion are very pale, almost devoid of tigroid, the little that is present being situated at the peripheries of very small pale areas scattered through the ground substance of the cell body. The nuclei of these cells vary in size and shape; some of the nuclei look swollen; others look contracted. Nucleoli are frequently absent from the cells, although in many they are present and are normal in size and position. In a few the nucleolus is seen outside the nucleus, lodged in the cell protoplasm. In some there has been fragmentation of the nucleus, two and three pieces of the latter remaining side by side in the cell body. The pale cells in hematoxylin and eosin preparations show a delicate net-work-like appearance stained in hematoxylin. Scarcely any normal-looking cells exist. Cells with black pigment and with yellow pigment are present, the latter being more abundant than the former.

There are a few concentric bodies. There is no increase of connective tissues about the ganglion demonstrable. The small blood-vessels in the ganglion are dilated; there is no round-cell infiltration.

OPERATION IN TIC DOULOUREUX.

A few convictions with regard to operative measures in tic douloureux may here find expression:

1. If a ganglion be entirely removed there need be no fear of a return of pain from irritation of the stump of

the N. trigeminus left behind, for all of the axons of this stump will degenerate to their terminations in the pons and medulla, down as far as the cervical cord. The end of a nerve in an amputation stump is not analogous.

2. Complete removal of a Gasserian ganglion utterly abolishes the possibility of calling forth sensations in consciousness by applying stimuli to the domain of peripheral distribution of the nerves connected with the ganglion of the corresponding side; retention of sensation on peripheral stimulation after operation indicates incomplete removal.

3. If pain persists, paroxysmally or continuously, after complete removal of the ganglion, or after evulsion of the N. trigeminus from the pons, the ganglion being left *in situ*, a lesion of the central neurons—of the second or of higher orders—of the trigeminal afferent conduction path is indicated.

4. In *tic douloureux* due to disease of the peripheral set of trigeminal sensory neurons, relief should be as complete and permanent by cutting the N. trigeminus between the ganglion and the pons and evulsing the central end without removal of the ganglion, as when the ganglion itself is excised.

PATHOLOGIC REPORT ON TWO OF THE GASSERIAN GANGLIA REMOVED BY

DR. CUSHING.*

BY WM. G. SPILLER, M.D.

FROM THE WILLIAM PEPPER LABORATORY OF CLINICAL MEDICINE,
UNIVERSITY OF PENNSYLVANIA (PHOEBE A. HEARST FOUNDATION).
PHILADELPHIA.

The first ganglion was received hardened in Müller's fluid. Portions of the three peripheral divisions were cut separately from the ganglion, and were studied in transverse and longitudinal sections. The body of the ganglion was cut in the longitudinal direction, so that the sensory root and the second and third branches were obtained in the same sections and the relations of the parts could be studied. The stains employed were ammonium-carmin, hematoxylin (methods of Weigert and Delafield), acid fuchsin, osmic acid (method of Marchi) and the Rosin stain.

First Division: Weigert's Hematoxylin Method.—In examining a transverse section in which the decolorization has not been pushed very far and the connective tissue is stained a deep brown—a fair test of the degree of decolorization—one is impressed by the relatively few nerve-fibers which stain a deep black. In each nerve bundle many deeply stained nerve-fibers are found, but the majority of them stain gray or brown. The black fibers are naturally more conspicuous than those faintly stained. This imperfect staining is an indication of alteration in the composition of the medullary sheaths by which the normal chemical reaction with hematoxylin is prevented. Not every fiber, even in a normal nerve, stains deeply with hematoxylin, possibly because the medullary sheaths of normal nerve-fibers differ in composition, and degeneration and regeneration are constantly occurring in the same bundle; but such imperfect staining as is seen in this division of the ganglion is probably due to pathologic change. With the Weigert hematoxylin method not much swelling of the medullary sheaths can be detected, although some of the sheaths are swollen. When the decolorization is pushed so that perfect differentiation is obtained, chains of black dots, such as I have described elsewhere,¹ are seen in

*Read in a Symposium on the "Fifth Nerve in Its Neurological and Surgical Relations," before the College of Physicians of Philadelphia, April 20, 1900.

transverse sections of the medullary sheaths. This is indicative of disintegration of the myelin. Nerve-fibers do not stain evenly in normal sections, but we do not find such a circle of dots in most fibers in normal sections.

When the ammonium-carmin and Delafield's hematoxylin are employed the axis-cylinders are not colored very deeply. Some of the medullary sheaths are considerably tumefied, but most are of normal size. (Fig. 1.) Occasionally within a tumefied medullary sheath there is a large and irregular pink mass, the remains of an axis-cylinder, but usually the axis-cylinder can not be detected within a swollen medullary sheath. Many nerve bundles seem to be perfectly normal, and the diseased fibers are confined to certain bundles. A much diseased bundle may be found directly in contact with an apparently normal one—possibly there is evidence in this selective tendency of the process for the theory of a cellular origin of the disease. The axis-cylinders are a little more prominent by the Rosin method, and some are distinctly enlarged.

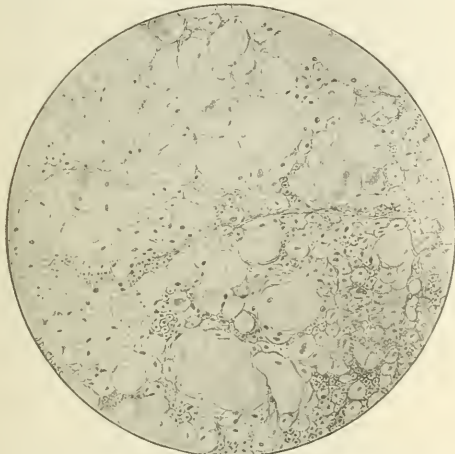


Fig. 1. Oc. 3; Ob. 7. First division by the carmin stain. Many of the axis cylinders and medullary sheaths are greatly swollen.

In longitudinal sections of the first division the tumefaction of certain of the medullary sheaths is very evident, and the axis-cylinders are frequently found altered. In some fibers a transverse cleavage of the axis-cylinders has occurred, and in others the axis-cylinder is swollen and of irregular shape. (Fig. 2.) The change in these is not as pronounced as in one of Dr. Keen's² cases, studied by me. Often the nerve-fiber has a distinctly fusiform shape, and in the enlarged portion the medullary sheath appears very granular.

Second Division: Weigert's Hematoxylin Method.—The nerve-fibers stain more intensely than those in the first division, but in some distinct tumefaction is seen, and the swollen fibers stain in black or light gray or brown, according to the degree of tumefaction, and have rather indistinct outlines when the tumefaction is marked. Some swelling of the medullary sheaths and axis-cylinders is seen by the ammonium-carmin stain. The axis-cylinders possibly take the carmin more deeply than do those of the first division. The blood-vessels do not appear to be greatly altered. The second division, stained by the Marchi method and cut longitudinally, shows a considerable accumulation of black dots in the nerve-fibers. This reaction will be mentioned further on

in the description of the body of the ganglion. The tumefaction of medullary sheaths and axis-cylinders is not so evident in longitudinal sections as in those of the first division. In these sections also the vessels appear nearly or entirely normal.



Fig. 2. Oc. 3; Ob. 1-12 immer. Swollen and degenerated axis cylinders within the ganglion (first division).

Third Division.—The description of the second division answers for the third, and in the latter also the tumefaction of certain medullary sheaths is distinct, and these swollen fibers stain gray with Wiegert's hematoxylin method. In the employment of the ammonium-carmin a tumefaction of some medullary sheaths with ab-

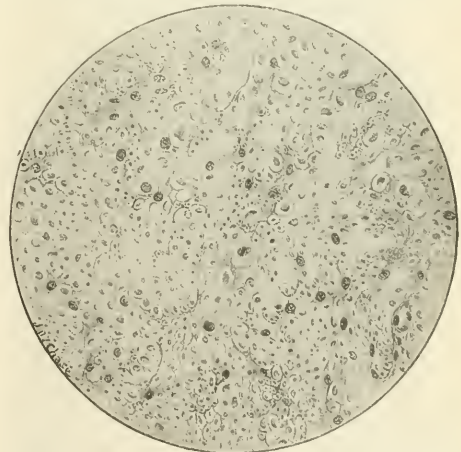


Fig. 3. Oc. 3; Ob. 7. Sensory root by carmin stain. Many of the axis cylinders are swollen. Compare this degenerated portion of the sensory root with the normal portion of the same root shown in Figure 4.

sence of axis-cylinders is seen, and in other parts distinct swellings of the axis-cylinders is evident.

Sensory Root.—Many moderately swollen axis-cylinders are found in transverse sections of the sensory root stained with ammonium-carmin. (Fig. 3.) The tissue shows many open spaces, and as the root macroscopically gave evidence in its torn appearance of having been pulled upon, these breaks in the tissue might be regarded as artefacts. The swollen axis-cylinders are found only in this loose tissue, and the tumefaction of axis-cylinders could hardly be produced by surgical manipulation fol-

lowed by immediate hardening of the tissue. Some of these spaces resemble those that are found when nerve-fibers have degenerated and dropped out, and this loose tissue may be regarded, in part at least, as the result of a pathologic condition. The swelling of the axis-cylinders is not attended by a proportional swelling of the medullary sheaths.

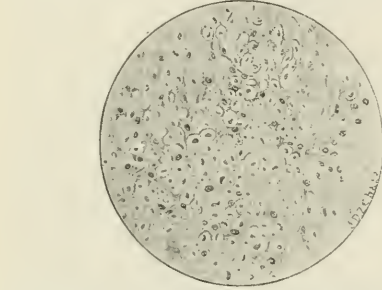


Fig. 4. Oc. 3; Ob. 7. Sensory root, normal portion. This is drawn with the same magnification as is the degenerated portion and should be compared with the latter (Fig. 3). In Figure 4 a smaller portion of the field has been drawn than in Figure 3.

The Ganglion Proper.—A space is seen between most of the ganglion cells and the surrounding capsules, and this is evidently due to the hardening process. Some nerve-cells stain deeply with the carmin, others more faintly—a reaction that is seen in normal tissue. The

found in normal nervous tissue in moderate amount when the Marchi stain is used. The sensory root does not exhibit the distinct evidence of degeneration seen in the distal end of the ganglion and the interior parts, and yet one might hesitate to say that this root is absolutely nor-

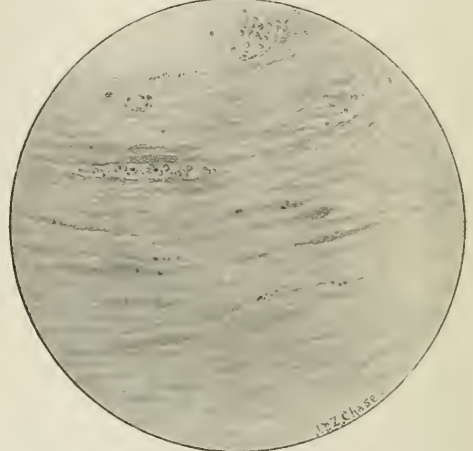


Fig. 6. Oc. 3; Ob. 5. Sensory root, normal, by Marchi's method.

mal. (Fig. 6). Numerous concentric bodies—brain sand, concentric concretions, etc.—are found within the ganglion, but I have found these in many of the Gasserian ganglia of man that I have studied, and do not regard them as necessarily indicative of disease of the ganglion. (Fig. 7.) The motor root was not obtained.

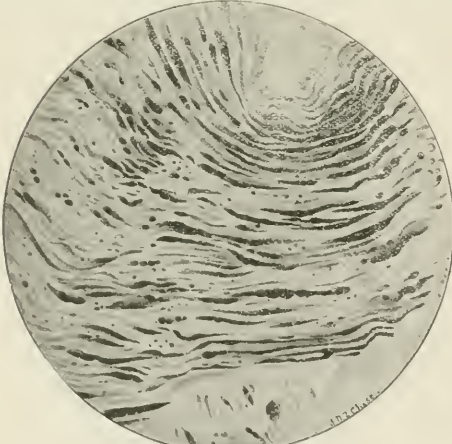


Fig. 5. Oc. 3; Ob. 5. Degenerated nerve fibers within the Gasserian ganglion. Method of Marchi.

pigmentation of the cells is not excessive, and in almost every one the nucleus and nucleolus can be seen. The intercellular tissue can hardly be regarded as increased in amount. The vessels are not strikingly abnormal, and the small vessels have delicate walls. Some tumefaction of axis-cylinders and medullary sheaths is seen in certain parts, but the changes within the ganglion, as studied by the carmin stain, are not very intense. The Marchi method gives most interesting results. The medullary sheaths of many of the fibers passing to the peripheral branches show distinct degeneration (Fig. 5), and a similar degeneration is found within the ganglion. The sensory root presents a marked contrast; it is not entirely free from black dots, but black masses are



Fig. 7. Concentric bodies found in the Gasserian ganglion.

mal. (Fig. 6). Numerous concentric bodies—brain sand, concentric concretions, etc.—are found within the ganglion, but I have found these in many of the Gasserian ganglia of man that I have studied, and do not regard them as necessarily indicative of disease of the ganglion. (Fig. 7.) The motor root was not obtained.

SUMMARY OF THE PATHOLOGIC CHANGES.

1. Tumefaction of medullary sheaths and axis-cylinders in certain bundles only, in all three divisions of the ganglion. 2. Tumefaction of axis-cylinders in a portion of the sensory root. 3. Numerous spaces in a portion of the sensory root, possibly resulting in part from degeneration of nerve-fibers. The sensory root, therefore, is not normal, and the condition in this root renders a return of the pain possible. 4. Quite intense degeneration by the Marchi method in the center and peripheral end of the ganglion and its peripheral divisions—a questionable change by this method in the sensory root.

The blood-vessels are not distinctly diseased, and no evidence is offered that the diseased condition of the nerve-fibers resulted from vascular degeneration. Neither do the nerve-cells, by the stains suitable to the method of hardening employed in this case, offer the slightest foundation for the theory of a cellular origin of tic douloureux.

MICROSCOPIC EXAMINATION OF THE SECOND GASSERIAN GANGLION REMOVED BY DR. CUSHING.

A description of this, if given in detail, would be very similar to that of the first ganglion.

First Division.—In some bundles the medullary sheaths are much swollen, and here and there a swollen axis-cylinder is found, especially in fibers cut longitudinally. An axis-cylinder may appear to be normal in one part of its course and swollen in another. The greater portion of the first division appears to be normal.

Second Division.—The condition of the second division is very similar to that of the first division. Some of the medullary sheaths and axis-cylinders are moderately swollen, but the greater number of nerve-fibers are normal. The small vessels contained within this division of the ganglion have thickened walls. The Marchi stain shows no distinct degeneration. This may partly be due to the hardening in formalin, for while this stain may be employed with formalin-hardened preparations the results are sometimes less successful than with Müller fluid preparations.

Third Division.—The third division is more altered than either of the other two; more nerve-fibers are diseased and the tumefaction of the medullary sheaths and axis-cylinders is greater. No alteration is detectable by the Marchi method.

Ganglion.—Most of the nerve-cells appear to be fully or nearly normal, but some are deeply stained and much shriveled. (Fig. 8.) The cells of the ganglion vary normally in the intensity of their coloring and size, but in the sections of this ganglion the cells which are shriveled are the ones most deeply stained by thionin. The ganglion was hardened in formalin soon after removal, and these shriveled cells can hardly be regarded as artefacts. Most of the cells extend to their capsules without leaving pericellular spaces, and the peripheral portion of the cells contains fewer chromophilic elements than the central portion, and these elements next to this clear peripheral zone are larger and more deeply stained than the others. We know, from v. Lenhossék's description of the cells of the spinal ganglion, that these cells of the Gasserian ganglion are normal. The nucleus is usually very sharply defined and central and the nucleolus deeply stained, but some nerve-cells are greatly shriveled and deeply stained, and in some the nucleus is peripheral. Some cells are also deeply pigmented.

Sensory Root.—The sensory root is normal.

So far as I know the condition of the sensory root of a ganglion removed for trifacial neuralgia has been reported in only two cases—one by Krause, and one by my-

self. Krause found the sensory root diseased and I found it normal. In Krause's case pain returned on the other side of the face. We can not say whether or not the occurrence of pain on the side from which the ganglion was not removed was caused by the diseased sensory root of the opposite side. In Dr. Cushing's first case the axis-cylinders of the sensory root were not normal. The tumefaction in these fibers was not excessive, and yet it was sufficient to lead me to believe that a recurrence of the pain in this patient is possible. I have examined the sensory root in three ganglia removed on account of prosopalgia, and only in this one case have I found this root diseased. When we remember that the sensory root of the fifth nerve passes to the sensory nucleus in the tegmentum of the pons, and that many of its fibers descend as the spinal root of the fifth nerve so low as the upper part of the spinal cord, we see that its fibers are distributed over a large area, and that when this root is diseased the diseased fibers are distributed over a considerable extent of the central nervous system. When the Gasserian ganglion is removed the cells in which this root arises are destroyed and the root probably degener-

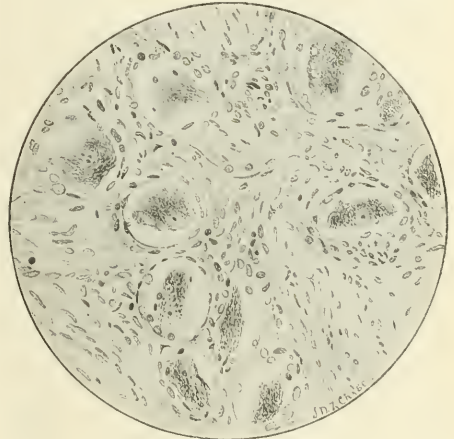


Fig. 8. Oc. 3; Ob. 7. Atrophied nerve cells within the Gasserian Ganglion (method of v. Lenhossék).

ates throughout its length, and it probably loses the power of transmitting any form of irritation after removal of the ganglion. If the root is found diseased at the time of operation, it indicates that the degenerative process has extended centrally beyond the Gasserian ganglion, and the danger of a recurrence of pain is probably greater than when the root remains normal. It occurred to me that possibly the moderate tumefaction of the axones in the sensory root in Dr. Cushing's first case was produced by pulling on the root at the time of removal. The normal condition of the sensory root in the other two cases examined by me hardly permits such a theory. I have taken the sciatic nerve from a cat soon after death, and have forcibly pulled it apart, placed it in Müller's fluid, and examined the axis-cylinders, but I was not able to find the tumefaction of the latter. I fear, therefore, that we must regard the sensory root of Dr. Cushing's first patient as diseased.

In the second ganglion removed by Dr. Cushing the nerve-cells are diseased. This ganglion was placed in formalin and in its preparation the thionin stain of v. Lenhossék could be employed. V. Lenhossék has given

such an admirable description of the cells of the spinal ganglion in man that we know the appearance of cells of a normal Gasserian ganglion very well. Most of the cells in this second ganglion are normal, but many are intensely shriveled and deeply stained. It is difficult to believe that these cells are artefacts. The degenerated condition of these cells does not prove that the primary lesions of trifacial neuralgia are in the Gasserian ganglion. The diseased cells are not confined to any one part of the ganglion. Once of twice before I have referred to the investigations of Lugaro and others. These observers found that the cells of the spinal ganglion belonging to the sciatic nerve were much altered when this nerve in the dog was cut, but that no distinct changes in the ganglia were present when the posterior roots or the posterior columns of the cord were cut. Lugaro concluded that the cells of the spinal ganglion are altered in lesions of their peripheral processes, but not in lesions of their central processes. The peripheral process of the nerve-cell in the Gasserian or spinal ganglion has been compared with the dendritic process of the nerve-cell of the spinal cord, and the behavior of the nerve-cell of the ganglion after division of its peripheral process as compared with its behavior after division of its central process indicates that these two processes are of different functional importance. With these facts before us the alteration of many of the nerve-cells in Dr. Cushing's second case is no proof of the primary lesion being in the ganglion. The second division of the nerve had been resected six years previously. Whether the cellular alteration was due to this I can not say, but it is not probable that it was. In this second case the sensory root was normal. We should naturally expect to find many of the nerve-fibers of this root diseased where many of the cells of the Gasserian ganglion are diseased, but nerve-cells may be more altered than the axis-cylinders arising from them.

A Gasserian ganglion removed on account of trifacial neuralgia and examined by Head,³ by the Nissl method, was found to be normal, and the nerve-cells so perfect that they could be used as standard specimens of normal staining of the cells of the ganglion. It is a pity that Head does not give the details of this case. With this exception I know of no published report of the examination of the cells of the Gasserian ganglion by Nissl's method in a case of trifacial neuralgia.

In Dr. Cushing's first case the blood-vessels were not distinctly diseased. This would seem to indicate that in this case at least the process was not primarily vascular.

Recently two cases have been reported in which the Gasserian ganglion was removed and pain returned on the same side of the face (Friedrich,⁴ Garré⁵), but fortunately these cases are exceptions.

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A PATIENT—a young girl—in a French sanitarium slipped into the water-closet and bolted the door on her special attendant, then hung herself with a strip of cloth. Her father sued the physician in charge of the sanitarium for negligence and, according to the *Gazette Méd. de Paris*, the courts have awarded him the amount of his claim, \$2000. He stated that he had called the physician's attention to the possible dangers of these retiring rooms, as his daughter had tried to commit suicide before.

SURGERY OF THE FIFTH NERVE FOR TIC DOULOUREUX.*

BY ROBERT ABBÉ, M.D.

SURGEON TO ST. LUKE'S HOSPITAL,
NEW YORK CITY.

It is the uniform experience of surgeons that there is no more fearful pain for a patient to endure than the persistent recurrence of what one of my patients always called "crashes of pain" in the side of the face. Its immediate, though transient, relief by simple section of the superficial nerves, is so much like the magic of art that it has been given as wide a trial as it ever should have. Brodie's reference to the "notorious failure of nerve section," in permanently relieving tic douloureux, echoed by Velpeau, Stromeyer and others of that time, is more emphasized to-day by accumulating experience. The accepted explanation of its failure, in that reunion of nerve channels is effected by natural laws of repair, has led to so many attempts to overcome this mischievous act of nature that we may now consider the success and failure of each and learn their relative values.

If the cause of pain is central, we may rightly assume that operation on the superficial nerve will not destroy the pain sense of the patient—hence it is useless. If the cause be peripheral, we must so far destroy the communicating channel as to prevent bridging over the gap by any reasonable reparative action. Hence the value of extensive resection of the nerve seems to be in direct proportion to its extent.

As the resection of the infra-orbital part of the second branch was replaced by Langenbeck's division on the floor of the orbit, and resection anterior to that, so the latter was displaced by Carnochan's more extensive resection from the foramen rotundum to the cheek. This latter has held its own with more recent methods and may now be fairly considered alongside of the Salzer and intracranial methods.

To speak of the Carnochan operation as "having been done" does not rightly justify the addition of many so-called cases in a statistical list, for like other difficult and dangerous operations it is possible to half do it by a bungling method, poor assistants; bad light, inadequate instruments or encountering very hard, unmanageable, posterior antrum walls.

I have had a case said to have had the operation done before, where I found much of the nerve still remaining. In my own experience I have found considerable inequality in extirpation of the nerve and branches. In judging of the value of methods, all who have had a varied experience may give weight to their personal views. In every field of surgery the statistical method is no more a criterion of value than what I would call the "personal impression" method. I do not hesitate to say, therefore, that the Carnochan operation, thoroughly done, holds a high rank with the deeper and more serious operations, and does not share their gravity.

In emphasizing the value of this operation on one branch only of the fifth nerve, I have often noticed that while the patient has designated the supra-orbital and lower maxillary branches as sharing the neuralgic pain, these two are as a rule at once and completely relieved by operation on the middle branch. Thus we can fairly ascribe much of the pain to reflex effect from some part of one branch to its neighbors. There is also a pain-

*Read in a Symposium on the "Fifth Nerve in Its Neurological and Surgical Relations," before the College of Physicians of Philadelphia, April 20, 1900.

sense, or pain memory, as we may call it, shown in some cases of aggravated and inveterate tic which lingers for a few days in occasional cases, no matter which method of operation has been adopted. Although the majority of operations give instant relief, the patient may complain of the old pain for as long as a week afterward, and then it leaves and he remains cured. This exhibition of persistence of pain I have seen oftener in those who had resorted to morphin. As a rule the morphin habit engendered by tic is entirely dissipated by operation.

My personal experience in operations on the fifth nerve's branches, excluding all those on the inferior dental and on the supra-orbital, includes somewhat more than twenty cases; but of that number only I have notes: intracranial (Hartley's method), 5; Salzer, 4; Carnochan, 11.

Seven patients were 60 years or more, 3 between 50 and 60, 3 were 32 years and 7 from 32 to 50 years of age.

There was but one death, that of a woman 63 years old, with severe tic. She had borne the Hartley operation well, with section and evulsion of the second and third branches. When I was about to close the wound the patient made two feeble attempts to vomit, and breathing and heart action ceased simultaneously. Every effort at stimulating and artificial respiration, even with the Fell-O'Dwyer respirator, failed to resuscitate her.

In reviewing the five intracranial cases, I find most gratifying material to report:

The first patient was a woman of 60 years who had been subjected to a Salzer operation two years before, and had recurrence in three months. The intracranial resection was done with much ease. The second and third branches were seized with forceps and evulsed from the ganglion after section at the foramina and forcing out the stumps. The patient was freed from pain and left the hospital on the eleventh day. Two months later she died of pneumonia.

The second case was a most aggravated one of eleven years, in a woman of 65. I operated it in 1895, by Hartley's method, evulsing the second and third nerves from the ganglion. The woman was at once relieved and remains absolutely free from pain and in good health, approaching five years from the operation (letter received yesterday).

The second patient was a frail woman who had suffered for two years from severe trifacial neuralgia extending even to the neck; the operation was done after the usual Hartley method, and this is the case spoken of previously as a death under anesthesia, from fatty heart or shock.

The fourth, a man, aged 46, had become distracted almost to suicide by inveterate trifacial neuralgia of three years' standing. In July, 1896, I resected the intracranial portion of the second and third branches, between the ganglion and foramina; the operation was suspended on the first day, on account of grave hemorrhage on every side, while exposing the ganglion. The packing was removed the second day and dissection continued; again profuse bleeding and packing of the wound. At the third attempt, excellent exposure of the nerves was obtained, and each being grasped by a broad clamp was cut off and then evulsed from the ganglion, only half an inch being torn out, but with profuse bleeding, which again required packing. When the hemorrhage was controlled, an attempt was made to curette away the Gasserian ganglion, but again bleeding forbid it.

NEW METHOD OF OPERATING.

Fearing that the nearness of the nerve stumps in the canals to the torn Gasserian might allow restoration of function and pain, I interposed a piece of sterilized gutta-percha tissue, more than one inch long and half an inch wide, which more than covered both foramina. This I pressed down by an iodoform-gauze strip, which was continued so as to compress all bleeding. In twenty-four hours—fourth day after initial operation—the gauze was removed, the rubber was seen to be pressed flat on the bone and the brain allowed to settle down on it. Primary union occurred, and now, after four years, the patient remains in perfect health, retaining the rubber as left at operation. The anesthesia in his case is shown in the illustration, from a photograph taken some months afterward, when reporting his case (Surgical Society, October, 1896).



Violent tic douloureux—3 years. Hartley operation; second and third branches excised; rubber tissue interposed. Remains well after 4 years. Dotted surface shows anesthesia; vertical lines, partial anesthesia.

The fifth intracranial case is also one of the same class, but in a woman of 61, who had suffered in the gravest way for twenty-four years. All trigeminal branches were affected and there was tenderness on pressure over the external foramina, with constantly repeated shocks of pain. I did the intracranial operation in July, 1897, and resected only the portions of the second and third divisions, between the foramina and the ganglion. I made no attempt to evulse or disturb the ganglion. The hemorrhage was slight and I carefully interposed a sterilized gutta-percha tissue layer between the Gasserian and bone, so as to more than cover both openings. Primary union of the wound and instant and permanent relief followed. At this date—nearly three years after—I have examined her and find perfect health and no trace of pain. Anesthesia remains as after operation.

Thus, in the five intracranial cases, three remain cured, after the lapse of three, four and five years.

I have operated on four cases after the Salzer method.

The first was a woman of 60 years, operated on in June, 1893, with most satisfactory resection of portions of the second and third branches at the foramina rotundum and ovale. Recurrence of pain occurred in three months, and she was subjected to the intracranial method (Case one).

The second patient, a woman of 50, had been suffering for five years and was relieved for 1½ years after

my operation. Recurrence was in a moderate degree only, and I have never cared to subject her to the intracranial operation, on account of her general weakness and digestive disturbance.

The third case was in a lawyer, aged 32, who had suffered for ten years and had three operations on his inferior branch, by Halsted and Hunter Maguire, with relief a few months only after each. I did a resection of the second and third branches at the foramina retundum and ovale, by a modified Salzer operation, two years since, with instant and permanent relief. I interposed a piece of sterile rubber tissue also in this case, between the resected ends of nerve in the sphenomaxillary fossa, and it remains there after two years.

The fourth case was in a man of 52 years, who had been suffering five years on the right side. A modified Salzer operation was done, with clean excision of a portion of the second and third branches at their exit from the skull. There was immediate relief and he has had not a twinge of pain since then, two years after the operation.

By the Salzer method there were no deaths. By the modified Salzer, adopted in two cases, I found it easy to expose the nerves in the sphenomaxillary fossa, by splitting the temporal muscle fibers vertically, without cutting the coronoid process, simply dividing and depressing the zygoma. When stretched by retractors, ample space was afforded and the coronoid could be lowered by opening the mouth at the same time. Thus the partial ankylosis following the usual Salzer method was avoided.

THE CARNOCHAN OPERATION.

This has been rather a favorite with me and represents 11 of the 20 severe cases operated on. Two patients were 32 years and 4 about 60 years of age; the others ranged between. I have been able to follow 8 of the 11 cases; 1 remains cured after twelve years; 1 after ten years; 1 died after six years, cured; 1 remains cured at five years; 2 remain well after one year; 1 was not relieved even by subsequent operation by Dr. Keen (case reported of Gasserian ganglion); 1 remained well at two years, when he was lost sight of; 3 were relieved and lost to view.

The possibility of thorough removal of the nerve behind the Meckel's ganglion is well shown in the specimen passed around, where the two filaments going to that ganglion are shown.

I have been interested in noticing cases of previous operation for removal of a large branch, that the foramen of exit closes when of no further use. Thus the mental foramen soon wastes to the size of a pin-point after the removal of the inferior dental nerve.

The anesthesia following Hartley's, Salzer's and Carnochan's operations is interesting. The removal of the second and third branches inside the skull leaves the half nose, cheek and upper lip only numb, but not completely anesthetic, as is the rest of the face, owing to a nasal branch of the ophthalmic, which covers the same distribution as the orbital branch of the superior maxillary, which comes off between the external and internal foramina. When the Salzer incision is made, this branch escapes and the nose, cheek and upper lip are often fully sensitive.

In conclusion, my experience leads me to advocate a thoroughly done Carnochan operation, with clean resection of the second branch to the foramen retundum, for most bad cases, even when the first and third branches seem to share the neuralgic shocks. The lat-

ter are usually relieved by operation on the middle branch. If one chooses to do the Salzer, which has some advantages in being less severe than the intracranial and more thorough than the Carnochan method, then I advise a section of the zygoma turned down with skin, and a muscle splitting of the temporal rather than coronoid section. If the intracranial method is adopted, as it must be in many grave cases, I advocate the simple section and limited excision of the second and third branches from the Gasserian to the foramina, and interposition of a piece of sterile rubber tissue, impermeable and non-conducting, adequate to cover both openings. I see no reason for believing that the resection of the Gasserian ganglion is necessary to the thorough severance of nerve connection with the brain. This step may be the greatest element of danger and, unless a tumor of the ganglion exists, is uncalled for. If a tumor exists it seems useless. In most cases of inveterate tic a chronic neuritis exists, usually of the middle branch. Hence the quick and permanent cures which we are able to record by excisions anterior to the Gasserian ganglion. 13 West Fiftieth Street.

NATURAL HISTORY OF TIC DOULOUREUX, WITH REMARKS ON TREATMENT.*

BY CHARLES L. DANA, M.D.

NEW YORK CITY.

If we hope to judge wisely as to how much good certain forms of treatment do for tic douloureux, we must know its natural history, which is not yet very fully understood. For though the disease is common, its origin is often unexplainable and there is none in which so much desperate effort is made to break up the course of the attacks and interfere with the natural symptoms. I have thought, therefore, that I could serve the purposes of this discussion best by devoting a good part of my time to this side of the subject.

It is one of the advantages of somewhat mature years that we are able to take a wider view of the course and of the history of the diseases as shown in our patients, and I have been able to make a close study of a number of my own cases from the beginning to the end. What I have to say now is based very largely on the recorded history of over fifty cases of tic douloureux, some of which I have had under observation for from five to ten years, and most of which I know the entire history of from the outset.

Pathogenesis.—Tic douloureux is, as I understand it, a degenerative neuralgia occurring in the great majority of cases, at or after the middle period of life and due to a degenerative change, sometimes amounting to neuritis, in the nerve and its ganglion, and probably in the blood-vessels which supply it. It attacks women¹ about twice as often as men, taking the whole period of the disease, but it rarely attacks men before the age of 40. I have seen only three cases of this kind of tic douloureux in a man under that age, whereas there have been ten women in whom the disease began under that time. Thus, it may be said to be at least three or four times as frequent in women under 40 as it is in men.

There is rarely any distinct hereditary taint, still, I have had one patient, aged 46, whose father suffered from the disease at the same time. In another patient

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¹As to sex, among 57 cases there were: males, 20; females, 37. Under 35 there were: males, 3; females, 10. Over 35: males, 17; females, 27. Ages at onset of disease: 20 to 30, 5; 31 to 40, 7; 41 to 50, 7; 51 to 60, 17; 61 to 70, 15; 71 to 80, 5; 81 to 90, 1. Side affected: right, 22; left, 14.

the grandmother had tic during her old age, and in a third the mother also had it. The most common neurosis found in the family is that of migraine, but this is so common generally that it can hardly be said to count in the personal history.

The most common previous nervous disorder in the patient, however, is also that of migraine, which I find in one-fourth of my patients. A common exciting cause is some overwork or strain. (14 per cent.)

No doubt many have observed that the initial disease begins as an acute trigeminal neuritis associated with herpes. This was the case in six of my patients. This fact of an initial herpetic neuritis is one of much importance as pointing to the origin of the disease in some cases from an infection causing a distinct peripheral neuritis. In a number we find that the cause is a local disease of the gums or tooth. In about 20 per cent. then there is an initial neuritis or local disease. I have also seen it start as the result of la grippe in three cases, and of exhausting hemorrhage in another.

Tic douloureux is, in the vast majority of instances, a disease of the second or third branch of the trigeminal nerve. It is extremely rare for it to begin in the ophthalmic, or remain localized in that branch alone, whereas it often affects the second and third branch alone for a long period of time. Among forty-five chronic cases I find only one instance in which the trouble was confined alone to the first or upper branch of the fifth nerve.

Types.—Cases which begin in women in early life have always been a puzzle to me, and I have always been doubtful as to their true character, although they do eventually seem to assume the type of a true tic. In carefully studying my own histories, it seems to me that these early ones are to be explained in this way: The patients are almost always young women suffering from migraine, and their trouble is preceded by frequent attacks of this trouble. After a number of years this migrainous disorder seems to become chronic and in a measure localized. It then settles in the second or third, or perhaps all three branches of the nerve. Such patients have, however, in addition to the sharp pains along the course of the nerve, diffused pains involving the head and often each side of the face. Cases that develop at the degenerative period of life are rarely associated directly with migraine, although one often gets a history of some migrainous trigeminal neuralgia, or attacks of migraine occurring early in life. The malady, however, often seems to settle down on the nerve as the result of the exciting causes already referred to, although referring to no particular predisposing neurosis.

I am disposed, in view of the facts referred to, to think that there are at least two particular and distinct types of tic douloureux, not including the purely symptomatic pains due to extra-neural disease.

The first I should call the migrainous type of early life, and I consider it an evolution of a definite trigeminal neuralgia on the basis of a migrainous neurosis. It is seen oftener in women. The trouble is originally central and not a disease of the Gasserian ganglion. Later it is possible that the fibers of the trigeminal nerve, through some inherent defect, incur degenerative changes and a true degenerative neuralgia develops. But it is to be borne in mind that in the early stages at least there is very little real disease in the fifth nerve. It is a disorder of the central sensory neuron.

The second type is the more common one, occurring after the age of 40 and affecting men at least half as often as it does women. Here the disease sometimes

starts as a true infective neuritis in the form of a herpetic or ascending neuritis, due to some local disease of the gums or the antrum, or the osseous tissues. Some of these herpetic forms run an acute course, lasting only a few weeks or months, and are easily cured.

Tic douloureux is sometimes purely symptomatic of local disease of the bone, of a tumor, etc.

Natural Course.—The natural course of these different forms of neuralgia is somewhat as follows: The persons who suffer from migrainous tic in early life, finally localizing itself as a true tic, rarely get cured, but have a long and tedious period of suffering. The prognosis is more unfavorable than that of ordinary migraine; however, like the latter, under exceptionally good constitutional conditions, periods of long remission occur, and sometimes the trouble spontaneously disappears. This tendency to disappear is probably somewhat increased after the age of 50, just as is the case with migraine, and I have a patient in whom the whole trouble disappeared at this age, after she had had a tic for twenty-nine years, the cause of the cure being asserted to be "Christian Science."

These cases also of the migrainous type, so far as my experience goes, are made worse by the ordinary operations for tic. I do not know what the result of the removal of the Gasserian ganglion would be in such early cases, but I have never seen any cures from the other minor surgical operations, although I have had a number of patients who have had these made on them at different times. Such operations may give temporary relief, but not always. Patients of this class are ill adapted for operation, because the trouble does not lie exclusively in the trigeminal nerve, but also in the central nervous system.

Of the second class of patients the natural history is more definitely known. Among seventeen cases of which I have definite histories from beginning to end, in seven the disease has stopped or has been cured. In six others it has been improved and kept under control, while in four its progress has not been affected by anything that has so far been done. Thus it appears that in at least 20 per cent. the disease is amenable to treatment or is relatively benign.

In these cases in which the trouble has been relieved entirely for a period sufficiently long to feel that it is practically under control, one attributes this relief to animal magnetism, two to operations, three to the minor operations of removing the tooth and washing out the antrum, one to "Christian Science" and the remainder to various measures, mostly the use of strychnin, tonics and rest or the natural course of the disease. With two exceptions all the cases which were relieved or cured occurred in persons in whom the trouble began after the age of 40, and in whom it had been lasting for not more than eight years, the average being about four.

The average duration of the disease, in which the malady stopped or was brought under control without any very definite or special medical treatment, was about five or six years, and my conclusion is that tic douloureux, beginning in persons at the age of 40 or over, has a natural tendency to run its course, this course ranging from five to twelve years. It usually reaches its height at the fifth or sixth year, and then has a tendency in some cases to spontaneous cure. The duration* of non-curable forms may be the even life of the patient. I have seen cases in which the duration was twenty-nine

* Duration of cases: cured or well-controlled without surgical measures—At 55 to 60, 5 years; 64 to 72, 8; 55 to 59, 4; 66 to 69, 3; 61 to 64, 3; 21 to 50, 29; 60 to 66, 5; 57 to 61, 4; 58 to 61, 3; 58 to 63, 5; 61 to 71, 10; 82 to 88, 6. Side affected: right, 22; left, 14.

and thirty-two years, others where it lasted twelve, seventeen and eleven.

One of the most characteristic features in the natural history of tic douloureux is its tendency to remissions. These occur for periods of one or two months, but they can be artificially produced by various methods of treatment. The surgical treatment will usually produce a remission of one-quarter to one-half a year; the medical treatment will often produce remissions of from six to ten months. These can be renewed by further systemic therapeutics. After the disease is long established, however, i. e., after six or seven years, there is apparently no measure, except a surgical one, which will absolutely and surely stop it. The surgical operations, except those for the removal of the Gasserian ganglion, produce only temporary remissions; all the medical measures have the same effect. As to the relative efficacy of the two measures, I can say, without any bias, that in most cases we can secure a remission by the medical measures almost as certainly as we can by surgery, except by the major kind. No drugs, however, and no surgical operation will arrest the disorder permanently. They will only lengthen the remissions and perhaps shorten the course.

It is perhaps known that for some years I have advocated a systemic treatment for tic douloureux, by means of heroic doses of strychnin. After experimenting with this method of treatment for now over six or seven years, and including about fifteen cases, I have reached this conclusion regarding it: In early cases of this kind, that is to say in the first and second years, the strychnin treatment will almost invariably arrest or control the disease in anemic and exhausted patients. In cases that have lasted over six or seven years, and in those with neuritis and sclerosis, the result is doubtful, and there may be a failure to secure even a remission. In anemic ones, however, even of long standing, it is often more effective, though relapses will occur. Among fifteen cases I have had only four distinct failures. In the very old cases, lasting fifteen or twenty years, medical treatment is practically valueless, no matter what is done.³

I have few favorable statistics to report of the results of surgical operations. I have seen absolutely none in which these succeeded in curing the patient, although one of my cases included that of a patient in whom the Gasserian ganglion was removed. I have seen operations, however, produce remissions lasting for two years. I have, as already stated, had three patients in whom the trouble ceased after the tooth had been removed and the antrum washed out. In no case have I known relief by the removal of teeth, or at least nothing more than temporary relief. Among 42 cases, 11 had had 24 operations, with no permanent cure in any case. One only was that of removal of the Gasserian ganglion.

As to the general matter of treatment it is better to record experiences than opinions. I have seen one case apparently helped by the opium treatment; but it is dangerous and not usually effective. Three of my patients had become opium habitues. Three patients, after long courses of medical treatment, and in one instance after an unsuccessful operation, were cured by removal of a tooth and washing out the antrum. In another this did no good. One patient thinks she was cured by animal magnetism, and one by "Christian Science." Remission followed in one case after prolonged use of the static breeze an hour daily for two months. This I believe was purely a natural remission. One patient had her ovaries removed with the result that the

face was worse and she had a vaginal neuralgia.

I have seen little good result from aconite or from any of the benumbing or narcotic drugs. Medical treatment is most successful which is addressed to the arthritic state, when that exists, and to the arterial sclerosis and gouty taint. In some of this latter, men of full habit and hard arteries tonic measures do harm and after a course of rest and arteriosclerotic or neuritic measures, surgery should be promptly applied. All measures will be more effective if applied at the beginning of the disease, and again at the fourth or fifth year when the trouble is at its height; or again at the period of the climacteric in those whose neuralgia began relatively early in life.

In conclusion, therefore, I should say that the early forms of tic douloureux, such as I have called a "migrainous tic," occurring usually in women, should not be operated on. There are some exceptions to this, however, in which tic douloureux occurs in early life, due to a distinct local disease, such as an inflammation of the nerve, or of the antrum, or of the jaws. In true tic of the degenerative period of life, prompt medical treatment will usually control the disease and operation is rarely indicated at first. In tic which has lasted three or more years, it may be safely said to the patient that medical treatment may produce a remission and that this remission may be repeated and that eventually the disease may be controlled by repeated treatments, but this is not at all sure. It may be said here too that a minor operation may give more relief than medical treatment. The question of prescribing major operations must be decided in each individual case, on its special merits.

TABLE SHOWING DURATION AND TREATMENT OF 42 CASES.

1. Male. Duration, 55 to 60; spontaneous cure.
2. Male. Duration, 64 to 72; strychnia; relieved; eight months relapse; cured for 3 years by removal of tooth and washing antrum.
3. Female. Duration, 55 to 59; 3 operations; no relief; strychnia; remission 6 months; strychnia; remission 8 months; cured—animal magnetism 10 months.
4. Female. Duration, 66 to 69; strychnia; improved—fairly well 2 years.
5. Male. Duration, 61 to 64; strychnia; relieved 1 year; slight remission; relieved 2 years.
6. Female. Duration, 21 to 50; strychnia; no result; cured by washing out antrum and Christian Science.
7. Female. Duration, 60 to 68; strychnia; relieved; remission; cured by washing out antrum; patient took morphia.
8. Female. Duration, 57 to 61; strychnia; relieved; disease controlled 2 years.
9. Male. Duration, 22 to 31; operation; relieved for 2 years; return.
10. Male. Duration, 31 to 33; strychnia; total failure; operation; no return in 1 year.
11. Female. Duration, 58 to 63; strychnia; relieved; disease controlled 2 years.
12. Female. Duration, 68 to 71; strychnia; relieved 6 months; remission; relieved again; disease still under control.
13. Female. Duration, 52 to 58; strychnia; relieved for 1 year; strychnia; no relief; patient lost sight of.
14. Female. Duration, 55 to 57; strychnia; relieved for 8 months; relapse?
15. Female. Duration, 31 to 47; strychnia; slight relief.
16. Male. Duration, 31 to 35; static electricity; remission 2 months; static electricity; remission 6 months; static electricity; remission 2 months; operation; no relief; strychnia; remission 4 months; strychnia; remission 4 months; return.
17. Male. Duration, 61 to 63; strychnia; no relief; disease still continues.
18. Female. Duration, 25 to 65; 3 operations; no relief; strychnia; no relief.
19. Female. Duration, 30 to 44; 2 operations; no relief.
20. Female. Duration, 45 to 52; strychnia imperfectly given; no relief; disease disappeared; patient suffered from melancholia.
21. Male. Duration, 50 to 62; operation; no relief; 3 other operations; no relief.
22. Male. Duration, 31 to 40; no regular treatment; patient somewhat better.
23. Female. Duration, 65 to 72; 2 operations; no relief; strychnia; no relief.
24. Female. Duration, 24 to 42; not heard from.
25. Male. Duration, 46 to 48; strychnia; somewhat improved.
26. Female. Duration, 25 to 28; relieved without any special treatment.
27. Female. Duration, 45 to 52; morphia.
28. Female. Duration, 30 to 40; nasal pain.
29. Male. Duration, 58 to 67.
30. Male. Operation; relapse.

³ The details of the technique of this method are given in full in the Post-Graduate, July, 1896, and in the 4th edition of my Text-book of Nervous Diseases.

31. Female. Duration, 82 to 88; 2 operations; relief 4 months; operation; no relief; medical treatment 6 months; pain ceased; patient died 4 months later of old age.
 32. Male. Duration, 33 to 43; strychnia; relief.
 33. Male. Duration, 51 to 54; strychnia.
 34. Male. Duration, 50 to 60; strychnia; relieved.
 35. Male. Duration, 39 to 47; operation; relieved 1 year; strychnia; improved.
 36. Female. Duration, 66 to 68; strychnia; relief.
 37. Female. Duration, 60 to 65; general medical treatment; relief; lost sight of.
 38. Female. Duration, 53 to 56; medical treatment; relief.
 39. Female. Duration, 55 to 60; medical treatment; lost sight of.
 40. Male. Duration, 55 to 61.
 41. Female. Duration, 71 to 75.
 42. Female. Duration, 23 to 35.

OPERATION FOR EXSTROPHY OF THE BLADDER BY SONNENBERG'S METHOD.

BY J. RILUS EASTMAN, M.D.
 INDIANAPOLIS, IND.

In January, 1899, a classic case of exstrophy of the bladder in a boy 13 years of age was brought to the writer's notice. The condition of the kidneys was such that rectal implantation of the ureters as a means to relief was not to be considered. The urine discharged from the left ureter contained crystals of the salts of urates and phosphates in great abundance, blood casts, epithelium and epithelial and granular casts. Traces



FIG. 1.

of albumin were also present. The urine from the right kidney was much clearer, of very little more than normal specific gravity, and contained a few granular casts and some epithelium. There was continual pain in the left lumbar region.

In view of these facts, the Sonnenberg method was chosen as the one most suitable for application in this particular case. The operation was made in February, 1899. It consisted in the detachment of the ureters from the extroverted bladder mucosa, and implantation of these into a groove made by a median sagittal incision on the dorsum of the dwarfed and clubbed epispadic penis. The raw and exquisitely sensitive bladder mucosa was cut away and the margin of the defect drawn snugly together and sutured about the two ureters as they coursed over the cartilaginous symphysis pubis.

The left ureter refused to heal in its new position. It became so engorged with inorganic deposits as to become almost pipe-stem-like in consistence, and gangrene of the exposed portion of this ureter developed promptly. There seemed to be no alternative but to remove the left kidney, and this was done. The remaining kidney has since—one year has intervened—discharged the extra

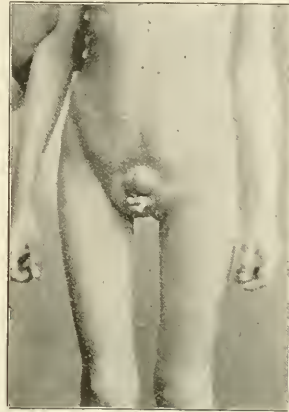


FIG. 2.

work imposed on it, without evidences of serious disorganization. Its condition at present is in no wise worse than before operation. The site of the extroverted bladder is now represented by a tough scar. Several futile attempts were made before the urinal shown in Figure 3 was finally constructed. As will be seen, it consists of a semispheroidal cup with a supplementary sacculatation at



FIG. 3.

its lower margin, extending slightly backward over the perineum. The margin of this cup fits accurately against the pubic and supra- and infra-pubic skin, and is made soft by a thin rubber rim. An ordinary rubber urinal is attached to the cup by a double rubber tube. A spiral wire is placed in this tube to prevent kinking. A valve is inserted in order that the urine may not be

thrown back into the cup by compression of the rubber tank. This urinal neither leaks nor causes pain. No urine whatever escapes, while the patient is in the standing or sitting posture. In the dorsal recumbent posture there is no leakage, but when the patient lies on the side there is an escape of a few drops per hour. A small opening near the upper margin of the cup effectually prevents the passage of air through the valve into the rubber tank. The presence of this opening is very essential; for without it air, which finds its way into the cup under the rubber rim, would be forced through the valve into the rubber tank, thus encroaching on the latter's capacity for containing urine. It is not the writer's purpose to discourse on the respective merits of the various operative methods for the relief of exstrophy of the bladder, but he wishes it to be understood that the operation of Sonnenberg is not presented by him as a substitute for the Maydl operation of rectal implantation. It can not but be conceded that Maydl's method has its distinct indications. Given a case of bladder exstrophy with a robust general constitution and sound kidneys the method of rectal im-



FIG. 4.

plantation must present itself for serious consideration as the only procedure by which the patient can be brought to a condition of passing comfort and happiness. Albert, Roux, Simon, Holmes, Lloyd, Boari, Allen, Hertz, Rudygier, Trombetti, Rosenoiti and Frank have all made successful implantations into the flexure coli, and Krynski, Vignoni, Pisani, and Fowler have made rectal implantations, each by his own method. Maydl's record is undisputably good. The dangers of ascending pyelonephritis seem to have been distinctly reduced by his precautionary removal of the bladder wall flange containing the valve-like openings of the ureter into the *caum vesicæ*, and the dreaded proctitis seems to develop only rarely.

In cases of *ectopia vesicæ*, however, presenting un-sound kidneys, Sonnenberg's operation in the light of present knowledge is certainly the one of choice. Its simplicity of execution is notable. It accomplishes all that can be accomplished by tedious flapping methods in much less time. The patient depicted enjoys very good general health. He attends school regularly and is apparently unhampered in play and work, by his deformity.

VISION AND COLOR PERCEPTION FOR RAILWAY SERVICE.*

BY WM. C. BANE, M.D.

OCULIST AND AURIST, C. R. I. & P. B'Y.
DENVER, COLO.

At the last meeting Dr. Pritchard favored the Academy with an article on the "Physical Examination of Railway Men," which included the test for vision and color perception. In the discussion that followed, many valuable points were brought out, and in considering the vision and color perception for railway service I must necessarily repeat some of the facts mentioned at that meeting. For efficient service it is essential that those who give and receive signals have normal vision and perfect color perception.

At the present time no uniform standard exists among the various roads that require applicants to pass an examination previous to entering their service. Their standard varies from a high to a low one. This is not as it should be, for there ought to be a uniformly high standard for physical examination, vision, and also some uniformity as to the colored yarns, flags and lights used. The vision for enginemen should be 20/20, or normal, with each eye, without the aid of glasses, and they should have normal refraction when entering the service. Those who serve as station agents, conductors, brakemen and switchmen should have vision of 20/20 with one and not less than 20/30 with the other eye, without glasses, and be free from hypermetropia of more than one diopter, on entering the service. Enginemen who have been in the employ of a company for five or more years and have proven themselves competent and trustworthy should be retained, everything being equal, if their vision with one eye is 20/20 and the other 20/40, without glasses.

It is a serious question as to what should be done with a trusted engineer, who has been in the service of a company for many years and become thoroughly familiar with his route, when his hyperopia becomes absolute and impairs his vision for distance. It does not seem just that such an employee should be laid off, when, with the aid of glasses, he is better qualified than a new man without them. Certainly the personal equation should be considered. In deciding on what shall be done with such an employee, the chief surgeon or oculist should have the right to grant some leeway and retain such a one, though he fall somewhat short of the standard properly established for new men. There are serious objections to allowing an engineer or fireman to wear glasses for distant vision. The lenses become dusty, and in cold or stormy weather the moisture will accumulate and blur the vision. Should the glasses become misplaced, the employee may for the time be disqualified for service. Some companies grant old employees the privilege of wearing glasses, while others refuse to permit their use. Without the permission to wear them we must say to the faithful employee: "Thou art weighed in the balances and found wanting." Glasses should be permitted for near vision, with which No. 2 Jaeger type can be read at fourteen inches.

Shall re-examination be required? Most certainly! As it has been clearly demonstrated that the eyes do change, they should be re-examined at regular intervals of from two to four years, and always after an attack of serious illness or accident. The difficulty regarding glasses, which would ultimately be required, is suffi-

*Read before the American Academy of Railway Surgeons, Omaha, Neb., Oct. 12-13, 1899.

cient reason for considering the refraction as well as the acuteness of vision of each new applicant for railway service. As a precautionary measure the pupillary reflexes and fields for form should be tested.

Dr. Williams of Boston, in his contribution on "Form and Color-Vision in Railway Service,"¹ has so clearly presented the subject of color perception and the tests to be made use of, that I here quote a part of his article, which I most heartily endorse: "The standard examination for color-vision should include three things: 1, a test with colored signal-flags; 2, a test by comparison of colors by the Holmgren worsteds; 3, a test with colored lights seen through openings of regulated size, which will form small images on the central part of the retina.

"The acuteness of color-vision varies considerably from the normal standard, as does form-vision. We may have a feeble color-perception, an incomplete loss of color sense, generally for red and green, or a complete loss of perception for one or both of these colors, and in rare cases a complete loss of all color-perception, in which the solar spectrum looks like a grey smear of varying shade, but no color. The object of our test is to discover the extent and character of the defects, and whether they are sufficient in amount to disqualify according to the standards adopted. The test with flags shows whether the man can give correct names to the flags, and can tell their use and meaning. It is also desirable to use one of the flags at a time as a test-object, and get the applicant to pick out from the heap of Holmgren's worsteds all the colors that look like the flag. It will often be found that the correct names can be given to the different flags even when the test by worsteds and colored lights shows a considerable defect of color-sense, but when used as a comparison test a green may be selected among the other colors as looking like a red flag, or vice versa. The second test, by comparison of colors without naming them, selecting from a large number those which appear to the applicant like certain test-skeins, light green or pink, according to the method proposed by Professor Holmgren, is the most satisfactory and easily applied of all the good qualitative tests, but it does not give a sufficient test for small central scotomata.

"I have recently had a conductor who passed both the Holmgren and the Thompson tests without making a single mistake, and who selected his colors without hesitation, but when examined by colored lights transmitted through small openings, or even with switch-light lenses, before a lamp at twenty feet distance, he called a red light 'white' in four different cases; he had a central defect in the retina, probably caused by the use of tobacco in excess, yet the area affected was so small that the retinal image of the flag or the skein of worsted was formed partly on the diseased retina and partly on the healthy portion outside the scotoma, where the color could be easily recognized, but when the retinal image was reduced in size, as with the lights, it was formed entirely within the borders of the scotoma, and red lights were called white or sometimes green. It will not do, however, to substitute the tests with such lights for the Holmgren tests, as the lights give little chance for comparison or for the selection of confusion colors, and for ordinary cases of congenital color defect it would take a long and tedious examination to reach the same result that could be arrived at more quickly by the worsted test. On the other hand, the test with lights, with regulated openings, should be used in addition to the worsted test, as was first proposed in Holland."

The test with transmitted lights may be made at twenty feet, or six meters, through an opening 2 mm. in diameter; through such an opening a person with normal vision and color perception will at once recognize the color. Dr. Williams' instruments for testing with colored lights is so constructed that the standard colors can be exposed through openings of sufficient sizes. By such an instrument the examiner is enabled to test the form-color-sense and detect any defect that may exist in the central portion of the retina.

In reference to the test "with Holmgren's worsteds" it is possible to make a distinction between some of the greater variations in color sense, for if a person is hesitating, picks up some confusion colors and compares them with the test skein, perhaps selects them and then discards them, or picks up some of the true colors, and after comparison rejects them, finally selecting none of the confusion colors, it shows that he has a feeble color perception; if he selects with the green some of the confusion colors, but with the pink or rose skein makes no mistake, it shows he has an incomplete defect; but if with the green skein he selects confusion colors in addition to the greens, and with the rose skein selects with the rose colors some blues or violets, it shows he has complete defect for red, or if with the rose skein he selects in addition to rose colors some greens or grays it shows he has complete defect for green."

"The tests for both form and color-vision should be made when the man is not fatigued by a long tour of duty or exposure, for it has been found that the acuteness of both form and color-perception is often diminished after two hours or more of engine work. After long runs and unusual exposure this temporary reduction in acuteness may be considerable, and it furnishes an additional argument for insisting on a high standard for such service. If one-half of normal vision were to be accepted as a minimum for each eye when the person was rested and in good health, the conditions of service might easily reduce this far below the danger point, but if a high standard is required the vision may be temporarily reduced by fatigue without becoming dangerous."

In conclusion, I would emphasize the following points: 1. The adoption by railway companies of a uniformly high standard of vision for men entering their service. 2. Uniformity of tests with colored flags, yarns and lights. 3. The re-examination of employees at regular intervals and after serious illness or accident.

DISCUSSION.

DR. JOHN F. FULTON, St. Paul, Minn.—It has been my privilege to have had quite an extensive experience in the line of work suggested by Dr. Bane's paper, and in order to make a success of the practical rules for examining candidates for train service as to their condition as to acuteness of sight, acuteness of hearing and color sense it is necessary to have the officials of the road in sympathy with and interested in the work of their oculist. When this subject is first brought to the attention of the railroad officials, they are disposed to look on the work as of little importance, and will give it but indifferent attention, but if you can succeed in obtaining their presence at a few examinations of candidates who are seriously defective, they will at once see the importance of the work and will then be disposed to make the examinations more severe than necessity demands.

For a number of years I have been doing this class of work for two of our Pacific Coast lines, emanating from St. Paul and Minneapolis, and have been consulting oculist for a number of other roads; consequently during the last ten years there has been examined, under my direction, a large number of men in train service, probably twenty-five or thirty thousand. Judging from my own experience in this work I am disposed to look on the requirements as suggested by Dr. Bane as some-

¹ Trans. Am. Oph. Soc., vol. viii, part 1.

what severe. If a man has vision of 20/20 in one eye and 20/40 in the other, I would have no hesitation in passing him, certainly if the slight defect in sight is due to a refractive error which can be completely or partially overcome by proper correction.

How often should each employee in train service be examined? This is a question well worth our careful attention. My own rule on the subject is as follows: All new candidates for train service should be examined before being employed, and re-examined whenever promotion takes place, or whenever they are transferred from one division to another, and all employees in train service should be examined every three years.

In regard to the examination for color sense, I do not know anything that requires more careful and conscientious work on the part of the oculist than those patients who at first hesitate as to matching of colors, it being often difficult to decide whether or not they are really color-blind, or "color ignorant" or "color stupid." It will be frequently found that such men, after repeated examinations, will demonstrate that their color sense is perfect and that they are perfectly safe men to be employed in train service.

The laity and many of the general practitioners look on color-blindness as a congenital and incurable defect. This is by no means always the case. Defects in color sense are frequently due to the excessive use of stimulants, such as tobacco and alcohol, and in the early stages thus acquired the trouble is completely curable by removing the cause; hence the importance of making frequent examinations.

What shall we do with old and trustworthy employees in train service, who have lost one eye while in the employ of the company and have perfect sight in the remaining one? We will all admit that it is not perfectly safe to retain such men, yet it seems like a great hardship to dismiss them on account of an accident which has occurred, while they are rendering faithful service to their employers. This is a matter more for the officials of the road to deal with than for the company's oculist. One of the most serious accidents with which I am familiar was unquestionably due to the defects of a one-eyed engineer. As you know, in all one-eyed men the range of the field of vision is not as large as with both eyes, and in the case alluded to there was an obstruction on the track on a sharp curve, which he failed to see, resulting in a most serious accident, costing a number of passengers their lives and causing the destruction of a large amount of property.

Equally as important as the testing of the eye-sight in railroad employees is testing the acuteness of hearing. General surgeons and inexperienced oculists who first begin the work are apt to depend too much on the tick of the watch as a test, but experience will soon teach them that it should only be utilized when making the preliminary examination. If at this examination the candidate can not hear the watch tick beyond six inches, he should be referred to an experienced aurist, and if he finds no progressive disease of the ears, and that the candidate's acuteness of hearing is normal for whispered and spoken speech, he should have no hesitation whatever in passing him for train service. I am familiar with the requirements of one road in this department where the surgeon required that the watch should always be heard at eighteen inches. It happens to be a small road, so fortunately no great harm was done. Should this rule be enforced on a large one, where they employ seven or eight thousand men in train service, it would mean the dismissal of from five to eight hundred of their best ones. In cases where we are in doubt as to the progressive nature of the trouble, a certificate should be given, limited for one year.

The work of the oculist for the railroad company should be divorced as much as possible from the work of the chief surgeon, because it will always happen that, if the chief surgeon attempts to interfere with the oculist in his work, he will so cripple him that he will not be able to get results satisfactory to the candidates, to the road or to himself. I have been particularly fortunate in my own association with the chief surgeons of the different roads for which I work, as they have not shown any disposition to interfere but, on the other hand, have given their best assistance to make the work a perfect success.

DR. J. T. ESKRIDGE, DENVER, COLO.—I would raise a medico-legal question in this connection. I think the chief surgeons

and managers of railroads are the responsible parties in this matter. This question suggests itself: When a man is re-examined and color perception is less than that of other employees newly accepted, what responsibility would the railroad have to bear if a person should be injured because of the defective vision of an old employee. It seems to me that if it were shown that the old employee did not have perception sufficient to prevent an accident from occurring, the railroad would be responsible, and the chief surgeon, who is mainly concerned in their cases, should co-operate with the oculist and inform the managers of the road when the vision of the old employee is becoming defective.

DR. T. B. LACEY, Council Bluffs, Iowa—There was one feature brought out by Dr. Bane, in his paper, which is worthy of further discussion, viz.: that in the examination of applicants for positions, or old applicants, we ought to have their records as to their condition when they are examined. He referred to the fact that a man in doing certain work has deterioration of vision due to the energy he has expended, and there is considerable truth in that. I have examined railroad employees who have been instructed to come to me for that purpose, and when they came they were in no condition to pass the proper examination, because they had been overworked. These men had not received any treatment. They had not received the consideration that they ought to receive, and still there are times when I do not know how that is avoidable, because they do not feel disposed to lay off from a trip or from their work a day or two to get thoroughly rested; but still, in a great many cases the evident weakness of vision or defect in color perception is largely due to overstrain or overwork, and they are not in proper condition to undergo a satisfactory examination. We all meet with cases of defective color perception in employees to be examined or re-examined, but much of it is due not so much to direct weakness as it is to absolute ignorance of what colors are; I have had applicants come to my office, off and on, and have asked them the color of a certain skein, and they will determine the color correctly at once, and then when they are asked to match or take all the skeins that contain that color, they will immediately go to work and try to match it with another shade. It is a difficult matter to so word our instructions to men who are wanting employment, that they will distinctly understand what we want them to do. If you give them the standard for the simplest green skein, and tell them you want the skeins that contain the green color, they will immediately pick out the shades which most nearly match the sample; you want the dark as well as the light. While a great many employees whom we examine develop a weak color perception, a good many others are simply color ignorant."

DR. JOHN E. OWENS, Chicago—I have been engaged in examining applicants for railroad service for a long time, and I still find some problems very difficult to solve satisfactorily. Not long since, I left Chicago at 6:30 in the evening, and returned the next morning at 8:30, having traveled 794 miles and remained 3½ hours in the town I visited. I say this to emphasize the importance of having men on our trains with normal color vision, on account of the great rapidity with which our trains run at the end of the nineteenth century. A mile a minute is common on many of our first-class railroads, not for the whole distance, but for many miles, and there has been such an advancement made in speed of trains, in equipment, in coaches, in trucks, and everything that pertains to the running of a train, that we certainly are beginning to see more and more the necessity of having men with normal physical endowments, normal functions, and particularly normal color sense to act as engineers. We have had a uniform system for some years on the Illinois Central, and the same system is in operation on the Northwestern. We go much further than examinations for visual defects and hearing. Physical aberrations which impair usefulness, which lengthen the time of disability or which lessen the powers of endurance of the physical strain during the running of fast trains are considered. I find a problem something like this to deal with: A new man reports for examination. He makes the characteristic mistakes of the color-blind and is rejected. He comes again for re-examination, and is again rejected, and even a third time. I have been inclined to be liberal with the men in examining them several

times, seven or eight days apart, to show them that I am disposed to do everything for them that is reasonable and right. A man with defective color sense will pick up the wrong skeins or point out the wrong colors. Others, after repeated examination and more or less outside practice, can key themselves up to pulling through, and the question arises: are we justified, under the circumstances, in passing them, or should they be rejected as the result of original characteristic errors? The latter is the course to be adopted.

When I first began to make examinations of employees on the Illinois Central, the Holmgren worsteds were used, and I was instructed by the general superintendent, as this was a new matter, to go over the road again and re-examine them. With assistance I accomplished it and examined the employees with flags and lanterns. I was a little timid about that part of it. I had every confidence in the Holmgren test for the detection of color sense, but I did not know what the men would do with flags and lanterns. I thought the Holmgren test would catch all, but I feared the other tests might let some slip through. We used flags in the day time and lanterns at night, and I was very much surprised to note the numerous mistakes that were made in naming the flags and lantern colors amongst those who had previously been found defective by the worsteds. The late Dr. Robert Tilley devised a little instrument which he used on a patient who was referred to an oculist, where he had examined the man and found him defective. This instrument was intended to bring out the personal equation in connection with such examinations. We did not bring it out to perfection. It was a domestic affair, but it corroborated the results of our previous examinations of certain men who were found defective in color sense.

DR. A. I. BOUFFLEUR, Chicago.—The old statement that "a chain is no stronger than its weakest link" should be applied in examining men when tired. If a man is color-blind or color defective when he is tired, just after he has quit work, is he a safe man in a responsible position ten minutes before he has quit work? If we are to have perfect men on our railroads, it is best to test them when they are tired. I have to examine railroad employees in Chicago who run their trains by signals from the time they go out until they go off duty, and it is very essential that those men should be perfect in color sense at the close of their day's work, as it is at the commencement of it. I therefore take exception to that part of the Doctor's paper.

DR. J. T. ESKRIDGE, Denver, Colo.—I showed, in my paper, that hysteric subjects and neurasthenics commonly have limited fields of vision. I know not why it is, but in Colorado, particularly among railroad employees, neurasthenia is exceedingly common. I have examined eight or ten neurasthenics from the D. & R. G. Railroad this year, in whom the fields of vision were at their narrowed. It is evident that such men would not make good signal-men. I would like to ask the Fellows of the Academy if they have made any distinction in examining the eyes of railway employees, whether the patients were either "run down," neurasthenic, or hysteric? Those with manifestations of hysteria showed a decidedly contracted visual field.

DR. W. C. BANE, closing the discussion.—As to the point brought out by Dr. Fulton, I agree with him that a man with one eye is disqualified for engine service, and unsafe for signal service. An old employee should be given other work.

As to the question raised by Dr. Eskridge in regard to neurasthenia and hysteria, I can only answer that in physical examination, the Rock Island surgeons include diseases of the Spine. The fields of vision are taken in the eye examinations.

The point with reference to men being tired at the time of examination should be carefully considered. A man at the end of his day's work ought to be able to recognize colors and see the signals quickly enough to protect himself and the passengers. The man who does not recognize colors promptly should not be employed for service where it is necessary to give and receive signals. Such men should be rejected.

I rode with an engineer on the Rock Island for a short distance in coming east, there being an electric headlight on the engine. He stated that for white and red the electric light was far superior to the ordinary light used on the engine, but he thought it was no improvement for green. I was impressed with the thought that the green lights as used on the railroads are not large enough.

THE EARLY DIAGNOSIS OF PULMONARY TUBERCULOSIS.*

BY EDWARD F. WELLS, M.D.

CHICAGO.

The history of pulmonary tuberculosis during the last quarter of the century now drawing to a close may be considered by the physician and humanitarian with a fair degree of complacency. The essential cause of the disease has been discovered; the avenues of infection have been located; promising methods of prevention have been formulated. The physician and the health officer are enthusiastic and alert to their duties and responsibilities, and they are guiding a public fairly intelligent and ready to accept the proffered advice; the malady is being discovered earlier, is probably being more effectively managed, and is declining in prevalence.

If one will but re-read the chapters on the diagnosis of pulmonary consumption, by Laennec, Louis, Andral, Copland, Watson, Eberle, Drake, Gerhard, Trousseau, Flint and Waldenburg—master minds of their day and certainly *au fait* with the literature and diagnostics of their generation—and compare them with the like chapters of Eichhorst, Osler, Anders, Kidd, Cornet and others of to-day, he can not fail to be profoundly impressed by the immense strides which have been made in the possibilities of the early diagnosis of this disease. This, however, only corresponds to my own observation and experience, and I know that appeal can safely be made to those of my hearers of my own age, or who are older, to confirm the statement that the early diagnoses of pulmonary tuberculosis which are now made as a routine, and which are demanded by the spirit of the times, were utterly unknown and unattainable a quarter of a century ago.

It may be admitted by many, and I will state as a proposition which I believe can not be successfully contradicted, that it is not only possible, but practicable as a matter of routine, to make very early diagnoses in cases of pulmonary tuberculosis. In making this statement I do not underestimate the difficulties, but I do feel confidence in the means at our command, and in the skill of medical men generally in their employment, for meeting and surmounting these obstacles. I am quite sure that diagnostic failures are not due to any inherent difficulties. On the contrary, they are usually due to remediable shortcomings on the part of the physician, as, for example, to a hazy conception of the clinical picture of early tuberculosis of the lungs; to obtaining an incomplete history of the case; to superficial physical examinations or to lack of facility in manipulation or interpretation in this field; and, finally, to a peculiar mental bias which renders him loath to acknowledge the presence of that which he dislikes to discover.

The practical importance of the earliest possible diagnosis of pulmonary tuberculosis can scarcely be over-estimated—certainly it is patent to every physician. To the patient it means that he is the victim of a malady which will entail upon him, at the best, many months or years of invalidism, with, probably, radical modifications of business and domestic arrangements, together with a certainty of prolonged incapacity, and death in a majority of cases. On the other hand, complete recovery ensues in a very considerable proportion of cases—probably in from 25 to 35 per cent.—and a fairly comfortable existence may be had in another large contingent

*Read before the Chicago Society of Internal Medicine, Dec. 28, 1899.

of cases which ultimately prove fatal. That the cure of the disease and extension of the life of the patient is largely dependent on the early institution of rational treatment, which presupposes early diagnosis, no one will have the temerity to deny.

To treat exhaustively of the early diagnosis of pulmonary tuberculosis would require a volume. It is clear, therefore, that within the limits of a short paper only a few of the more important points can be considered, even cursorily. It will be my aim, however, to select for comment those which are most apposite, most novel, and which are oftenest neglected.

Without argument it will be taken for granted that pulmonary tuberculosis is due to the lodgment and subsequent growth in the lungs of the bacillus tuberculosis; that the avenue of infection is usually through the inspiration of air which has been contaminated with the dried and pulverized sputa of consumptives; that the germs vary in virility and are inherently short-lived, especially in the light; that in countries where the malady is prevalent all persons are constantly exposed to the germs of the disease, and that some persons are infected because the inspired bacilli meet with present accidental conditions conducive to their growth and inherent or acquired slight powers of resistance, while the majority of persons escape because the germ encounters unfavorable local conditions and ample systemic defensive resources.

In the diagnosis of early and obscure cases it may be necessary to carefully weigh every circumstance which might possibly have any bearing on the probability, or improbability, of the presence of the disease in question. In such cases heredity and environment may be factors of the greatest importance. There can be no reasonable doubt that tubercular persons transmit to their descendants a peculiar and more or less profound susceptibility to the disease, as is proven by the persistency with which it clings, generation after generation, to those families in which it has once obtained a firm foothold. Known, and especially prolonged and extraordinary, exposure to the germs of the disease, or the absence of such exposure, must also be estimated at its true value in forming a diagnostic opinion. It will be readily understood that the chances of an obscure affection, presenting some of the features, but lacking in positive evidence of pulmonary tuberculosis, being in fact this disease are greatly increased in those who have family histories bristling with instances of the presence of this malady, or in those who are closely associated with consumptives who are careless in their habits. In this connection I can not too strongly urge upon family physicians the necessity of carefully examining such persons at regular, and not too infrequent, intervals. Pulmonary tuberculosis is more prevalent in some races, localities, and in connection with some occupations, etc., than in others. For these reasons heredity, susceptibility, immunity, environment, exposure, climate, occupation, residence, etc., should all be given due consideration in summing up the evidence in any given case.

Of special importance in the diagnosis of early pulmonary tuberculosis is a comprehensive and detailed medical history of the case, although the obtaining of this is often a most difficult professional feat. Patients have no desire to withhold needed information or to make wilful misstatements, yet some of the most suggestive of the early symptoms they may consider insignificant and unworthy of mention, or they may not

have noticed them. However, careful and methodical questioning, especially in the presence of an observing associate, will, ordinarily, elicit a fairly clear, and it may be a graphic, description of the early symptoms of the disease. Upon this feature I lay particular stress, inasmuch as long observation in a field of practice peculiarly suited for obtaining exact information has convinced me that, ordinarily, the access of pulmonary tuberculosis is marked by great uniformity of symptomatology.

I can not recognize a "pretubercular stage" of the disease. I do not lose sight of the fact that the disease is often preceded by anemia, gastric and intestinal disorders, etc., but the existence of such conditions, although they may invite infection, are purely accidental and are not necessarily premonitory. The beginning of the attack must be coincident with the implantation and parasitic development of the bacillus of tuberculosis.

The symptomatic development of pulmonary tuberculosis in a typical case may be briefly outlined as follows: There is a slight and unobtrusive cough which insidiously increases in force and frequency; after a few weeks there appears a scanty mucous expectoration, later, becoming mucopurulent and more abundant; there may be hoarseness, hemoptysis and thoracic soreness; there is slight or moderate afternoon fever, which is accentuated by exercise; the pulse is increased in frequency and arterial tension is diminished; the appetite is lessened, nutrition fails and there is loss of weight, strength and endurance. About once in from four to six weeks there is an exacerbation in which all these symptoms are accentuated and some new ones are added: The cough is increased in frequency, is dry and is often accompanied by thoracic soreness or pain; the fever rises higher in the evening and is usually also present in the morning; the head aches, and there are general aching pains; the appetite is poor and the bowels are constipated; weight is rapidly lost and there is marked weakness; the patient is restless, irritable and out of sorts generally. After about a week freer expectoration occurs; the skin becomes moist; the appetite returns and the bowels move naturally; the soreness and aching cease and the patient feels better. These exacerbations recur at intervals of from four to six weeks, each succeeding one becoming more pronounced, and their diagnostic value can not be readily overestimated.

Let us now consider some of these symptoms more fully:

Cough is probably the earliest symptom. It has, moreover, peculiar characteristics. It is slight, unobtrusive, hacking and often consists of a single effort. It may be excited by change of posture, deep breathing, etc., but if the movement or forced inspiration be repeated the cough may not be reproduced. Usually it is infrequent and may not be heard a half dozen times a day, and may be unnoticed by the patient and his associates. Later, and especially during the morbid exacerbations, it increases in frequency and severity, is provoked by changes of posture, sudden exertion, deep breathing, etc., and each repetition of the provocative act is followed by cough. Later it may assume a paroxysmal character and may be accompanied by vomiting. Cough, as above described, and gradually assuming more and more prominence as time passes, is highly suggestive of pulmonary tuberculosis. If hoarseness is also present the chances that the affection is of any other nature are very slight indeed.

Expectoration may be scanty and for a time free from the specific germ and the evidences of ulcerative action. However, if search is made for bacilli and elastic fibers immediately after one of the febrile exacerbations referred to it will usually be rewarded by the discovery of these, practically, indubitable evidences of the disease in question. Boiling the sputum, just long enough, with a caustic alkali, and centrifuging it, increases the chance of finding the bacilli and fibers if sparingly present.

Hemoptysis occurs in only a moderate proportion of the cases of early pulmonary tuberculosis, but it is very significant when it does appear and is a symptom of prime importance. It is usually small, or moderate, and solitary or mildly persistent for several hours, or recurrent. Although a period of cough and one or more febrile attacks will almost certainly have preceded the hemoptysis, yet the spitting of blood is often the first symptom to excite the alarm of the patient and his friends.

Thoracic tenderness, soreness and pain are rarely absent in early—not the earliest—pulmonary tuberculosis. Their favorite location is in the upper part of the chest, in front, although they may be seated in the axilla or back, or even at the base. Their location and character are often indefinite, but this indefiniteness is in itself a suspicious circumstance.

The *fever curve* of early pulmonary tuberculosis is highly diagnostic, and frequent, methodical thermometric observations for several days will clear up many a doubtful case. The temperature in the morning may be normal, subnormal or very slightly elevated. In the afternoon it may range between 100 and 103 F., the highest temperature occurring in the late afternoon rather than in the evening. An important fact is that exertion promptly and decidedly increases the temperature. During the febrile exacerbations the range of temperature is greater, and the type of fever is remittent rather than intermittent. Some other affections, e.g., anemia, obscure suppurations, etc., may be accompanied by evening elevation of temperature, but these are usually readily differentiated.

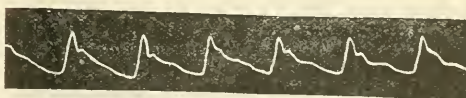
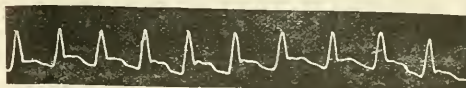
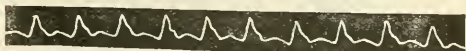
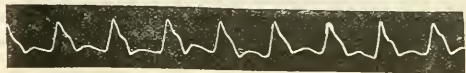
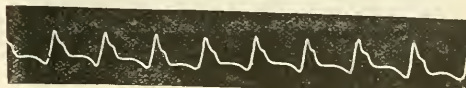
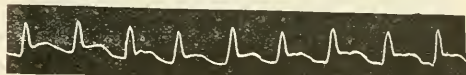
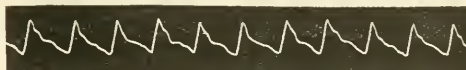
Gastric symptoms are frequently present. The appetite is somewhat impaired and may be erratic, while in infrequent cases there is a veritable dyspepsia. In rare cases there are no gastric disturbances. During the febrile exacerbations the appetite fails, the tongue becomes coated, the bowels are confined and there may be nausea and vomiting. So marked are these symptoms that these exacerbations are often considered "bilious attacks," with failure in recognizing their true nature.

Nutrition is impaired, and weight, strength and endurance are early diminished, especially during the febrile attacks, each exacerbation leaving the patient on a slightly lower plane. The patient may have the appearance of health, but an appeal to the scales will show a loss of weight and it will be found that feats of strength and endurance which could be formerly accomplished with ease can not be duplicated, or are only possible with difficulty and added exertion. The patient tires easily and unaccountably, and this symptom usually early attracts his notice.

The *blood* is early altered in composition. The number of red blood-corpuscles is diminished, as is also the specific gravity and hemoglobin. It is contaminated by the presence of tubercular toxins and, perhaps, anti-toxins, and by an excess of waste products. There are

probably morphologic changes in the erythrocytes and leucocytes.

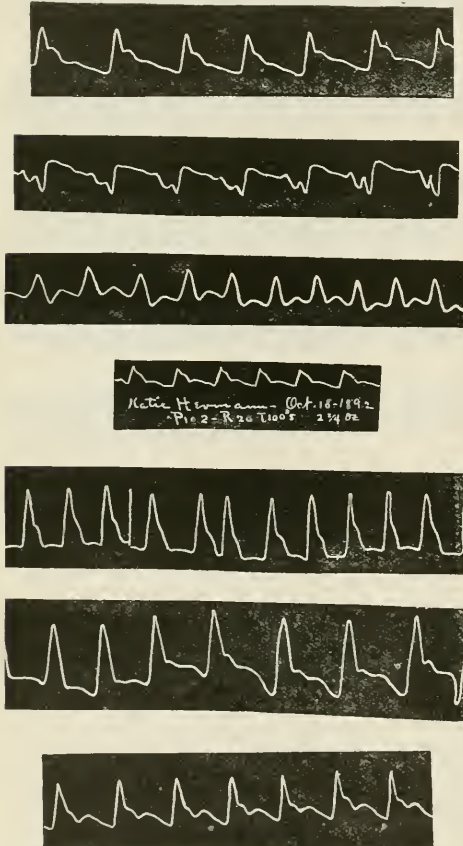
The *pulse* is early and decidedly modified in its character. It is usually accelerated, and the rate is changed but little by position. This latter feature is very suggestive, and whenever the pulse-rate is found increased and practically the same whether the patient is lying, sitting or standing, the most careful scrutiny is demanded. The acceleration is usually moderate, but in rare instances it may be very great. The arterial tension is early and notably reduced, especially during the febrile exacerbations. To this, in my experience, I have met with no exception. Normal or an increased tension may be present when the disease attacks persons with arteriosclerosis, but I have had no opportunities for studying such cases.



Sphygmographic tracings give most valuable aid in the diagnosis of early pulmonary tuberculosis, and from these alone the scale may be turned in the great majority of doubtful cases. Typically the tracings show a pulse of lowered tension and infantile character—a small and frequent pulse. From this typical curve there are infinite variations in both directions, approaching the normal on the one hand and reaching the most pronounced dirotism on the other. Words can convey no adequate conception of these changes, and I can only append a number of examples, with the assurance that you will be convinced that we have in the early stages of this affection a distinctive and readily recognizable pulse.

To some I may have been somewhat tedious in my preceding remarks. I can only offer, in apology, my conviction that those points are of primary importance and that they must be fully appreciated and recognized when we come to interrogate the chest by the aid of the percussor and the stethoscope. The importance of a most painstaking physical examination of the chest needs no extended mention. However, those who have had the greatest experience will know that, at the stage of the disease to which my remarks refer, physical signs are often in abeyance or are capable of various interpretations. Localized râles may mean much or little, as they may be heard in a patient with or without the symptoms detailed. It must also be borne in mind that in some cases the progress of the pulmonary affection is slow; and that in these cases symptoms may antedate by several months the appearance of demonstrable signs.

Percussion may elicit diminished resonance or dullness



in some early cases which are rapidly progressive, but as a rule this will not be found in the doubtful cases. Stethoscopic percussion may be an aid. I have thought that during the febrile exacerbations areas of dullness could be detected which did not exist before nor persist after, but on this point my conclusions are indefinite. I am sure, however, that areas of pre-existing dullness

are enlarged at these times. It must be borne in mind that, whereas distinct interscapular, supra- or infra-clavicular dullness is highly suggestive of tubercular consolidation of the lung, the converse does not hold good, as tubercular formation may be present without any impairment of the percussion note.

In *auscultation* it is scarcely possible to overestimate the diagnostic importance of localized crepitation, moist râles, and prolonged, high-pitched expiration, heard, especially between the scapula and the spine, at the apex, or below the clavicle. Fine crepitation and coarse râles may be heard more distinctly, or only on deep inspiration, or with, or after, coughing. All the auscultatory signs are more noticeable during or shortly after a febrile exacerbation. Moist râles are rendered more prominent, or they may be heard only after an iodid has been given in moderate doses for a few days. The iodid causes a flow of serum from the bronchial mucous membranes, and this serum is not readily extruded from consolidated areas. Under these circumstances coughing, deep breathing, or even ordinary respiration will produce râles in these areas. It does not aid in the diagnosis of cases which have not progressed to the stage of some consolidation, except that it may favor the expectoration of bacilli bearing sputum. Some observations upon the use of iodid of potassium in the early diagnosis and the locating of the local lesion in pulmonary tuberculosis I brought to notice a year ago. Since my report I have employed it in every suitable case which has presented itself, and I can only reaffirm what I then said, namely, that in iodid of potassium we have a valuable diagnostic agent.

The *tuberculin test* may be employed in those cases, not syphilitic nor chlorotic, in which the diagnosis can not be made by ordinary means and in which a moderate delay can not be had. Although a valuable diagnostic agent its use is attended with a slight risk and, therefore, tuberculin should be administered only in such manner as to furnish profitable information. The temperature should be normal or have a very low febrile range and thermometric observations should be made and recorded every three hours for several days before the tuberculin is injected. The dose should be a moderate one, say from three to five milligrams, and it should be given in the evening in order that the reaction may begin in the morning. A positive reaction may be considered to have taken place if the malaise, headache, backache and pains in the legs have been marked and the temperature decidedly elevated. The reaction usually begins in about twelve hours and continues for from thirty-six to forty-eight hours. If no reaction follows the injection a larger dose, but not exceeding one centigram, should be given after the lapse of several days. In the tuberculin test a negative result is of great importance, because, if the observations have been carefully made, we may affirm that not only is the suspected pulmonary affection not tubercular but that there are no latent pulmonary foci and that tuberculosis does not exist in other parts of the body.

In a doubtful case the X-ray may tip the balance for or against the probability of tuberculosis being present. This is especially true when thoracic soreness or pain is present, the X-ray revealing restricted movement of the diaphragm upon the affected side.

In conclusion, I will say: Satisfactory diagnoses in cases of early pulmonary tuberculosis can be made only on a broad base of practical knowledge. It must be apparent that it is impossible to compress in a short ad-

dress that which many volumes can not contain. It is believed, however, that sufficient has been presented to lead to the conclusion that the early diagnosis of the affection under consideration presents no insurmountable difficulties, and that the application of a reasonable amount of care and skill, and in a few cases allowing the lapse of a little time, will almost invariably lead to correct results. In attaining these ends no portion of our experience concerning pulmonary tuberculosis can be neglected, but particular attention should be given the points mentioned.

4571 Lake Avenue.

THE SIGHT AND HEARING OF SCHOOL CHILDREN.*

BY H. V. WURDEMANN, M.D.

Ophthalmic and Aural Surgeon to the Milwaukee Children's Hospital and to the Milwaukee County Hospital for the Chronic Insane; Managing Editor, *Annals of Ophthalmology*; Associate Editor, *Ophthalmic Record*; Chairman, Section on Ophthalmology, American Medical Association, 1900, etc.

MILWAUKEE, WIS.

WITH THE COLLABORATION OF
FRANK ALLPORT, M.D.

Professor of Ophthalmology, Chicago Polyclinic; Professor of Ophthalmology and Otolaryngology, Northwestern Woman's Medical College; Oculist and Aurist to St. Luke's Hospital, Consulting Oculist and Aurist to St. Joseph's Hospital.
CHICAGO.

I have been requested by the superintendent of the Milwaukee schools to say something concerning methods for the systematic examination of school children's vision and hearing, which have been instituted in a number of the large cities of America, and have been taken up in this city under the authority of the commissioner of public health.

The enlightenment of the young may be likened to the raising of agricultural products. Not only are proper seeds necessary, but favorable soil and conditions are quite as needful. The means of education: the buildings, properly placed, constructed and conducted, including teachers, systems, books, etc., have been fully developed in our day. The child's mind should be active and its body and senses healthy to render it capable of profiting by instruction. Modern schools, with their effective machinery, are a source of gratification and delight to all; but enthusiastic, progressive and systematic educators do not always consider the soil on which the seed of enlightenment falls; in other words they are disposed to consider children as a massed entity, do not separate them into isolated individuals, with distinct inheritances, and mental and physical peculiarities, rendering them more or less adaptable to the requirements of the modern public school. Children are thrown into the great machinery of school life, are divided into grades, are expected to adhere to them and become educated according to this system. A child may have a weak or crooked back, which will become aggravated by close confinement at improperly constructed desks; he may have lungs handicapped with the incipient germs of consumption, encouraged by the protracted inhalation of vitiated school air; he may languish from an impoverished condition of the blood, and pine and droop under too much study and too little fresh air.

These are some of the conditions noticed in school children, militating against the easy acquirement of an education; but more directly detrimental is the existence

of certain abnormal conditions of the organs of special sense, of *seeing* and *hearing*, which are certainly of prime importance in acquiring an education. If a child can not see well and hear well his position is certainly most unfortunate in the modern public school, where he is expected to keep up with his grade work, or else subject himself to chagrin and mortification. Do not understand me as saying that your schools are to be likened to the car of Juggernaut, that ruthlessly throws down and crushes all who unfortunately come in contact with its destroying wheels. Far from it. I fully appreciate the gentle, humane and sympathetic feelings that proceed from the hearts of most teachers toward the children committed to their care. I am not unaware of their watchfulness and solicitude over their little flock, that prompts them to change the seats of the deaf and nearsighted, to make allowances for any noticeable physical or mental short-comings, to frequently visit parents and urge on them the necessity of action concerning the health of a child; but these are isolated though frequent instances, inspired by individual sympathy and character.

What we want is a paternal school system of health investigation, by which the physical defects of children will be made manifest and steps taken to protect pupils against themselves and in many instances against their parents. We also want a system that, after these unfortunate conditions have been discovered, will not only allow, but insist on, the harmonizing of the studies to the child, and not the child to the studies. I am not unaware of how often this is done; that the doctor's certificate of poor health is usually respected; that the course of study is sometimes changed under the advice of parents or teacher. I think I am not wrong in saying that these changes are so frequent, and so little encouraged, that children will often endure much physical discomfort or even suffering, rather than assume the mortification brought on them by the distinction of a grade change. These changes should be inspired from the intelligent illumination of regular physical examinations, and should be so common as to excite no comment, and give rise to no loss of a pupil's self-respect, or disappointment on the part of the parent, who frequently allows a child to languish and acquire permanent invalidism, rather than interfere with his class standing, or the date of a projected graduation.

I would not be misunderstood as advocating the abolition of systems and grades. It is needless to say that schools can not be properly conducted on other principles. Neither do I advocate the indiscriminate changing of children in grades, without just and adequate consideration. Neither do I ignore the fact that pupils are frequently changed to other grades for ostensibly good and sufficient reasons. I advocate more system and more grades. I advocate a system of physical examination in schools, by which we may know the condition of a child's health, and not trust chance or circumstances to detect it, and I advocate more and shifting grades, commensurate with the physical condition of defective children. In other words, I do not believe in the wholesale education of the rising generation, which is our country's hope, its bulwark and defense, and whose physical and mental condition is a sacred trust which we must guard and cherish. I do not believe in thrusting these little, yielding, impressionable, often sickly, lives into the common crucible, to be moulded and turned out with identical exactitude and precision. I believe that children should not be damaged by their educational existence, but should emerge from the portals of the Amer-

*An Address delivered before the Principals of the Milwaukee Public Schools, Jan. 12, 1900.

ican public school in better physical, mental and, may I say, moral condition than when they were entrusted to its fostering care, and that steps should be taken calculated to bring about the fulfilment of this imperative duty.

We must creep before we walk, and a great reform of this kind can not be accomplished without primitive and pioneer work. The eye is the most important physical element in the acquirement of an education, unless it be the brain, and is fortunately an organ capable of ready examination. The testing of school children's eyes has been systematically performed for many years in Europe, and especially in Germany—that factory of bad eyes—and, since 1895, somewhat in this country, but these examinations have been made by oculists appointed by school authorities, who have personally—with their assistants—examined every child in a given community. This system operated very well in monarchical Europe, accustomed to arbitrary domination, but in America, habituated to democratic rule and individual freedom, the method has given rise to much opposition from parents, children, school authorities and other oculists wherever tried. In fact, the method has been forcibly discontinued, as an element of too much discord and professional strife. Teachers have, sometimes, in a spirit of righteous investigation, made abortive attempts at testing their school children's eyes in various more or less scientific fashions, being forced by intelligent observation to a realization of the truth that many children were struggling under an ocular burden, very heavy to carry.

A systematic method for the examination of pupils' eyes by teachers, comprising simple questions and instructions which, if properly carried out, will detect the existence of most important ocular diseases, has been in use in Minneapolis and St. Paul; Worcester, Mass.; Sycamore, Ill.; Philadelphia and Chicago, for several years, and is being introduced in San Francisco and other cities.

Statistics show the average frequency of defective eyes in American school children to range from 25 to 35 per cent. When it is remembered that the vast majority of these have never sought ophthalmic advice, and are therefore endeavoring to acquire an education under exceedingly disadvantageous circumstances, the importance of this subject can be imagined. Time forbids me to enter into any description of the ocular diseases and conditions chiefly incidental to school life, but you doubtless know that nearsightedness or myopia is quite frequently a development caused by excessive study under poor conditions; that hyperopia and astigmatism are malformations of the eyeball, rendering study exceedingly irksome, because of tired eyes and head and headache; that a cataract is an opacity of the crystalline lens, and may exist and partly blind a child, without recognition, except by skilful examination; that optic nerve, choroidal and retinal inflammations may occur without especially noticeable symptoms to an observant child; that many varieties of "sore eyes" may hinder even reasonable school diligence; in short, that many morbid ocular conditions may obtain without attracting especial attention, and render the acquirement of an education exceedingly burdensome to children who thereby acquire the reputation of being dull, stupid and idle, but whose unenviable record may be completely revolutionized by proper ocular treatment and advice. The same may be said of aural diseases or conditions attended by deafness.

These are the children we hope to reach by these school tests, and especially those poor and almost abandoned

children, whose parents are ignorant, careless and indifferent to the physical conditions of their offspring. These eye tests are now quite generally recognized as being the best practical solution of the question as to how to place children in the proper channel to secure relief from ocular complaints, and as the idea is firmly established, we think that the time is ripe for another advance in the physical examination of the children.

Many children suffer from nasal obstructions and particularly from enlargement and engorgement of the

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INSTRUCTIONS FOR THE EXAMINATION OF SCHOOL CHILDREN'S EYES AND EARS
FOR USE BY TEACHERS IN SCHOOLS

1. The child should be seated at a distance of 20 feet from the chart. The chart should be held at eye level. The child should be asked to read the letters from top to bottom, and from left to right. If the child cannot read a letter, the teacher should ask the child to point to the letter. If the child cannot point to the letter, the teacher should ask the child to say the letter. If the child cannot say the letter, the teacher should ask the child to show the letter with their hand. If the child cannot show the letter, the teacher should ask the child to say the letter. If the child cannot say the letter, the teacher should ask the child to show the letter with their hand. If the child cannot show the letter, the teacher should ask the child to say the letter. If the child cannot say the letter, the teacher should ask the child to show the letter with their hand.

2. The child should be asked to read the letters from top to bottom, and from left to right. If the child cannot read a letter, the teacher should ask the child to point to the letter. If the child cannot point to the letter, the teacher should ask the child to say the letter. If the child cannot say the letter, the teacher should ask the child to show the letter with their hand. If the child cannot show the letter, the teacher should ask the child to say the letter. If the child cannot say the letter, the teacher should ask the child to show the letter with their hand.

3. The child should be asked to read the letters from top to bottom, and from left to right. If the child cannot read a letter, the teacher should ask the child to point to the letter. If the child cannot point to the letter, the teacher should ask the child to say the letter. If the child cannot say the letter, the teacher should ask the child to show the letter with their hand. If the child cannot show the letter, the teacher should ask the child to say the letter. If the child cannot say the letter, the teacher should ask the child to show the letter with their hand.

4. The child should be asked to read the letters from top to bottom, and from left to right. If the child cannot read a letter, the teacher should ask the child to point to the letter. If the child cannot point to the letter, the teacher should ask the child to say the letter. If the child cannot say the letter, the teacher should ask the child to show the letter with their hand. If the child cannot show the letter, the teacher should ask the child to say the letter. If the child cannot say the letter, the teacher should ask the child to show the letter with their hand.

5. The child should be asked to read the letters from top to bottom, and from left to right. If the child cannot read a letter, the teacher should ask the child to point to the letter. If the child cannot point to the letter, the teacher should ask the child to say the letter. If the child cannot say the letter, the teacher should ask the child to show the letter with their hand. If the child cannot show the letter, the teacher should ask the child to say the letter. If the child cannot say the letter, the teacher should ask the child to show the letter with their hand.

tissues in the upper part of the pharynx and throat. Such obstructions prevent free nasal breathing and cause a utilization of the mouth for this purpose, besides giving rise to deafness, on account of a lack of proper aeration of the middle ear through the Eustachian tubes, leading from the upper portion of the throat to the ear. These enlargements in the pharynx, called "adenoid growths or vegetations," are productive of a large majority of the chronic ear diseases from which children suffer. Fortunately they can be easily removed, and some of the most satisfactory surgical work ever witnessed follows such operations. These children, called "mouth breath-

ers," present a peculiarly dull and stupid appearance which is aggravated by the almost invariably accompanying deafness. Removal of the growths and proper treatment to the ears completely revolutionize the appearance and character of the child, and if you have ever observed such physical and mental transformations, you will never forget them, nor fail to emphasize the importance of such work.

One important matter should be remembered in these tests, viz.: They are not conducted solely for the purpose of detecting ocular conditions requiring the use of glasses. Many seem to have the idea that they simply detect errors of refraction, but such is not the case, as they will, if properly carried out, detect the existence of almost all serious ocular diseases or conditions. The teacher does not know what disease is present, but that something is wrong; that is sufficient. The sole idea in the tests is to separate those children having good eyes and ears from the defectives. These tests should be made at the beginning of the school year, statistical reports prepared and reports of the defectives again made at the end of the school year. Those passing the tests successfully are returned to school and not re-examined for one year, when they should undergo another examination, as morbid conditions may have developed meanwhile. Those having defective eyes or ears are simply given a card of warning, which they hand to the parent. This card merely states that some eye or ear disease is believed to exist, and the consulting of a physician, therefore, is advised. The matter is not compulsory, as the parent may do as he thinks best; he may consult any physician or dispensary he chooses. In this way the duty is thrown on the shoulders of the parent, where it belongs, but if compliance with the advice is not observed, the teacher may from time to time urge the matter with tact and delicacy, but nothing should be said to make the parents regard the matter as an arbitrary demand.

Many teachers outside of large cities are interested in this work, and are constantly inquiring how they may do it in places where a board has taken no official action along these lines. They may purchase one of these combination charts¹ for twenty-five cents, containing both the test-types and instructions, and proceed with the work in their room or school. To this there can certainly be no objection, as the tests are absolutely harmless in every particular.

In Minneapolis and Chicago, where these examinations were most complete, we know positively that thousands of children were much benefited by these proceedings. Cataracts were removed, cross-eyes straightened, intraocular inflammation relieved, glasses were fitted, etc.; in short, the tests have really been exceedingly beneficial in their results, and while some opposition from parents and teachers was at first encountered, nothing but commendation can now be heard from all sources.

For the Milwaukee tests the commissioner of public health and the superintendent of public schools have authorized me to design a plan for this investigation, embodying the best features from the experience of other cities. To this means I have secured the collaboration of other oculists, Drs. Charles Zimmermann, J. S. Barnes and N. M. Black, who, with myself will at appointed times instruct the grade teachers in the anatomic and physiologic relations of the eye and ear so far as may aid in these investigations, and will also instruct them in the methods of examination and keeping what records may be needed by actual demonstrations on teachers or

pupils at these meetings. The tests and records will be made by the teachers for each grade, under the supervision of the principals of the school. The number of children examined should be noted, but only complete records of the defectives are to be made, which are to be done in duplicate by the room teachers and both copies sent to the principals, one copy to be kept by the principals and the other sent to my address. The cards of warning are to be filled in and sent by the principals to the parents of any child found defective. At the end of the school year the principals are to fill out the duplicate reports, stating whether or not the pupil has profited by the card of warning to its parents, and the results, as well as his impression of the usefulness of such an examination in his school. This duplicate is then to be sent to my address for use in the preparation of a report to the school board.

A compound test-card, based on the standard types of Snellen, has been designed by Dr. Frank Allport—"The Visual and Aural Chart for Schools"—and will be used in the Milwaukee examinations. Roman numerals are on one side of each line and Arabic on the other. Under the twenty-foot line are these words: "This line should be seen by a normal eye at 20 (XX) feet," and would seem to make the matter sufficiently plain. Under the ten-foot line, on the card proper, is a half-broken line at which the lower portion of the compound card should be severed from the upper portion. Just under this line are printed the words: "Please detach by breaking on this line."

The card which is thus detached contains the teacher's instructions as to how to proceed with the tests. The upper or long card containing Snellen's types is the testing card, and should be hung on the wall when in use. On the lower card of instructions is printed the following matter, most of which is already familiar to those who have used this method:

TEST CHART.

Instructions for the Examination of School Children's Eyes and Ears. For Use of Principals and Teachers. After the Method proposed by Dr. Frank Allport of Chicago, Ill.:

First grade children need not be examined.

The examination should be made privately and singly, in a room apart from the general school session.

Ascertain if the pupil habitually suffers from inflamed lids or eyes.

Children already wearing glasses should be tested with such glasses properly adjusted on the face.

Place a card of Snellen's test types on the wall in a good light; do not allow the face of the card to be covered by glass.

The line marked XX (20) should be seen at twenty feet, therefore place the pupil twenty feet from the card.

Each eye should be examined separately.

Hold a card over one eye while the other is being examined. Do not press upon the covered eye, as the pressure might induce an incorrect examination.

Have the pupil begin at the top of the test card and read aloud down as far as he can, first with one eye and then with the other.

If the pupil does not habitually suffer from inflamed lids or eyes, and can read a majority of the XX (20) test type with each eye, and does not, upon inquiry, complain of habitually tired and painful eyes and headache after study, his eyes may be considered satisfactory. But if he habitually suffers from inflamed lids or eyes, or can not read a majority of the XX (20) test type with both eyes, or habitually complains of tired and painful eyes or headache after study, a card of information should be sent to the parent or guardian.

FACTS TO BE ASCERTAINED.

EYES.

1. Does the pupil habitually suffer from inflamed lids or eyes?

¹ Vision Charts for Schools; published by Almer Coe, 65 State St., Chicago.

2. Does the pupil fail to read a majority of the letters in the number XX (20) line of the Snellen's test type with either eye?

3. Do the eyes and head habitually become weary and painful after study?

4. Is the pupil probably cross-eyed?

EARS.

5. Does the pupil complain of ear-ache in either ear?

6. Does matter (pus) or a foul odor proceed from either ear?

7. Does the pupil fail to hear an ordinary voice at twenty feet in a quiet room?

8. Does the pupil fail to hear the tick of a good-sized watch at three feet, with either ear, in a quiet room?

9. Does the pupil fail to breathe properly through either nostril?

10. Is the pupil an habitual "mouth breather"?

If an affirmative answer is found to any of these propositions the pupil should be given a card or letter of warning to be handed to the parent, which should read something like this:

Dear Sir: After due consideration, it is believed that your child has some eye-ear disease, for which an eye-ear doctor of recognized standing should be consulted.

It is earnestly requested that this matter be not neglected, as children with eye-ear diseases can not attain the best results in school

Respectfully.....

Principal.....School

Either the word "eye" or "ear" may here be crossed out, as may be appropriate for the case. If the pupil has presumably both an eye and ear disease, both words may be left, and the space between the words "eye" and "ear" should be filled with the words "and".

It will be observed that these cards are non-obligatory in their nature. They do not require anything of the parent, who is at perfect liberty to take notice of the warning card or not as he sees fit. They simply warn the parent that a probable eye or ear disease exists, thus placing the responsibility upon the parent.

These instructions are repeated in the tabulated reports, and in addition instructions for ear examination as follows:

In a room apart from the general school session examine the pupils singly, ascertaining if the pupil complains of ear-ache, if matter (pus) or a foul odor proceeds from either ear, if the pupil fails to breathe freely through either nostril or if he breathes mostly through his mouth. Have the child turn his back, an assistant plugging up the left ear with a cloth over the finger. The examiner steps away about 20 feet, asks the child a direct question in a low but distinct voice requiring a direct answer. The right ear is then to be stopped and the left ear tested. If after several questions the child fails to hear the spoken words and answers incorrectly he is deemed defective. A good-sized watch is held about six feet away and gradually moved toward the ear to be tested and distance at which the subject says he hears the tick is noted. It should be heard at least three feet away from the ear. If the pupil fails to hear spoken words or the tick of the watch as above noted, if he complains of ear-ache, if pus or a foul odor is observed from either ear, if his nose is habitually stopped or if he is a mouth breather, his name and a detailed report should be entered below on this sheet by the teacher, and a card of information sent by the principal to the parent or guardian.

General suggestions and instructions are likewise found on the tabulated reports as follows:

Examine your entire school by these methods at the beginning of the school year; part of the pupils each day, so as not to interfere with the regular course of instruction. Examine each new pupil entering between beginning and end of terms. Only such pupils as are thought necessary to send to an eye or ear physician need tabulation on this blank. This sheet is to be filled in duplicate, both copies sent to your principal,

one copy of which is to be sent as soon as you have completed the examination of the school to the commissioner of Health for Milwaukee. The other is to be held until the end of the school term by the principal, who will then send the duplicate copy to this address, noting thereon in the two last columns, whether the pupil consulted a physician, or if not, why; describing the results of treatment, particularly as regards the pupil's conduct, health and application to study.

One of the chief obstacles to satisfactory results in Minneapolis and Chicago was the fact that many parents took their children to jewelers and opticians instead of oculists. The cities were flooded with fulsome advertisements, and circulars from opticians and spectacle peddlers to teachers, parents and physicians soliciting their trade and influence.

This preliminary examination is not proposed simply for the purpose of ascertaining the need of glasses, but in hopes of disclosing existence of almost all ocular diseases. The eye is not merely a mechanical apparatus which, if out of order, requires for its correction a pair of glasses. A good medical education is absolutely essential for the diagnosis and treatment of astigmatism, hyperopia, myopia and imbalance of the ocular muscles; the former of which are malformations, and the latter diseases, which, in many cases, need something else than the placing of lenses before the eye as well, for cure of inflammation and work of a surgical nature.

Principals and teachers are, therefore, urged to impress upon pupils and parents the necessity for consulting reputable eye and ear doctors and not unprofessional tradespeople.

SPECIAL ARTICLE.

RELATIONS OF PHARMACY TO THE MEDICAL PROFESSION.

III.

It has been shown that confusion existing in the lay mind, and largely shared by the medical profession, concerning the so-called "patent medicines" for domestic use, is due to the popular incorrect use of the term "patent" to indicate that an article is afforded such protection as rests on priority of registration of a name for the article as a trademark, or through copyright including this. It does not mean the article is protected through letters patent issued on the process of manufacture, or on the composition of the article itself. It has also been shown that a patent is very rarely granted on the combination, or mixtures of various ingredients, or on the process of producing any medicinal preparation or mixture, if for no other reason from the fact that in the vast majority of instances it would be impossible to show any originality, improvement, or invention, even to the often limited extent necessary to satisfy the patent office requirements; hence the almost general reliance on the trade-mark laws, for protection in medicinal articles.

As has already been pointed out, it is not the intent of the trade-mark law to afford protection to the name of an article, but simply through its registration record priority in case of contention over a device, symbol, sign, or figure to distinguish a certain "brand" of manufactures from all other brands.

It is the evident intent of the trade-mark law to protect a manufacturer through some design of his own invention, which must be arbitrarily selected, or, as it is termed, "fanciful," and in the case of a name it must therefore not be descriptive, i. e., too closely simulate the name of any natural substance, mineral, plant, or animal, or geographic name, or that of any well-defined physical, chemical, physiologic process or mechanical or therapeutic uses. That this is a subject of difficult interpretation is self-evident, and the registration by

* The third of a series of articles to appear weekly in THE JOURNAL, designed to correct the abuses from advertising and patronizing pharmaceutical specialties.

different parties, often unwittingly, of names identical or nearly so, has caused endless litigation. Sometimes the difference of a single letter in the termination of a word, as for example, "digestin" and "digestine," applied to different products of different manufacturers, has caused annoyance and confusion. The most interesting illustrations of this character are the adjective derivatives—bromo, chloro, phospho, pepto—joined or hyphenated to some substantive or base, such as caffeine, alum, quinin, mangan, etc. Such compound words have been held as valid trade-marks, and yet they are as nearly descriptive of the articles as any titles could possibly be. "Bromo-seltzer" comes in this category, and yet the name as a trade-mark could probably not be bought for a million dollars! The official nomenclature of the Pharmacopoeia may decide what form of termination should be regarded as descriptive, but since the termination "ine," of a generic plant name, for example, stands for the alkaloid of the plant named, the application of this system to the present trade-mark names would cause a surfeit of active principles of a nondescript collection of medicinal agents as ever graced the apothecary shop, so vividly portrayed by the "bard of Avon." "Heroine," for example, would under the definition become the alkaloid of "hero," and the active principles of the "great fathers" of antiseptic surgery would be ever with us in their "spirits."

CONFUSION OF NAMES.

Much could be said concerning the necessity from the medical standpoint, and especially from that of the prescriber, for a radical change in the system—or lack of system—in vogue for naming medicines. Scarcely a day passes but some new article appears under some fanciful name. The possibilities of the English language are great, but they will soon be exhausted, as the medical and pharmaceutical terms already are, and well-nigh also the dead languages.

So nearly similar terms are bestowed, often on widely differing articles, that, aside from the resultant confusion, there is great danger from serious error. A few illustrations will suffice: "Lactated Mercury" was a name given to a trituration of calomel. On a physician's prescription for this, lactate of mercury, a very potent mercury compound was dispensed.

In another instance a prescription was written for "mercurol," m. 10, water, fl̄ss iv, for an injection. For "mercurol," written illegibly and too recent an addition to be known to the pharmacist, "mercauro" was dispensed instead; and yet the pharmacist can scarcely be blamed—"the pace is getting too swift for him" as well as for the physician.

It is for these reasons, among others, that the use of the names of the article as trade-marks is so objectionable and, in fact, so unreliable that manufacturers wholly familiar with the situation have abandoned reliance on such except when joined with a proper name. The possessive name of a person, especially of the manufacturer, joined with the name of the preparation, is fairly indicative of identity of brand, though not invariably so, as demonstrated in the celebrated cases of "Hoyt's Cologne" and "Brown's Essence of Ginger," the original makers in both instances failing to estop these manufactures by persons of these respective family names.

THE TRUE POSITION.

The very best authorities on trade-mark law at the present time, however, are unequivocally of the opinion that the name of an article can not be maintained as a trade-mark; that such use would give to the trade-mark a power not only not contemplated, but expressly interdicted by the law; that a monopoly of the manufacture of an article must rest on proven originality, invention or improvement, neither of which qualities are inherent in simply the naming of an article; in short, that if the article itself is really valuable, then the invention is entitled to a limited monopoly through patent on the article itself, the preparation, compound or mixture, or on the process of manufacture. Not to be satisfied with a limited protection expiring through limitation granted for a valuable discovery, but to seek unlimited protection—eternal monopoly—on an article unworthy of the few years of protection invested by the letters patent, is a travesty of justice and an absurdity. The justice is therefore apparent of the demand on Congress, by

the National Association of Retail Druggists, submitted to the trade-mark and patent laws, revision committee, appointed by President McKinley, at its recent sitting in Chicago, that the laws should be amended so as "to prohibit the registration of names, combination of names coined or otherwise, and that such registration be confined to brands, symbols, signs and devices." This action is in line with that of the American Pharmaceutical Association, last year, in defining the status of medicinal articles for introduction into the U. S. Pharmacopoeia, presented through its delegates to the Convention for Revising the Pharmacopoeia in Washington, D. C., May 2.

EXTERNAL MEDICINAL AGENTS.

This class comprises all medicinal articles intended for external use; absorbents, antiseptics, astringents, deodorants, disinfectants, protectives, etc., and includes the following pharmaceutical forms:

1. Simple solutions—examples: formalin, hydrogen dioxide solution, hydrozone, glycozone.
2. Compound solutions or mixtures—examples: alphasol, eucacoin, glycothymolin, listerin, bromochloralum.
3. Semiliquid mixtures—non-fatty: lubricichondrin.
4. Semisolids—non-fatty: antiphlogistin, anhydrosin. Fatty—ointments: lyptol, unguentum, vasogen; suppositories, protargol bougies.
5. Plasters, surgical dressings, soap, ligatures.
6. Powders, antiseptic powder.
7. Chemicals of definite composition: nosophen, eudoxin, etc.

In all of the above examples, only the two first mentioned have truly descriptive names, all the remainder having more or less fanciful or suggestive ones, protected, as far as known, by trade-mark or copyright registration. Hydrogen dioxide is the perfect type, since the name is the correct chemical one, and "solution" or "water of" being understood it is also the official title of the U. S. Pharmacopoeia. By affixing the name of the brand, the preparation or rather the particular make of hydrogen dioxide is specified and insures all the distinction required to identify this make against all other makes. This is the ideal method and insures protection; besides, it familiarizes the reader with the name of the brand, and if favorably impressed with the preparation, on its use, he will know that any other article of this same brand is the make of a manufacturer who enjoys his confidence and is entitled to his patronage and preference. The same plan could be adopted for the naming of the two other hydrogen dioxide preparations, instead of "glycozone," the term "glycerite hydrogen dioxide" would at once indicate its character and far better identify the brand than the present title, although "ozone" as compounded with the prefixes "hydro" and "glyco" in these instances is not to be particularly criticized and is permissible. "Lubrichondrin," from "lubricating" and "chondrin," the accepted term for the mucilage of Irish moss, "Chondrus crispus," is fairly descriptive of composition and use, and this may be said also in a more limited degree of "Protargol Bougies," but with these exceptions all the examples in the first four groups have nothing to commend them and simply "make confusion worse confounded," since new recruits are received nearly every day, especially in Group 2. A general title, i. e., "Antiseptic Solution" or "Liquor Boroglycerini Compositus," the name specified, would be far more rational and satisfactory to the physician, pharmacist and dealers than the unscientific, confusing, pretentious and grotesque names bestowed on this class of preparations at the present time.

GENERAL FORMULAS.

The composition of these articles is usually known. A few are secret and these should be tabooed since they are on exactly the same level as are the "patent medicines," and like these will, sooner or later, be exploited to the laity as cure-alls, the testimonials received from medical men being used to "boost" them. Some of them are valuable therapeutic agents, as are the non-fatty mixtures of Group 4, and from their character they can not be so well prepared by the retail pharmacist, as on a larger scale. The following yields a product similar to antiphlogistin: glyceroplasma of kaolin (antiseptic). Kaolin, or white clay, is thoroughly elutriated, dried and made into a semisolid paste with glycerin, containing about 5 per

cent. boroglycerin; methyl salicylate or oil of gaultheria, oil of thyme, or menthol may be incorporated. The clay must be thoroughly levigated with glycerin, best accomplished in a paint-mill. Any fine argillaceous earth will answer, provided it is entirely freed from grit, by elutriation, or water-sifting, the process by which chalk is "prepared."

OINTMENT VEHICLES.

While secrecy should not be tolerated, there is no need of the exact formulas for this class of preparations so long as they are only for external use. Except in the case of powerful germicides—phenol, mercuric compounds, etc.—enumeration of the ingredients without the exact proportions is sufficient. Nor is the process necessary, since any skilful pharmacist should be able to prepare a similar article and others need not be considered.

But in semisolid fatty preparations, the vehicle employed should be designated since it is of great importance that the physician be advised as to the general dermic properties of the preparations. Thus, in the case of ointments, the fatty vehicles determine the respective general uses of the preparation, viz., if the agent is desired merely for protection, a non-absorbent fat such as petrolatum or cerate, is wanted; if intended for subdermic use, animal or vegetable fats and oils, lard, etc., while if systemic effects are desired by inunction, hydrated wool-fat is the vehicle to induce rapid absorption of the medicinal agent.

To summarize: the trade-names should be supplanted as early as possible by pharmaceutical ones, at least as synonyms; the general composition must always be given; the vehicles for fatty preparations should be stated; the article must not be exploited to the laity, in order to secure medical patronage.

Chemicals of Group 7 will be treated under "chemicals made by patent processes."

Therapeutics.

Stomatitis Aphthosa.

Paint the affected areas four or five times with:

R.	Borax	4 parts	
	Tincture of myrrh	8 parts	
	Syr. of mulberries	60 parts	
M.			
R.	Borax	4 parts	
	Tincture of benzoin	2 parts	
	Distilled water	10 parts	
	Syrup	20 parts	
M.			
R.	Sodium phosphate	10 parts	
	Orange-flower water	25 parts	
	Honey of roses	50 parts	
M.			
R.	Calcium chlorate	2 parts	
	Honey	20 parts	
M.			
R.	Potassium chlorate	3 parts	
	Distilled water	60 parts	
M.	Apply four or five times a day.		—Levi.
R.	Sodii boratis	5i	4
	Tinct. myrrhæ	5iii	8
	Syrupi	5xv	60
M.			
R.	Acidi salicylici	5ss	2
	Spt. vini rectif.	5iiss	10
	Glycerini	5v	20
			—Hirtz.
R.	Potassii chloratis	5i	4
	Aquæ destillatæ	581¼	200
	Tinct. myrrhæ	gr. xlv	3
M.	Sig. To inject into the mouth.		—Monti.
	In obstinate cases with great pain, especially affecting the tongue:		
R.	Sodii salicylatis	5v	20
	Aquæ destillatæ	5xxv	100
M.	Sig. Use as a wash.		
Or			
R.	Hydrargyri chloridi corrosivi	gr. iiii	2
	Aquæ destil.	5xxv	100
M.	Sig. To apply with a brush.		—Levi.

R.	Aquæ destil.		
	Glycerini, āā		3iiss
	Jodini		
	Potassii iodidi, āā		gr. vi
M.	Apply to lesions.		—Morfan.
R.	Potassii chloratis		5i
	Tinct. myrrhæ		gtt. xx
	Elixir calissayæ		5iii
M.	Sig. Teaspoonful in water every four hours.		Caution:
	Not to be used in acute nephritis.		—Harc.

Irritable Bladder.

R.	Benzoic acid		
	Borax, āā		5iv
	Alcohol		5iv
	Tinct. hyoscyamus		5iii
	Syr. wild cherry		5iii
	Elixir orange peel		5xii
	Distilled water, q. s. ad		5vi
M.	Sig. A dessertspoonful every four hours, followed by a glass of water.		—Todd; Therap. Digest.

Ichthyol in Burns.

Ichthyol is efficacious in burns of the first and second degrees. It allays the pain at once, and slight superficial burns heal rapidly. It is used dry, diluted with zinc oxide or bismuth—the powder being spread evenly over the surface—in the form of paste, or as a combination of both methods. The zinc-oxid powder may be combined as follows:

R.	Zinci oxid.		5v
	Magnesium carbonatis		5iii
	Ichthyol		5iiss
	Below is the composition of the paste:		
R.	Calcii carbonatis		5i
	Zinci oxid.		5iv
	Ol. olivæ		5i
	Liquor. calcis		5i
	Ichthyol		5i

—Monatsh. f. prak. Dermat.

Seasickness.

From the *Practitioner's Manual* we quote the following:

The mere fact of being upon a vessel does not preclude the possibility that the nausea, vomiting, headache, depression, sleeplessness, pallor, perspiration, may have other causes than the one most likely under the circumstances, or that there may be some complications requiring most prompt and urgent attention. Examination of the abdomen may disclose signs of volvulus, appendicitis, obstruction, etc. Begin three days before sailing and continue for first three days out to take:

R.	Ext. taraxaci		
	Ext. colocynth. comp, āā		gr. xx
	Ext. hyoscyami		gr. iiii
	Ext. nucis vomice		gr. v
	Masse hydrargyri		gr. xv

M. Et fiant pil. No. xx. Sig. One or two each night. During this time let the diet be simple. Avoid fluids. Keep the recumbent posture on deck.

PREVENTIVE TREATMENT.

For an hour before embarking give every quarter hour, strychnin sulphate (arseniate or hypophosphate) gr. 1/20, in granules or tablet triturate. A combination of these three salts of strychnin, gr. 1/20 of each, can be given for three days, three times daily, and each night half a grain of podophyllin. —Le Griæ.

Wear a tight bandage or belt from the ensiform cartilage to below the umbilicus. Potassium bromid, 5ss—3i; take, upon embarking, in a large glass of soda water and repeat for long voyages in perhaps smaller dose; or take chloral in corresponding large dose. Remove bile by giving hot water to provoke emesis. —T. Lauder Brunton.

Bromization is demanded, and this must be induced and kept up two or three days before, and continued for several days after sailing, and sometimes even through the entire voyage. The amount necessary to produce mild bromization varies in individual cases. Thirty grains three times a day may be sufficient, but in many cases it is necessary to give much more than this. Because of its greater acceptability to the stomach, the bromid of sodium is much to be preferred to the bromid of potassium. —Rockwell.

TO ARREST VOMITING.

- R. Cocainæ hydrochloratis
Ext. opii, āā.....gr. iss
- Powd. marshmallow root.....q. s.
- M. et div. in pil. No. x. Sig. One pill every second hour.
- R. Chloroformi
Tinct. nucis vomicæ, āā.....gtt. x
- Comp. tinct. lavender.....3i
- Water.....3x
- M. A teaspoonful to be taken every hour until the vomiting and nausea have subsided, care being taken to shake the bottle each time before the dose is poured out. —Barbas.

- R. Menthol.....gr. iss | 1
- Cocain hydrochlor.....gr. iii | 2
- Alcohol.....5xv | 60
- Syr. simp.....3viiss | 30

M. Sig. Teaspoonful every half hour. —Morci-Lacalléc.

Treatment of Stomatitis Ulcerosa.

- R. Acidi thymici (thymol).....gr. iv
- Acidi benzoici.....ʒii
- Tinct. eucalypti.....ʒss
- Spt. vini rect.....ʒiij
- Spt. menthæ pip.....gtt. x
- M. Sig. Drop enough into a glass of water to cause turbidity, and rinse the mouth morning and night.

—Muller.

- R. Tannin.....3ii
- Tinct. iodini.....ʒiv
- Potassii iodidi.....gr. xx
- Tinct. myrrhæ.....ʒiv
- Aque rosæ.....3viii

A dessertspoonful in a small glassful of warm water is used to wash the mouth with thoroughly every morning.

—Thomas.

- R. Sodii bicarbonatis.....ʒiiss
- Sodii bicarbonatis.....ʒss
- Thymol.....gr. iii
- Glycerini.....ʒi
- Aque lanrocerasi, q. s., ad.....ʒiv
- M. Sig. Use as a wash. —Thomas.

Treatment of Hemorrhoids.

In the Presse Médicale for December, Dr. R. Rounne recommends the following suppositories when there are slight excoriations or small losses of blood:

- R. Chrysarobin.....gr. iss | 072
- Iodoformi.....gr. 3/10 | 018
- Ext. belladonnæ.....gr. 16/100 | 009
- Olei theobromi.....gr. xxx | 2

M. For one suppository. Two or three suppositories may be used daily.

Later the suppositories may be replaced by the following ointment:

- R. Chrysarobin.....gr. xii | 8
- Iodoform.....gr. ivss | 27
- Ext. belladonna.....gr. ix | 6
- Vaselin.....ʒiiss | 10

M. For local applications several times a day.

Diuretic, With Iron.

- R. Tinct. ferri acetatis.....3iv
- Potassii acetatis.....3iv
- Syrupi simplicis
- Aque, āā.....ʒii
- M. Sig. Two or three teaspoonfuls four times a day.

Asthmatic Bronchitis.

Torres Homem recommends, in O Brazil Medico, a tablespoon of the following, five minutes before the two principal meals, in cases of bronchitis with asthma:

- R. Sodii arseniatis.....gr. iss | 10
- Aque destil.....ʒixss | 300

Treatment of Seborrhea.

Dr. J. F. Payne, in "Allbutt's System of Medicine," says:

There are many popular remedies for dandruff. Washing, alkalis, lime-water, borax, etc., have some efficacy in removing the scurfy condition, for a time. And admitting that this condition is almost certainly due to the action of microbes, we treat it upon this supposition. Hence, first we shall disinfect the skin of the head as thoroughly as possible. For this purpose an antiseptic soap may be used; I prefer

one containing biniodid of mercury. After washing with this a few times the scalp is to be brushed over with perchlorid of mercury solution (1 to 1000), either aqueous or alcoholic. But this treatment is not sufficient, and irritation is often produced by the antiseptic; we then have recourse to sulphur combined with carbolic acid or tar, as follows:

- R. Sulph. præcip.....gr. xv
- Acidi carbolicii.....m. xv.
- Olei amygd. amar.....m. iij
- Paraffin moll.....ʒi
- M. ft. Unguent.

Coal-tar solution may be substituted for carbolic acid, and the ointment may be scented with an essential oil. Resorein, either in a lotion—2 to 5 per cent.—or combined with sulphur in an ointment—the same proportions as given for carbolic acid—is also a very efficacious means. The ointment should be rubbed thoroughly into the roots of the hair once a day for a fortnight, and afterward used occasionally. Since patients will not tolerate greasy applications for very long, a lotion or hair wash must then be substituted. The following prescriptions are useful:

- R. Liq. carbon deterg.....m. iv ad x
- Glycerin.....ʒss
- Aque rosæ ad.....ʒi
- M. ft. lotio.

- R. Glycerit. acidi tannici.....ʒi to ʒii
- Acidi carbolicii.....m. v
- Aque rosæ, ad.....ʒi
- M. ft. lotio.

- R. Acet. cantharidis.....ʒss
- Hydrag. bichloridi.....gr. i
- Spt. camphoræ.....m. iij
- Aque dest.....ʒi
- M. ft. lotio.

The latter is used only when there is an entire absence of inflammation, as a stimulant to hair growth.

Too frequent washing with insufficient drying greatly favors the production of dandruff, and must be avoided. Seborrhea of the body, if not complicated with eczema, is easily got rid of by thorough washing followed by a sulphur ointment or lotion, or one of the other remedies recommended above for the scalp. In all affections of the head, brushes, combs, and other articles should be kept thoroughly disinfected with borax or carbolic acid.

TREATMENT OF SEBORRHEA OLEOSA.

The first step here is thoroughly to remove the sebaceous crusts, for which purpose imunction with some oily substance—such as pure olive oil, carbolized oil, a mixture of equal parts olive oil and fresh lard, or others—is necessary. These should be left on for twelve hours, and the head then washed with soap or, if the skin is inflamed, with yolk of egg. The subsequent treatment is the same as for the other variety. Sulphur in some form is the most efficient remedy.

INTERNAL TREATMENT OF SEBORRHEA.

Generally speaking, no internal treatment is necessary, and from my own experience I believe that internal conditions have little to do with the production of seborrhea. But two points have to be considered. 1. Gastric dyspepsia, though far from producing seborrhea of the scalp, may aggravate the condition when present, chiefly by producing irritation of the skin and consequent scratching. The same is true of constipation. It may then not be superfluous to correct morbid conditions of the stomach and bowels as far as possible. 2. The general nutrition of the skin may be bad, and consequently the seborrheic process gets firmer hold. Hence it may be advantageous to give a course of arsenic, which has acquired a special reputation in the treatment of certain forms of seborrhea corporis.

Medicolegal.

Five Hundred Dollars for Four Hours' Pain and Suffering.—The Supreme Court of Arkansas holds not excessive, in St. Louis, Iron Mountain & Southern Railway Company vs. McCain, Administrator, an award of \$500 for the pain and suffering caused by an injury which terminated fatally in four hours' time.

Liability for Infection of Assistant.—The declaration in the New Hampshire case of Edwards vs. Lamb, an action for negligence, alleged that the defendant, a physician and sur-

geon, was employed to treat the plaintiff's husband for a wound which became an infectious sore; that the defendant knew the danger to the plaintiff of infection therefrom but negligently informed her that there was no such danger, and on one occasion directed her to assist in dressing the wound; that she, in justifiable ignorance of the truth, and relying on his assurances, did so assist him, whereby she became infected with septic poison. The defendant demurred to the complaint. But the Supreme Court of New Hampshire has overruled the demurrer. It says that the question presented was not one of breach of contract and that it was not necessary to consider how far the defendant's contractual duties extended. Nor was it necessary to decide whether, in the absence of any statement by the defendant, he would be liable. The case was one of positive action, not merely of failure to act. The declaration alleged, as above stated, that the defendant informed the plaintiff that there was no danger of infection, and when he did this he voluntarily assumed certain obligations. The fact that his duty, as to her, was merely to advise, and not to administer treatment, was immaterial. The situation was such that she needed the advice of a physician. This the defendant knew. He knew of her danger, and negligently advised her as to it, and she was injured by following his advice. That when he advised her he assumed the obligation to use due care in so doing was not open to doubt. Moreover, the court goes on to say that, if the contract to attend the plaintiff's husband were eliminated from the case the liability would be the same. The gratuitous character of the services rendered to the plaintiff would not excuse the defendant's failure to exercise such care as the circumstances demanded. On the other hand if the advice to the wife was treated as a part of the performance of the contract with the husband, the defendant still owes her the noncontractual duty to use care in the performance of such of his services as concerned her personally. Then, it was urged that there would have been no danger but for pricks in the plaintiff's fingers of which the defendant was ignorant. The court replies that there was danger unless the plaintiff's hands were free from the slightest wounds. And it adds that it can not be said as a matter of law, that a perfect physical condition is so common that the defendant could reasonably rely on it in giving advice, or that the plaintiff ought, as a reasonable person, to have understood that he was acting on the assumption that such was the fact.

Crooked Ankle Indicative of Malpractice.—Certain physicians in Kentucky were sued for damages for negligently setting a broken ankle, by reason whereof it was alleged that in healing it was crooked, and painful to use in walking. The answer denied any negligence, and alleged that the crooked condition was caused by the negligence of the plaintiff alone. On trial before a jury at the conclusion of the plaintiff's evidence, the court gave a peremptory instruction to find a verdict for the defendants. This, the Court of Appeals of Kentucky holds, was error, on account of which it reverses the judgment entered in favor of the defendants, remanding the cause for a new trial. There was no proof introduced as to the treatment, except by the plaintiff—that for five days bandages and bags of sand were used around the ankle, and then the leg reset and incased in plaster. No surgeon or expert was called to testify, and it was not shown whether this treatment was the usual and proper treatment for that kind of an injury, or whether it was unskillful to so treat it. However, it did appear in proof that the bones knit together and healed at the place of fracture, but the ankle and foot were crooked, and the ankle-joint stiff. Now the court of appeals is of the opinion that under this proof alone the jury might have concluded that the leg was not set straight by the defendants, and that it knit together as it was set, and might therefore have concluded that the defendants were guilty of negligence in replacing the broken bones. If they so concluded, a judgment for the plaintiff, it holds, would have been authorized. It says that it recognizes the well-settled principle that physicians and surgeons are held to possess only the usual and ordinary skill of the members of the profession in that community where they are engaged, and that without special contract there is no guaranty of a cure. But it goes on to

declare that, in that state—Kentucky—where no person is permitted to practice medicine or surgery without a certificate of qualification from the State Board of Health, and where by the same energy and vigilance of that body the profession of medicine has reached so high a standard, it thinks a jury would be warranted in concluding a physician guilty of negligence, who, in resetting a broken limb at the ankle, would leave the ankle and foot crooked. The question presented, it adds, was not one of cure. The broken bones did unite and grow together, even in the crooked position, and would have, the court thinks, necessarily united if placed straight. This case, of Hickerson vs. Neely, is "not to be officially reported," but will be found in 54, *Southwestern Reporter*, 842, 843.

When Epidemic of Smallpox is Threatened.—Mention was made on page 377 of THE JOURNAL, that the Supreme Court of Indiana had sustained the State Board of Health in its order excluding unvaccinated children from the public schools. The decision thus briefly referred to was rendered in the case of *Blue vs. Beach*. But the court's opinion is rather lengthy and contains several points deserving of notice. First of all, it wants it understood that with the wisdom or policy of vaccination, or as to whether it is or is not a preventive of the disease of smallpox, courts, in the decision of cases of this character, have no concern. That question is one which the legislature or boards of health, in the exercise of the powers conferred on them, must in the first instance determine, as the law affords no means for the question to be subjected to a judicial inquiry or determination. Then, it says that there is no express statute in Indiana making vaccination compulsory, or imposing it as a condition on the privilege of children attending the public schools, but holds that, in the absence of such a law, the exclusion in question was justified, as a public emergency, under the rules and orders of the state and local boards of health respectively. And it emphasizes that it does not here go beyond holding that such exclusion may be made during the continuance of an emergency, as where there is a threatened epidemic of smallpox, as that it considers it as far as the rule or order objected to went. Nor does it think that either the holding of the Supreme Court of Illinois or of the Supreme Court of Wisconsin can, under the facts, be said to militate against the conclusion reached in this case. Here there had been an exposure to smallpox on the part of the community. This being true, and an emergency on the account of danger from smallpox having arisen, and the board of health of the city believing, as may be assumed, that the disease would spread through the public schools, and further believing that it would be prevented, or its bad effects lessened, by the means of vaccination, and thereby afford protection to the pupils of such schools and the community in general, the court holds, it would certainly have the right, under the authority with which it was invested by the state, to require, during the continuance of such danger, that no unvaccinated child be allowed to attend the public schools; or the board might, under the circumstances, in its discretion, direct that the schools be temporarily closed during such emergency, regardless of whether or no the pupils thereof refused to be vaccinated. And, under the circumstances, this power the court holds, was lodged in the local board of health, irrespective of the rule of the state board. It also declares that it would be an absurdity, under such circumstances, to require the health officials, before taking action to prevent the spread of the disease, to investigate in order to determine the degree of exposure to which every person in the community had been subjected. Besides all this, it says that it is a well-recognized fact that our public schools in the past have been the means of spreading contagious diseases throughout an entire community. They have been the source from which diphtheria, scarlet fever, and other contagious diseases have carried distress and death into many families. Surely, it then adds, there can be no substantial argument adverse to the reasonableness of a rule or order of health officials which is intended and calculated to protect, in time of danger, all school children, and the families of which they form a part, from smallpox or other infectious diseases.

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

Philadelphia Medical Journal, April 21.

- 1.—*Senile Arterial Plethora. (Continued.) T. Clifford Allbutt.
- 2.—*Wesley M. Carpenter Lecture on Infection Through the Tonsils, Especially in Connection with Acute Articular Rheumatism. (Continued.) Frederick A. Packard.
- 3.—*Report of Two Cases of Fracture of Shaft of Radius. W. B. Lowman.
- 4.—*Appendicular Abscess Rupturing into Sac of Reducible Inguinal Hernia; Operation by Drainage, with Permanent Cure of Hernia, Intussusception of Bowel Relieved by Operation; Relapse and Second Operation. Chronic Hematocele of Tunica Vaginalis Testis Associated with Encysted Omental Hernia Resembling Malignant Disease of Testicle. Orville Horwitz.
- 5.—*Early Operation in Appendicitis by Country Practitioner; Report of Case Probably Caused by Typhoid Infection. R. H. Harper.

New York Medical Journal, April 21.

- 6.—*Cancer of Stomach in the Young. William Osler and Thomas McCrea.
- 7.—*Contribution to Histopathology of Epidermolysis Bullosa (Hereditary). (Continued.) George T. Elliot.
- 8.—*Consideration of Neuromuscular Elements in Hip-Joint Disease, With Especial Reference to Question of Abolition of Protective Treatment. Newton M. Shaffer.
- 9.—*Present Status of Widal Reaction as Diagnostic Test in Typhoid Fever. Arthur R. Guerard.
- 10.—*Mysticism Among Negroes. F. Julian Carroll.
- 11.—*Hepatic Abscess. J. F. Richardson.
- 12.—*Some Practical Remarks on Clinical Examination of Blood. William N. Berkeley.

Medical News (N. Y.), April 21.

- 13.—*Pain as Pathognomonic Symptom of Ectopic Pregnancy. Henry C. Coe.
- 14.—*Tuberculous Disease of Urinary Apparatus. J. M. Gile.
- 15.—*Case of Probable Accidental Inoculation with Malarial Parasite. William H. Katzenbach.
- 16.—*Curability and Treatment of Early Phthisis. W. F. Hazelton.
- 17.—*Lateral Sinus Thrombosis and Acute Leptomeningitis, both Complicating Acute Suppurative Otitis Media; Complete Perforation of Cranial Wall Above and External to Antrum. Wendell C. Phillips.

Medical Record (N. Y.), April 21.

- 18.—*Formation of Artificial Anus. Robert F. Weir.
- 19.—*Indications for Constitutional Treatment of Catarrhal Affections of Upper Air-Passages. Walter A. Wells.
- 20.—*Case of Fracture and Medical Ethics. E. S. Goodhue.
- 21.—*Use of Electricity in Chronic Rheumatism. William J. Morton.

Boston Medical and Surgical Journal, April 19.

- 22.—*Intermenstrual Dysmenorrhea. Malcolm Storer.
- 23.—*Treatment of Cancer of Cervix of Uterus Complicated by Pregnancy. George Ben Johnston.
- 24.—*Third International Congress of Obstetrics and Gynecology, held at Amsterdam, Aug. 8-12, 1898. George J. Engelman.
- 25.—*Gunshot Wound of Abdomen, with Multiple Wounds of Intestine. Howard A. Lothrop.
- 26.—*Practical Value of White Blood Count in Surgical Cases. J. C. Hubbard.

Cincinnati Lancet-Clinic, April 21.

- 27.—*Deep Breathing vs. Tuberculosis. H. H. Spiers.
- 28.—*Medical Review (St. Louis, Mo.), April 21.

- 28.—*Report of Case of Gunshot Wound of Pregnant Uterus and Fetus; Cesarean Section; Recovery. H. L. Nietert.

American Practitioner and News (Louisville, Ky.), March 1.

- 29.—*Diagnosis of Glaucoma without Ophthalmoscope. M. F. Coomes.
- 30.—*Cholelithiasis. R. C. Falconer.
- 31.—*Cerebrospinal Meningitis. T. D. Williams.
- 32.—*Typhoid Fever a Curable Disease. J. L. Stillings.

Medical Age (Detroit, Mich.), April 10.

- 33.—*Some Remarks Concerning Suitable Treatment Before, During and After Surgical Operations. J. A. Jackson.
- 34.—*Technique Governing Use of Harris's Urine Separator. H. F. Harris.

Bulletin of Johns Hopkins Hospital (Baltimore), March.

- 35.—*Notes on Improved Method of Removing Cancerous Uterus by Vagina. Howard A. Kelly.
- 36.—*Preliminary Report of Surgical Treatment of Complicated Fibroid Tumors of Womb, with Description of Two Methods of Operating. Howard A. Kelly.
- 37.—*Congenital Malformations of Heart as Illustrated by Specimens in Pathologic Museum of Johns Hopkins Hospital. W. G. Mac Callum.

Journal of Cutaneous and Genito-Urinary Diseases (N.Y.), April.

- 38.—*Contribution to Histogenesis of Melanosarcoma of Skin. Alfred Schalek.
- 39.—*Notes of Thought on Malignant Tumors. R. H. Buxton.
- 40.—*New Urethral Instillation Syringe. Angus McLean.
- 41.—*Laryngoscopy (St. Louis, Mo.), April.
- 41.—*Past and Present of Laryngology. Orlando B. Douglas.
- 42.—*Associated Frontal Sinus and Mastoid Disease. Thomas J. Harris.
- 43.—*Case of Carcinoma of Pharynx. Gotthelb Kleaer.
- 44.—*Tooth in Left Nasal Cavity Causing Purulent Rhinitis. Homer Dupuy.

- 45.—*Radical Treatment of Follicular Tonsillitis. M. A. Goldstein.

Denver Medical Times, April.

- 46.—*Report of Case of Mucous Colic. H. B. Forbes.
- 47.—*Influence of Infectious and Hereditary Diseases on Developing Mind. J. A. Lambert.
- 48.—*Typhoid Fever. G. Law.
- 49.—*Nose and Throat Affections. C. H. Powell.
- 50.—*Report of Case of Septicemia and its Treatment. Arthur C. Bell.
- 51.—*Medical Science of Talmud. Nuphtali Herz Imber.

Medical Standard (Chicago), April.

- 52.—*Diagnosis of Diseases of Heart. Albert Abrams.
- 53.—*Incurability of Leprosy. Albert S. Ashmead.
- 54.—*Laryngeal Tuberculosis, Spontaneous Ethmoiditis and Acute Non-Suppurative Ethmoiditis. William L. Ballenger.
- 55.—*Measles and Treatment. Marcus P. Hatfield.
- 56.—*Urinary Diagnosis and Treatment, Including Microscopic and Chemical Examination. J. W. Wainright.
- 57.—*Strangulated Hernia from General Practitioner's Standpoint. C. F. Wahrer.
- 58.—*Diagnosis and Treatment of Ectopic Gestation. C. K. Fleming.

Ophthalmic Record (Chicago), April.

- 59.—*Need of More Careful Measurements of Refraction. E. W. Stevens.
- 60.—*Study of Changes in Refraction in 400 Eyes During Seven Years. Howard F. Hansell.
- 61.—*The "Crossed Cylinder" in Determination of Refraction. T. B. Schaeffelman.
- 62.—*Dioptric Power of Cornea. William N. Suter.
- 63.—*Extraction of Congenitally Dislocated Opaque Lenses, with Presentation of Case. Wm. H. Wilder.

Chicago Clinic, April.

- 64.—*Rachitis. Frank B. Earle.
- 65.—*Study and Dissection of Pelvic Outlet. W. T. Eckley.
- 66.—*Retrostriatal Edema in Female Bladder. Gustave Kolisher.
- 67.—*Report of Case of Cystinuria Complicated with Uricacidemia. G. A. Gilbert.
- 68.—*Surgery of Hand. W. A. Kuflewski.

Louisville Monthly Journal of Medicine and Surgery, April.

- 69.—*Urethral Fistule. T. S. Bullock.
- 70.—*Nitrous Oxid. W. E. Grant.
- 71.—*Lobar Pneumonia: Its Treatment. C. L. Venable.
- 72.—*Review of Progress of Medicine during Nineteenth Century. H. Brooker Mill.
- 73.—*Systemic Anesthesia of Chloroform and Ether: Practical Points from a Personal Experience of 2300 Cases. (Continued.) James W. Guest.
- 74.—*Case of Rabies. D. L. Field.
- 75.—*Gunshot Wounds. H. G. Sandlin.

Physician and Surgeon (Detroit and Ann Arbor, Mich.), March.

- 76.—*Pathology and Treatment of Typhoid Fever. George Dock.
- 77.—*Report on Question of Contagiousness of Pulmonary Consumption. Johann Flintermann.
- 78.—*Earlier Diagnosis and Treatment of Pulmonary Tuberculosis. George Duffield.
- 79.—*Complicated Wounds of Intestines. Hal C. Wyman.
- 80.—*Forceps and Gauze Carrier. Emil Amberg.

New York Lancet, March.

- 81.—*Cleanliness in Minor Gynecology. Alex. J. C. Skene.
- 82.—*"Pleaters" in Urine. Ferdi. C. Valentine.
- 83.—*Brief Discussion of Certain Conditions Frequently Associated with Movable Kidney. Charles M. Niesley.

Kansas City Medical Index-Lancet, March.

- 84.—*Address Before Grand River Medical Association. F. W. Burke.
- 85.—*Displacements of Uterus. H. C. Crowell.
- 86.—*Rectal and Anal Surgery. Samuel G. Gant.
- 87.—*Clinical Report on Cases of Unusual Interest. Thomas H. Manley.
- 88.—*Further Observations on Treatment of Abdominal Viscera Through Colon. Fenton B. Turck.
- 89.—*Convulsions in Children and Their Significance. John Puntton.

Texas Medical Journal (Austin), April.

- 90.—*Vaccination. H. A. Engelhardt.
- 91.—*Scalp Wounds. W. E. Fowler.
- 92.—*Electricity and Gynecology. M. B. Grace.

The Stylus (St. Louis, Mo.), April.

- 93.—*Paresthesia. Acne. John V. Shoemaker.
- 94.—*Salpingo-Oophorectomy and Suspension of Retroflexed Uterus: Remarkable Abdominal Spasms and Post-Operative Hemorrhage; Abdomen Reopened; Recovery. Spencer Grave.
- 95.—*Case of Hemiplegia of Specific Origin. Sidney I. Schwab.
- 96.—*Interesting Decision. John A. Harrison.
- 97.—*Radical Treatment of Follicular Tonsillitis. M. A. Goldstein.
- 98.—*Limitations of Tuberculosis. Wm. Porter.

Medical Council (Philadelphia), April.

- 99.—*Selection of Frames and Prescribing Them with Glasses. A. H. P. Leuf.
- 100.—*Case of Dislocation of Shoulder with Unsuspected Fracture of Anatomic Neck of Humerus. J. M. Salmoo.
- 101.—*A Safe Inhaler. Willis Cummings.
- 102.—*Treatment of Pneumonia in Children. Abraham Goltman.
- 103.—*Failure of Buissou Treatment of Hydrophobia. C. M. Smith.
- 104.—*Pigeon Post Pointers. (Continued.) Charles L. Lang.
- 105.—*Uterine Fibroid; Ruptured Ovarian Cyst. E. E. Montgomery.
- 106.—*Chronic Middle Ear Catarrh. E. B. Gleason.
- 107.—*Points in Surgery. William W. Morgan

Journal of Boston Society of Medical Sciences, March 20.

108.—Solid Stage of Large Intestine in Chick, with Note on Ganglion Coli. Chas. S. Minot.

109.—Lobule of Lung and Its Relation to Lymphatics. W. T. Councilman.

AMERICAN.

1. **Senile Arterial Plethora.**—Allbutt treats especially of the senile fluctuations of the blood pressure, which is often temporarily increased in the aged. He quotes from Savill, his post-mortem findings showing the general increase of the arterial coats, more especially of the muscular coat, and his views that senile vertigo and senile syncope are clinical manifestations of this arterial hypermyotrophy.

2. **Infection Through Tonsils.**—The routes of infection through the system are first noticed by Packard with special reference to the mouth, where it would seem from the abundance of micro-organisms that there must be constant infection of the mucous membrane. The tonsils are especially exposed, and he briefly reviews the comparative anatomy and concludes that they are not evolutionary vestiges. He is inclined to believe that they have certain protective functions, acting as do lymph nodes, and form a defensive outpost of the digestive tract. We have, therefore, to consider them as dangers to the organs no more than we should look on the inguinal glands as a danger point in venereal disease. Diseases of the tonsils are evidence of the protective conflict in retaining the bacteria and destroying their virulence. He reviews the various disorders which have been found to follow or complicate tonsillar inflammation, as they have been observed by various authorities. Among these are cardiac disease, pleurisy, synovitis, skin lesions and chorea. Of this last he reports two cases. He refers to the infection theory and its origin.

3. **Fracture of Radius.**—After first noticing the usual textbook statements as to diagnosis of fracture of the shaft of the radius, Louman says his experience has been contrary to these. The cases he reports and illustrates he thinks could not be diagnosed without the use of the X-ray. Both were of interest to him on account of the uncertainty of the fracture of the bone, one being misled by the arm being straight, the ulna being in position.

5. **Appendicitis.**—Harper reports a case of operation for appendicitis in country practice, under unfavorable circumstances, with success, excepting the occurrence of stitch abscess along the upper part of the incision. The disorder appeared to be a sequel of typhoid.

6. **Cancer of Stomach in Young.**—Cancer of the stomach in persons under 30 years of age is here considered as occurring in the young. Cases occurring before the age of 20 are clinical and pathologic curiosities. Those in the third decade of life, however, are more numerous, and show fairly uniform symptoms. Osler and McCrae analyze a few cases in the first and second decades, which are in most cases rather rapid, though in accordance with Dock's experience cancer of the stomach in early life runs a slow course. They next report six cases occurring in the third decade, which constitute 4 per cent. of the total of their series. In all the disease was rapid and the onset abrupt in 4 of the 6. Certain symptoms are mentioned in detail: Loss of appetite was present in 2 cases, pain in all but one and fairly serious, and accompanied with vomiting, which was absent in the others. Tumor was present in 5, though found only at autopsy in 1. In none of these 6 was there ascites, and 3 were febrile. Only 1 was prolonged over eighteen months, and in 4 others the duration was known; all were under six, and the fifth was also probably of short duration. The authors quote the two following conclusions: 1. Cancer of the stomach below the age of 30 has generally a rapid progress in some months, and often ends suddenly by incidents more or less abrupt. 2. Early cancer is not latent—it is often overlooked.

7. **Epidermolysis Bullosa.**—Elliot describes and discusses at length cases of this disorder, which he thinks is not easily confounded with other bullous affections.

8. **Hip-Joint Disease.**—The spasmodic muscular symptoms and the functional disturbances of hip-joint disease are noticed by Shaffer. The special practical points are the question when to discontinue immobilizing and rest treatment, and to allow

free movement and use of the limb. He favors the use of prolonged protective treatment until he is satisfied that the reflex muscular spasms have ceased to exist and the damaged joint is in a state of true convalescence. The latter does not begin in hip-joint disease before the important symptoms which enable us to make a diagnosis are present or before the joint disability is relieved so as to make the hindrance to locomotion of lesser effect than that occasioned by simple disuse, and not so long as any deformity is present. Still, the danger of too long immobilization is a real one, and when the joint is free from reflex muscular spasm, it may be at once placed on gradual treatment by use and movement.

9. **Widal Reaction.**—Gnerard concludes, from a review of the published facts and his own experience of three years including the examination of about fifty specimens a week, that the Widal reaction is as reliable a test as any bacteriologic one now in use. The serum reaction is never present in other diseases if correctly tested and in proper dilution. It does not appear as a rule during the first few days of disease, but is usually manifested before the eruption appears and is only occasionally late in its appearance and very rarely absent. While it has its undoubted limitations, it is nevertheless of value to diagnosis in irregular and mild cases of typhoid.

10. **Mysticism Among Negroes.**—Carroll describes the superstitious ailments of negroes and his success in treating them under the advice of an old experienced physician. The treatment was purely mental, the performances largely to affect the imagination, and its success was brilliant.

12. **Clinical Examination of Blood.**—The vital facts to be ascertained in the examination of the blood are: 1. Number and character of red corpuscles. 2. Number and character of white. 3. Proportion of various kinds of white. 4. Presence of parasites. He details the method of counting, but the study of stained films is much more valuable. The usual method of making them is given. The latest formula for Ehrlich's "triacid stain" is the best he has ever worked with. None but Grüber's colors should be used in compounding it. Of the primary diseases of the blood, chlorosis, pernicious anemia, and leucemia can be diagnosed as a rule in from a few minutes to an hour's study with the Ehrlich stain. He has not found any case of filaria sanguinis, but as regards malarial parasites he directs as follows: To prepare fresh blood for examination, take three covers and three slides, cleaned. Draw the blood—a minute fresh drop—touch the cover with it, drop each cover on a slide and see that the blood spreads without pressure. Put by in a warm place if immediate examination is not practicable. By coating the margin of the cover with vaselin the blood will often stay good for an hour or more, though the fresher the specimen the better the chance of showing the characteristic amoeboid movement of the plasmodium, which is invaluable for identification. We should try to get the specimen during or just after or before the paroxysm, and he thinks it bad practice to give quinin before the parasite has been found if the chances of finding the germ are considered. When fresh specimens can not be examined, dry films properly made and properly stained will be nearly as good. He describes a quick method for this.

13. **Ectopic Pregnancy.**—After giving some illustrative cases showing the peculiarities of the symptoms in ectopic pregnancy, Coe concludes that pain alone, when not accompanied by a clear history of menstrual irregularity, symptoms of pregnancy, and the presence of a tumor at the side of the uterus or in Douglas' pouch, is pathognomonic of extra-uterine pregnancy only under certain conditions, viz.: The pain is of a sharp colicky character, distinctly localized on one side, attended with faintness more or less marked, and is usually followed by intervals of hours or days of complete remission. The pulse is accelerated during the attack, but there is no rise of temperature. The latter is an important symptom, distinguishing ectopic from inflammatory conditions. The violent tearing pain attending intraperitoneal rupture is accompanied by the unmistakable evidences of internal hemorrhage. In extraperitoneal rupture the symptoms vary in severity according to the amount of blood lost, but soon subside, being succeeded by the usual evidences of pressure resulting from a mass in the folds

of the broad ligament which displaces the pelvic organs. A persistent pain following the acute attack may indicate localized peritonitis.

14. Tuberculous Disease of Urinary Organs.—Gile finds that tuberculous disease of the urinary organs is a condition of considerable frequency, more so probably than the number of cases diagnosed would indicate. Its course is variable; it may be rapidly fatal or chronic, and for certain diagnosis one must depend on the bacteriologist, though this course does not always definitely localize the trouble. He does not think that the affection originates in the kidneys as a rule, but that many cases start primarily from the bladder. The hereditary character of the disease appears to be more definitely marked than in pulmonary tuberculosis. From his own cases he thinks it occurs more frequently in early adult than, as frequently said, in middle life.

15. Accidental Malarial Inoculation.—Katzenbach reports a case of a physician, thoroughly examined bacteriologically, where malaria was apparently contracted through an operation of hysterectomy on a woman who had recently come from a malarial district in North Carolina. The parasite found was of the estivo-autumnal type, which has not prevailed in New York, and the patient had previously been in good health.

16. Curability of Early Phthisis.—Hazelton reviews the statistics reported by various authorities as to the proportion of cured cases of tuberculosis. He thinks the fact established that from 10 to 50 per cent. of cases, according to individual resistance and promptness of treatment, are curable.

13. Artificial Anus.—The difficulties of properly producing an artificial opening of the intestines are noticed by Weir, who reviews the different methods and sums up as follows. 1. An artificial anus of a temporary character can be best established by Maydl's operation or by Bodine's modification. 2. Overslipping of feces may be prevented by proper spur formation, by narrowing the rectal opening, or by occluding the rectal end of the bowel, which may be fastened in the wound or dropped into the abdominal cavity. 3. Continence of the abnormal outlet is aided by muscle separation (Maydl) or by muscle bridging (von Hacker and Hartmann), or by the use of inflatable or moulded plugs or other apparatus. 4. It is only, however, to be satisfactorily effected—though larger experience in this is desirable—by an extra-abdominal iliac outlet (Witzel's iliac colostomy) to be made by opening the bowel outside and behind the iliac spine. In this procedure the bowel is compressed between the edge of the bony pelvis and the skin.

Many other methods have been proposed. Some, like Witzel, have made the outlet externally, but by gouging a hole through the iliac bone. Other schemes have been tried and have failed. A few are unsurgical. Perhaps some have promise, and may in time, their value not now being recognized, develop into methods of note. He has himself operated in 30 cases with 9 deaths, 2 from cancer, 3 from ulceration and 4 from obstruction. In 18 of these, colostomy was a preliminary to operation or was a curative agent. There were 7 in which the opening was subsequently closed.

19. Constitutional Treatment of Catarrh.—The catarrhal affection of the upper air-passages, or what may be so-called, from diseases of other regions of the body are noticed by Wells. He thinks that the responsibility for much of the greater number of secondary catarrhal affections of the upper respiratory organs belongs to the gastro-intestinal system. Among these he specially mentions a form of throat disorder involving the lingual tonsil as connected with dyspepsia, and he also notes the condition of intestinal flatulence insisted on by Moritz Schmidt as a factor in the production of catarrhal diseases of the upper air-passages. Those of the reproductive organs, etc., are also noted, and especially the so-called uric acid diathesis. This last he considers as often having much to do with the nervous irritability, which he calls neurohyperkinesia, and this, with other conditions like hysteria and neurasthenia, is often responsible for catarrhal disorders. He gives a few brief indications as to treatment for each of these.

21.—See abstract in *THE JOURNAL* of April 14, p. 934.

22. Intermenstrual Dysmenorrhea.—After briefly reporting twenty cases of his own observation, Storer remarks that he

has collected twenty-five more from the scanty literature on the subject. He found that in these the pain appeared regularly every month, within a few days of a definite period, generally along about the 12th to 16th day. In most cases it was paroxysmal, in about one-half it resembled that of menstruation. Its duration was generally two to three days. The pain was sharply limited in 14 cases; in 12 it was more general. In no case was there any discharge. It certainly is not always ovarian and in a large proportion there was a more or less inflammatory condition of the appendages. The various theories of the condition are reviewed and the objections to them stated. The author offers the following theory which, for the want of a better name, he calls "the awakening of menstrual activity" theory: "The intermenstrual pain coming about the fourteenth day from the beginning of menstruation, the nineteenth after the climax of Stephenson's wave, occurs just about the time the pressure line has reached its lowest point. Can not then the intermenstrual wave, if one exists, be one of preparation rather than a subsidence, a nervous explosion, so to say, as if nature were waking up with a more or less violent effort to make ready for the coming activity, whether menstrual or ovarian? We have seen how for nearly three weeks the wave of vital energy has been running down hill and the system has, as it were, got into a rut. Nature suddenly says this decline must be stopped, and in the readjustment of forces that ensues as the human machine begins to work again with greater energy, it is not to be wondered that there should be groaning from some of the machinery, which, however, after a day or two finds its bearings again and then works automatically and in silence. This theory would not be incompatible with the fact that this pain occurs under such a variety of pathologic conditions, ranging from simple endometritis to pyosalpinx and fibrosis. The pain does not of necessity come from any one organ, but from whatever organ is the most irritable or diseased, will come the loudest protest at the sudden arresting of the comfortable vital decline."

26. White Blood Count in Surgery.—Hubbard finds, from an analysis of the surgical records of the Massachusetts General Hospital, that the white blood count may vary very largely without indicating the condition of suppuration, and that from our present knowledge of the cause and variations of leucocytosis, we can not make any deductions simple enough to be of great use to the surgeons at the bedside. In some cases the blood count may indicate an exactly opposite condition to what is shown by the physical signs.

27. Deep Breathing vs. Tuberculosis.—The point of Spiers' article is that by deep breathing we call into exercise the healthy lung tissue we possess, and cause better aeration and better blood-supply. The bacilli of tuberculosis can not act provided the aeration of the blood is perfect. He says that the number of germs in the atmosphere is of little moment provided there is perfect aeration of the blood.

28. Gunshot Wound of Fetus.—Nietert reports a case of gunshot wound involving the uterus and fetus, followed by Cæsarian section and recovery of the mother. The notable points of the case are the rarity of the accident and the absolute lack of any infection, notwithstanding the bullet's passing through several layers of dirty clothes. There was a large powder burn on the skin, and the patient confessed, when confronted by this fact and its necessary inference, that the wound was self-inflicted.

35. Operation in Cancerous Uterus.—Kelly says that his views in regard to extirpation of cervical cancer have changed somewhat during the past year, and that he now believes that glandular metastases are not so important in mammary cancer or are rare until the later stages. He offers a new method of operation which he details at length. He first insists on catheterization of the ureters. Then, after curetting, he cuts through the vagina on all sides, strips it loose from the bladder, opening the peritoneum as widely as possible. If the bladder is diseased, the base of it may be cut off and left sticking to the cervix. The uterus being attached by its broad ligaments alone, a gauze pack is inserted behind it, while the anterior wall is pulled down with the forceps through the anterior incision,

until the fundus appears at the vaginal outlet. The next step is to bisect the uterus from above downward, and half of it is caught by a stout museum forceps. Catching the cervix of the same side, the body is also completely severed from the cervix by dividing from within outward. As soon as the division is done the uterine vessels are clamped in the exposed cellular tissue and the detached body is pulled farther out, the round ligament clamped and lastly the uterine cornu. In this way one quadrant of the uterus is removed. The same method is followed on the opposite side. The ligatures are then applied in place of the clamps. The ovaries and tubes are removed after the body of the uterus, and it then becomes an easy matter to take out the cervix on the side which is least implicated. Under all circumstances give it the widest possible berth, keeping the rigidly catheterized ureter under touch all the time; three-quarters of the uterus having been removed, the remaining quadrant, that half of the cervix on the side where the infiltration of the broad ligament is most marked, is then extirpated. The operator holds in the grasp of his forceps a small nodule, one-half of the cervix, and the idea is to get it out with perfect control of the vessels, giving it the widest possible berth. This may be done in some cases by ligatures, but it will be better done in the other cases by cautery clamps (Skene's), or by igni-extirpation, as done by Mackenrodt. If the ureter lies clearly beyond the diseased area, and is uninfected, it may be dissected out and left intact. In many cases, however, the operator must not hesitate to cut it off above the diseased area and proceed with wide enucleation of the nodule as if it did not exist. After enucleation the ureter may be turned into the denuded bladder and stitched there. The anterior and posterior peritoneal surfaces are then drawn down and attached to the vagina, and are again sutured together in the middle line so as to leave but two small openings up in the pelvis, which are loosely stuffed with gauze.

36. Fibroid Tumors.—Kelly describes two new methods of enucleating complicating fibroid tumors. In the first the large tumor occupies the lower uterine section, elevating the uterus as well as the ovarian vessels and choking the pelvis. He prevents hemorrhage by thrusting two long-jawed pedicle forceps through the capsule of the tumor on each side, at about the level of the round ligament, until the point appears on the posterior surface of the tumor, then clamps powerfully down on the uterine and ovarian vessels. Then pulling the two cornua in opposite directions, he bisects and cuts down into the tumor as far as the vesical peritoneum, which is freed and pushed down; then he enucleates the left and right halves of the tumor by a blunt crenated spatula. The uterine artery is then easily reached and tied at a point below the body of the uterus, then the bed of the tumor closed by buried sutures and the vesical peritoneum drawn over and attached to the posterior peritoneum concealing the wound and the operation finished. "The enucleation of the bisected uterine body may be done after the removal of the tumor in one or two ways—either by tying the ovarian vessels, now easily reached, and the round ligaments and lastly the uterine vessels and then amputating, or by severing first one then the other half of the uterus from the cervix, below, cutting from within outward, from the center of the cervix toward the broad ligament, and so exposing and catching the uterine vessels, after which they are divided and each half is pulled up in turn by its cervical extremity and the round ligaments of the ovarian vessels tied in order. The direction of the enucleation in this case is from below up, the reverse of the direction ordinarily taken; the extirpation in this way is facilitated by the sagittal bisection of the uterus." The second operation, which he has performed but once, is, he thinks, adapted for those cases in which there are dense adhesions of the upper pole of the tumor, which can not be dealt with without great risk by operating from before backward. In this operation he caught up the cervix by short-toothed museum forceps and brought it up within reach. The vesical peritoneum was then detached and pulled down, exposing more of the cervix, which was caught with a second pair of forceps. A knife was then passed through the cervix in the antero-posterior direction between the two pairs of forceps, and the cervix was cautiously divided from side to

side, and pulled apart. The cellular tissue to the left was first exposed, the uterine vessels clamped with short, stout forceps, and the right one treated in the same way. The upper forceps was then used to drag up the tumor and the uterine body, rotating them on a transverse axis, first exposing the round ligaments and then the ovarian vessels of the left and right sides, respectively; these structures were clamped and the whole mass disconnected from its pelvic attachments. The tumor now only remained adherent by the dense adhesions at its upper pole. The next step was the rupture of an enormous abscess lying behind it and extending from the center of the tumor into a sac bordered posteriorly by the lumbar vertebrae and above by the mesocolon, and discharging through a large opening into the transverse colon. The tumor now rolled out, being enucleated from behind forward without added injury to the bowel, other than was rendered necessary by the opening into its lumen. The contaminated abdominal cavity and the abscess cavity, containing at least a liter of thick yellow pus, were cleansed, the opening in the bowel sutured and the long abdominal wound closed, leaving a large iodoform gauze drain about the umbilicus into the remainder of the sac under the colon. The patient made an excellent recovery.

38. Melanosarcoma of the Skin.—Schalek finds, from an observation and analysis of the literature, that while the final decision as to the histogenesis of melanosarcoma is not easy, it appears that the standpoint taken by Unna and his followers is probably correct. Melanosarcomata of the skin do arise from the pigmented epithelial cells of the epidermis; these cells proliferate into the connective tissue and become entirely detached from the epidermis; still further proliferating, after having been cut off, these cells lose their epithelial character and assume that of ordinary connective tissue elements and that of those particular pigmented cells known as chromatophores. This view, that epithelial cells may undergo such a metaplasia under pathologic conditions, is not at all improbable, since L. Loeb has also stated in another paper that chromatophores of a typical character originate from epithelial cells. Concerning the pigment, we have found that it is finely granular and not very dense in the epithelial cells from which the melanotic tumor arises. The pigment becomes more coarsely granular, the more pigmented cells assume the character of connective tissue cells, more particularly that of chromatophores.

39. Malignant Tumors.—The following is the summing up of Buxton's paper: 1. Carcinomas contain connective tissue stroma because there is an attempt at defense on the part of the organism. 2. Their increase is not prevented, because the cells can multiply in the newly-formed lymph spaces of the stroma. 3. Sarcomas, as a rule, contain non-connective tissue stroma, because they consist of the very cells which would be called on to form it, and which are now in revolt. 4. Sarcomas contain numerous blood-vessels, because these always penetrate masses of immature connective tissue cells, whether in the embryo or the adult. 5. Certain sarcomas contain connective tissue stroma because the cells composing them are ordinary connective tissue cells, so that the latter are able to attempt defense. The defense fails for the same reason as it fails in the carcinomas. 6. Tumors containing connective tissue stroma form metastases via lymphatics, because the newly-formed lymph spaces in which their cells are growing open up communications with the regular lymphatic channels. 7. Tumors containing no connective tissue stroma form metastases via the blood-vessels, because the cells can easily break through the immature walls, while lymph spaces are absent.

44. Rhinitis Due to Tooth in Nasal Cavity.—Dupuy reports a case of purulent rhinitis the source of which was finally discovered to be a carious tooth growing in the nasal cavity. The only case in literature which he has found similar to this was that of Tyler, which was a supernumerary tooth, while in this case it was a misplaced one.

48.—This paper appeared elsewhere: See abstract in THE JOURNAL of Oct. 21, 1899, ¶ 68, p. 1033.

51. Medical Science of the Talmud.—Imber claims that the Talmud anticipated the discovery of many valuable methods

and hygienic facts. It ascribes all diseases to certain little dangerous ones which it calls "shedins"—destroyers. In accordance with this bacilli theory the following hygienic laws were enacted: "1. If an animal was killed, the Talmud urges, under certain penalty, to cover its blood with the dust of the ground or with ashes. (As it has been proven that the belly of mother earth is the best of bacilli destroyers.) 2. No Jew was allowed to wear hide in its raw state as a garment. 3. No tannery was allowed to be established, except two miles from the city and not on the east side, for the wave in the Orient was mostly easterly winds. 4. No spitting was allowed in the city of Jerusalem. (Our moderns have realized the danger 2000 years later.) 5. Four cubits of space shall be allotted to each person in a room. (Our modern board of health of course ignores that law and the tenement houses in the big cities have not a yard to spare for a person.) 6. To beware of flies of lepers, as they are transmitters of the disease. (In perfect harmony with views of modern science.) 7. To investigate every slaughtered animal, if it had not a lung or liver trouble. (If our inspectors sent out by the 'board of health' to investigate the slaughter houses would observe that law, the Christian people would enjoy the sanitary benefit which the orthodox Jew enjoys in regard to health.) 8. To throw out the water where a person just died, and destroy all his clothes. (That law was most beneficial to the human race, and I think, if the board of health should take it into consideration, they will not give a permit to the second hand clothes dealers until their goods were disinfected.)"

53. **Incurability of Leprosy.**—Ashmead reviews and discusses the cases of reported cure of leprosy, and finds that with no case was there more than temporary relief of symptoms. He is especially critical of Dyer of New Orleans, and his views as to the possibility of the cure of this disease.

57. **Strangulated Hernia.**—The frequency of this accident renders it a part of the experience of almost every general practitioner. Wahrer therefore insists on the necessity of the physician being able to operate; in many cases the question of prompt operation is one of life or death; the patient has everything to gain by it, as it may save his life, and otherwise he will surely die. He advises the physician who has such a case to call in the assistance of a neighboring practitioner, or two are better, and to follow the following technique: Wash the patient clean, shave off all hair over and near the site of the operation, wash the hands clean, boil the instruments—in a bread pan if there is no regular one in the surgeon's outfit—in a solution of soda, then spread a boiled towel over a small table and lay the instruments on it—if the towel is wrung out of a 5 per cent. creolin solution so much the better. The patient is placed on a kitchen table, and when he is under the anesthetic an incision is made through the skin and fat in a semicircular line, the convex side toward the umbilicus, then through the three layers of muscles. The sac of the hernia is then followed down to the ring and an incision made large enough to enable return of the bowel. The sac is drawn out as far as possible, tied off with a stout catgut, or better a kangaroo tendon, and in a similar manner, any redundant mass of omentum cut off, dropping both stumps back into the abdomen. One must carefully avoid including the cord in the ligations or the coverings, and sew up the peritoneum with catgut, also the three layers of muscles, lastly the skin with catgut, silkworm gut or silk—which is better. Over the wound gauze is applied, a good layer of absorbent cotton over that, and it is secured with adhesive strap or bandages and the patient put to bed. He says expert surgeons must not criticize him for this unrefined technique and gives also in detail the directions for antiseptics. The instruments are simple and inexpensive. As regards antiseptics, he says: "Get a bread pan or two, put your instruments and needles into one of them, some boiled water in the other; it does not matter if you put any drugs in as antiseptics or not, so you have things clean. Wash your hands, if you have nothing better, in boiled water and soap, then more water and soap, then some more water and soap. Keep this up for fifteen or twenty minutes and your hands will be as clean as those of Lawson Tait." Avoid rough and useless

effort at taxis and rough handling of the bowels and avoid rough handling of the cord.

60.—See abstract in *The Journal* of March 17, p. 688.

69. **Ureteral Fistulae.**—Bullock reports a case of ureteral fistula which seems to have been caused by an infected ligature in close proximity to the ureter, producing ulceration. The tumor opened externally through the inguinal opening, and is now nearly closed.

70. **Nitrous Oxid.**—After giving the chemistry of the drug, Grant describes the methods of its use. The known rules in anesthesia should not be overlooked with this anesthetic. An empty stomach need not be insisted on, but it should not be distended. The sitting posture for short operations may be maintained throughout, and the head should be bent forward rather than backward as there is less danger of the tongue falling back. All foreign substances should be removed from the mouth, such as plates, etc. A prop should be placed between the teeth. The first impression on the patient is a sweetish taste of the gas and a certain sense of oppression. In the second stage there is a tingling sensation and consciousness is lost, and the narcosis deepens into the third or anesthetic stage. The circulatory system is but little disturbed, but the respiratory is more affected and the physical indications are those of asphyxia. Then the anesthetic is profound enough for minor surgery, and the inhaler should be withdrawn and the operation performed. The hemorrhage following the use of nitrous oxid is generally venous and may be profuse an hour or more after extraction. Recovery is usually rapid. The dangers are through the respiratory function, and intensified lividity of the face, great and sudden pallor, and cessation of respiration must be regarded as symptoms thereof. The secondary effects of nitrous oxid are trivial; there is no proof of secondary serious complications.

71. **Lobar Pneumonia.**—The treatment of lobar pneumonia, according to Venable, is first, proper feeding, milk diet, meat broth, etc., with stronger and more soluble foods after the crisis is past. Cardiac stimulants should be used when the first signs of heart failure appear. He employs alcoholics in this case, in moderate doses. In an urgent need he uses strychnia, hypodermically. Like strychnia, digitalis may be valuable—10 minims of the tincture every three or four hours. Nitroglycerin is an excellent adjuvant and useful when renal secretion is scanty. Aromatic spirits of ammonia is an excellent cardiac stimulant in the feeble heart in pneumonia. Beginning cyanosis is a signal for the use of respiratory stimulants, oxygen by inhalation, strychnia and atropia. Hydrotherapy is useful and he relies mainly on cold sponging, but pays little attention to temperature unless above 104 F. If he were to give antiseptics, he would use carbolic acid, 1 minim, or thymol 2 to 3 gr., or mercuric chlorid 1-1000 every four hours. Morphine will do for the initial pain, but it is rarely necessary to continue it after the second or third day. Internal antipyretics are not desirable, and arterial sedatives should also be used sparingly and their effects watched. Nervous symptoms are usually met successfully with bath and the ice-cap, and sometimes in the advanced stages stimulant expectorants may be used, though they are generally useless.

73. **Anesthesia.**—Chloroform and ether are the anesthetics generally used. In this article Guest gives the indications as regards chloroform. He first insists on buying only small bottles, two ounces or less, as the drug is then fresher and better. He has a careful urinalysis made a few days before operation, with a warm bath and moderate supper the night before. If the patient is constipated he gives a cathartic two days before, otherwise a saline only, followed by an enema the next morning. A cup of coffee, tea, milk or water may be given three hours before. If the patient is not desperately ill, no drug should be given before operation. He never gives morphine or atropin before giving an anesthetic, as this takes away the pupil reaction, which is one of the first warning signs. He finds the Esmarch drop-bottle the best method. He warns the patient to expect a choking sensation, and, starting with only a few drops, he gradually increases this until surgical anesthesia is accomplished, then very much less will be re-

quired to maintain it. After the incision is made in abdominal surgery, he uses the lightest possible anesthesia. He thinks there is not much choice as to position, but there is much danger in change of position during anesthesia. It is better not to crowd the chloroform during the stage of excitement, and there is no necessity of touching the conjunctiva to produce the conjunctival reflex. If the eye does not rotate by exposing it to the air, it is a safe rule to withdraw the anesthesia for a few seconds. We should be sure never to miss a heart beat or lose a respiration. No anesthesia should be continued if the pupils commence to dilate after the patient is well under its influence. Before commencing, he rubs the lobe of the ear gently between the fingers and watches the capillary circulation. He repeats this every few minutes and, if the circulation falls, the patient is sinking and requires a hypodermic of nitroglycerin, or digitalin, 1-100 gr., repeated in ten minutes if needed. It is difficult to tell by the breathing whether the patient is taking the anesthesia well. When he can distinguish laryngeal stertor, he throws aside the anesthetic and extends the head and neck pushing the inferior maxilla forward. The most alarming symptom is when the breathing is irregular and spasmodic. He then stops at once and resorts to respiratory stimulants hypodermically, and by inhalation. Warning is given that abdominal breathing is not a constant sign that air is entering the lungs. One of the best and most accurate signs is the circulation. When the pulse commences to lose its *vis a tergo*, the finger on the temporal artery is sure to note it. There is a steady lowering of the arterial pressure beginning and ending with chloroform inhalation.

76. **Typhoid Fever.**—Dock is not prepared to say positively that typhoid fever is specific in the sense that it is caused by a germ of unvarying characteristics. The question also as to whether it is always derived from a previous case he also considers still unsettled, though this may not affect the practical point of avoiding contagion or infection. He also speaks with doubt in regard to its pathology. The fact that we find very few germs in the first stages of the disease is an important one in this regard. Whether the treatment directed to destruction of the typhoid bacilli in the intestinal canal is of great value is also doubtful, but he does think that clinical experience shows some advantage in intestinal antiseptics. It is useful to give a cathartic in the beginning of the treatment, and the choice is calomel, though castor-oil appears to be equally effective. During the course of the disease emata will generally serve the purpose, and in convalescence the febrile rises will also be found connected with constipation. The general infection of the system is not parallel in all cases, but that it is extensive is indicated, among other things, by the recent discovery in regard to bacteriuria. Elevation of the body temperature is only a part of the fever and secondary infections may be a possible cause. The belief held by some that elevation of temperature is a salutary process, he thinks can not be maintained. The good effects of the cold bath treatment are not exclusively in its effects on temperature, and its effect in producing diuresis is one of the most important points in the treatment. We must remember, however, that the mortality is now lower than at any former period, and this may be partly due to more comprehensive diagnosis. Dock believes in the modified diet instead of the exclusively liquid one generally recommended, but the excretions must be carefully watched to see that what is taken is fairly digested. As regards medicines, he uses none except for special symptoms, the rare exceptions are stimulants, such as strychnin, and in less marked indications coffee; he has entirely abandoned alcoholics.

77. **Pulmonary Consumption.**—Flintermann reviews the facts in regard to the contagiousness and infectiveness of tuberculosis, and lays down rules for its prevention. Non-expectoration except in special receptacles, thorough cleanliness of rooms where numbers are gathered together, and sanitary inspection of homes. Tuberculous patients should be excluded from public hospitals and sanitarium and treated in special ones. Dispensaries are dangerous; public laboratories should be provided for the examination of sputa, etc. The dangers of bovine and milk tuberculosis are also mentioned,

but he objects to compulsory notification of cases as useless and cruel.

78. **Early Diagnosis and Treatment of Phthisis.**—Duffield says that statistics prove that 60 per cent. of mankind are affected with tuberculosis, and its death-rate is actually from 15 to 18 per cent. He calls attention to certain early symptoms, such as the facial expression, inspection of the chest, scars of old strumous abscesses, physical signs, necessity of attention to the temperature and pulse, small rapid pulse in the young frequently being an early symptom. A large part of his paper is devoted to the treatment by tuberculin, or rather the watery extract of tubercle bacilli of von Ruck, which he thinks is of decided value. He has had twenty patients under treatment in the past fourteen months, and in all there is a marked improvement. He starts the treatment by giving .1 c.c. of Solution No. 1, containing .01 of 1 per cent. of solid extract free from water. He first administers .1 c.c., increasing every day or two until .5 c.c. is taken, then gradually increasing this until 1 c.c. is reached. The injection is made in the loose skin between the shoulder blades. After 1 c.c. is reached, it is continued for about a month, and then he takes Solution No. 10, which is ten times as strong, and, starting with .1 of 1 per cent. increases it by 1-20 until .5 c.c. is reached.

79. **Intestinal Wounds.**—Several cases of injuries of the intestines are reported by Wyman, and in conclusion he summarizes as follows: 1. A wound of the portal vein should be treated by ligation and suture of a part of the omentum to the peritoneum, so that collateral circulation can take place. To do this the free border of the omentum is dragged into the wound made to open the abdomen, and by intercepted sutures fastened to the margins of the peritoneum. 2. Hemorrhage from liver wounds, if not involving large arteries, may be controlled by gauze packing. Arteries may be controlled by cauterization, clamp, forceps or ligation. 3. An effort must be made to preserve the contents of a wounded uterus. A temporary urinary fistula must be provided when the ureter or kidney is wounded.

81. **Cleanliness in Minor Gynecology.**—Skene insists on the importance of the utmost cleanliness in minor gynecology. It is far from easy to keep all the instruments and appliances surgically clean in ordinary office practice. On this account he has adopted the following method: Sterilized cotton kept in a clean vessel is used for sponges and thrown away afterward; wool is resterilized before use; pessaries, hard and soft rubber, are sterilized before using, as are also specula, sounds, forceps, etc., when they are applied in cases suspected of being septic or specifically contaminated. Instruments used in cases free from septic or specific contamination are simply washed in boiling water and dried with a sterilized towel. Vaseline is sterilized by heat and applied with a sterilized paint brush, and sterilized rubber gloves, disinfected each time after use, are employed in digital examinations. In order to insure great cleanliness he uses liquid soap discharged from the lower end of the soap bottle by a movable valve-stopper and running water for ordinary washing. He thinks the steam sterilizer has given him the most satisfaction for the sterilization of gauze, pessaries and towels. Instruments are kept in a sterilized towel, which he thinks is as advantageous as having them put in an antiseptic solution. For surgical cleanliness of the hands he uses a solution of carbolic acid, glycerin and water—5 per cent. of the acid and 25 of the glycerin. In conclusion he cautions about handling money, and he now picks up his fees with a forceps, drops them in a money box, and at the close of a day disinfects them at the same time his instruments are cleaned.

87.—This paper has appeared elsewhere. See THE JOURNAL of March 3, title 176, p. 549.

88.—See abstract in THE JOURNAL of Oct. 28, 1899, p. 1104.

90. **Vaccination.**—Engelhardt reviews the statistics of vaccination. He doubts the existence of natural immunity. The length of immunity against natural infection is longer than that against vaccination. Scars are not reliable indications as to immunity. The only way to insure this is to be re-

vaccinated over and over again. As regards the time of vaccination, he thinks the hot months are most liable to produce complications. The infant is best vaccinated when it is from four to six months old.

91. **Scalp Wounds.**—Fowler notices the common statement in text-books, as to the refractory character of scalp wounds, and gives his experience, which is against this. He thinks the method of using hair to secure the edges of the wound pretty sure to bring on suppuration, and plaster is almost as bad. His own method is to shave away the hair for about one-half inch along each side of the wound, thoroughly cleanse it with warm carbolic water and close the wound with silk sutures, spray and seal with absorbent cotton, and collodion with .1 per cent. iodoform. The sutures should be inserted at least one-fourth inch away from the wound, as too close insertion in the dense tissue of the scalp may cause necrosis.

92. **Electricity and Gynecology.**—Grace considers electricity the most effective remedy in postperperal metritis. It is of value in uterine engorgement, in amenorrhea and scanty menstruation, especially in cases caused by constipation, dysmenorrhea and menorrhagia.

FOREIGN.

British Medical Journal, April 14.

Non-Diabetic Glycosuria. ROBERT SAUNDY.—The occurrence and significance of glycosuria is discussed, and Saundby notices the pseudoglycosuria, where the copper reaction occurs, but which is prevented by repeated filtration through animal charcoal, which removes other reducing substances than sugar. The alimentary and physiologic glycosuria is also noted, and in some cases it may be rather persistent, according to the cases he reports. The other forms mentioned are alcoholic, hepatic, gastric, neurasthenic, and senile glycosuria. In many of these forms, however, there may be an alcoholic factor not given in the history. The author is inclined to think, however, that in many cases there is a disturbance of the liver that is not detected. Senile glycosuria is a symptom of the general tendency to break down, and care must be exercised in ordering strict diabetic diet. The object of his paper, in noticing these different forms of glycosuria, is to call attention to the conditions under which these symptoms may occur, so that the practitioner when meeting it may properly value it and possibly avoid serious errors in diagnosis.

Some Cirrhoses of the Liver. W. B. CHEADLE.—This author briefly mentions the drug treatment, three drugs being more reliable than all others, viz., mercury, potassium iodid and digitalis, the former two in cases with specific complication, the latter in those numerous instances where there is weakness of the heart. He condemns the use of purgatives as a pernicious and fatal practice, and diuretics as of little value. In some cases the limitation of fluids may be of use, but the only reliable way of relieving the condition of ascites is by paracentesis, and the earlier this is performed the safer it is as a rule. He also believes that in the majority of cases cardiac insufficiency, though it may be unrecognizable by the usual physical signs, is a factor in the causation of the more acute cirrhosis of the large alcoholic liver and its accompanying ascites.

The Lancet, April 14.

Typhoid Bacillus and Typhoid Fever. P. HORTON-SMITH.—This lecture by Horton-Smith deals with the Widal reaction. He points out that as the result of investigations by Gruher and Durham, as well as by Widal, credit belongs to three countries, Germany and England as well as France. The dilution to be used, the time limit and culture are discussed, and he thinks the facts show that 1/20 dilution with the time limit of one hour is a reliable standard. If the serum would suggest typhoid fever, producing clumping of the bacillus within one hour with a dilution of 1/20, it can rarely be due to the presence of Gaertner's bacillus or any other than the typhoid. In rare cases the test may be at fault, but the proportion is very small, not over 3 per cent. As to the nature of the agglutinating substance, he thinks the evidence points strongly to the view that the agglutinins are ferments not directly secreted by the bacilli themselves, but produced by the cells of the

body and especially those of the spleen, lymph glands, and bone marrow, under the influence of stimulus produced by invading micro-organisms. The agglutination is a reaction of infection, but Horton-Smith does not fully accept the opinion of Emmerich and Loew that it has a connection with immunity. If this is possible, he says that if we picture to ourselves the delicate changes which occur in the blood of a patient during the course of typhoid fever, we should say that very early in the disease, as a rule during the commencement of the second week, agglutinative properties are in general acquired. But the date at which the agglutinins appear, the amount in which they may be present, and the length of time during which they persist are subject to extraordinary variations. The reaction is undoubtedly one of infection and its connection with immunity, though probable, has not as yet been proved. A little later in the disease bacteriolytic properties make their appearance, and with the gradual increase in their amount the further growth of the bacilli in the body is checked, and finally the latter are gradually digested and destroyed. But even now the disease is not quite at an end, for the toxins set free by the destruction of the bacilli have first to be dealt with. In part they may be neutralized by antitoxins, but of this we have as yet no direct evidence; in part they are probably excreted by the usual channels and thus eliminated from the body. In conclusion he calls attention to the methods of preventive inoculation, the results of which are encouraging.

Plague Viewed From Several Aspects. W. J. SIMPSON.—After noticing the history of the plague, Simpson says there are no productive localities, where it could be said to always exist, neither is it confined to low marshy regions. The present endemic center, Yunnan, China, is 5000 to 7000 feet above the sea. The general mildness of the plague in many places is not to be trusted in, as the ordinary behavior of plague in new localities is slow and insidious. In Calcutta it has existed since 1896, but it is only now that it is beginning to be an epidemic. He thinks the danger of infection from rats a real one, and calls attention to the special danger during the early and late stage of the disease for other countries. The symptoms and treatment are reviewed, and he thinks the only rational treatment is neutralization of the toxins and destruction of the germs. The results so far with the protective curative serum are at least encouraging, and for preventive measures Haffkin's plague prophylactic is of the greatest importance.

Experiments on Intestinal Suture. WALTER EDMUNDS AND EWEN C. STABB.—These authors experimented with the following methods: Halsted's inflated rubber cylinder, Murphy's button and Laplace's forceps, each on seven dogs, and, as far as actual results go, the verdict is in favor of Halsted's cylinders. Their effect is to push back the mucous membrane, which otherwise always everts itself so much as to materially interfere with the suturing of the outer coats and the adaptation of the peritoneal surfaces. The cylinder also prevents the escape of the intestinal contents. They do not think the Murphy button entirely trustworthy without the external suturing, which they did not use in their experiments, and they do not recommend Laplace's forceps. In the seven dogs in which the Halsted cylinder was used, the intestines united circularly in all and the animals recovered. With the Murphy button without sutures, only five were successful, and of the seven with Laplace's forceps, four succeeded; all failures were due to non-union. They do not think the difference in the intestinal muscular coats in man and dogs invalidates their conclusions.

Presse Medicale (Paris), March 31, April 4 and 11.

Alcohol in France and Germany. DE LAVARENNE.—"France produces 311,952 hectoliters of alcohol a year, an increase of 282,760 in thirty years, and, with the colonies, drinks nearly all of this amount, which includes 192,866 hectoliters of absinthe. Germany produces much more alcohol than this, about 800,000 hectoliters more than France in 1897, and has 12,500 distilleries for the production of alcohol from potatoes alone. Part of this alcohol is exported. Part is consumed in heating and lighting, and part has contributed to the great development of chemical industries in Germany. The Germans took coal

and combining it with alcohol, changed it into gold." The world has been flooded since with German anilins, antipyrins, benzins, etc. The exports of chemical products amounted to \$80,000,000 in 1897.

At What Age is Syphilis Contracted? E. FOURNIER.—Investigation of 11,000 private and over 5000 hospital patients, reported in this communication, strikingly confirms the assertion that syphilis is usually contracted very young. In men, by far the largest percentage is during the twenty-third year; earlier in the lower than in the middle classes. Among women the overwhelmingly largest percentage occurs between 19 and 21, on an average, but among girls of the lower classes between 16 and 20, and among prostitutes primary contagion is less frequent after 23 than before 15 years of age. Prostitutes over 23 seldom present the manifestations of primary syphilis, as they are usually past at that age. The figures show that 14 to 20 out of every 100 male syphilitics are infected while still minors, and the proportion is much larger among the females: in private practice, 31 out of every 100; in the hospitals, 48, and among prostitutes, 63, were infected with syphilis while they were still minors. The importance of protecting young girls is emphasized by these facts, and also the exceptionally great danger of contagion from young prostitutes.

Insomnia Due to Disturbances in Ocular Refraction. A. TROUSSEAU.—Ocular disturbances should be thought of when a young person is affected with insomnia at a period of excessive studying or other exertion, with headache on waking and better sleep after days of comparative rest of the eyes, as on Sundays. Trousseau relates a number of instances in which the patients had applied to physicians and neurologists in vain, and were finally cured in a few hours with appropriate eyeglasses.

Prophylaxis of Rheumatismal Endocarditis. E. BARIÉ.—Observations have been reported of the invasion of the heart by the rheumatism several days before the joints were affected, but they are rare. In such cases sodium salicylate is not given until the pains appear, and consequently its action on the heart is less than when given before the endocarditis occurs. Barié attributes the effect of the salicylate to its analgesic and antithermic action. As a prophylactic of endocarditis, he approves of doses of 4 to 5 gm. a day at intervals during the twenty-four hours, as long as the pains last, and 3 gm. for a week afterward. But his first choice is for an iodid medication, to prevent or check endocarditis under these circumstances. Sodium iodid with supralimentation and rest in bed, to prevent overexertion of the heart, has proved extremely successful in Potain's experience in arresting the affection, curing it completely in several cases. Recovery is most frequent in children.

Technique of Pylorotomy. H. HARTMANN.—The extensive experience of the writer has shown that cancer of the pylorus has very little tendency to extend toward the duodenum, probably on account of the lack of continuity between the submucosa of the stomach and of the intestine, which he has established, but is apt to invade the lesser curvature, and especially the ganglia in this direction. He first exposes the posterior surface of the stomach. The lesser omentum can be slit for this purpose without fear of hemorrhage—in the avascular middle portion. The great omentum should be opened close to the stomach, at the point where the incision is to be made, allowing access to the posterior cavity without danger of injury to the transverse mesocolon. The liver is drawn out of the way and the stomach pulled out to expose the coronary, which is ligated and cut. The viscus is then held with forceps as near the cardia as possible, and almost the entire lesser curvature is removed, leaving only the large expansion and a portion of the greater curvature. The gastroduodenal artery is then easily exposed and ligated in the angle between the first portion of the duodenum and pancreas. The operation is completed by freeing the pylorus, cutting the great omentum which holds it, and at quite a distance from the stomach, in order to remove with the tumor the subpyloric and retropyloric ganglia. After ligation of the gastroduodenal artery these ganglia can be detached from the pancreas without hemorrhage, which is almost certain in operating by other methods.

Deutsche Medicinische Wochenschrift (Leipsic), March 20.

Treatment of Hemorrhages from Uterus. H. OSTERMANN.—Hemorrhage occurring with complicated endometritis is very difficult to cure; internal medication is apt to derange the digestive apparatus and local cauterization aggravates the endometritis. Ostermann announces that he has been unflinchingly successful in curing these and all cases of uterine hemorrhages, aside from the puerperal, by the simple method of hot local applications of a mixture of equal parts of antipyrin and salol after the uterus has been wiped out dry. It is applied on cotton wrapped on an aluminum rod; the inner surface of the uterus smeared with the syrup-like fluid. Thirty observations are described, showing the great variety of uterine hemorrhagic affections amenable to treatment by this means. A large number were definitely cured by one application; others required two more at intervals of three to five days.

Medical Experiences in Arctic Regions. B. RAWITZ.—During the first part of Rawitz's stay on Baereninsel, the air was extremely dry; fish, meat, etc., dried in the open air very rapidly, and without a trace of decomposition. The men in the expedition were all robust, and their numerous scratches and other injuries, acquired in fishing and oil-trying, did not show a trace of suppuration, but neither did they heal. All had a red, dry surface, with healthy granulations, but no tendency to cicatrization. A long period of foggy weather followed and all the wounds began to suppurate violently, although the lesions were much less severe than at first, as the men had become more skillful in their work. As soon as the pus was evacuated, however, remarkably rapid healing followed. This absence of healing in aseptic conditions and the rapid healing when the air became septic, as manifested by the invariable suppuration, suggest to Rawitz that there may be some still unknown factor in healing processes, which bacteriology has failed to elucidate. He describes the cod-liver oil industry and states that the oil is mixed with that from the livers of other fish besides the cod, in many instances. It is derived from the livers by the cold process, that is, a keg is filled with the livers and left for three weeks, by which time the oil has been drained out without other heat than the sun, which shines day and night. The livers show no indication of decomposition. Oil drained by steaming the livers is of a poorer quality.

Muenchener Medicinische Wochenschrift, April 10.

Transplantations of Tendons Into Periosteum for Paralysis. F. LANGE.—Vulpus has a record of 80 transplantations, and Lange has performed the operation fifty times, but he modifies the usual method by implanting the tendon of the paralyzed muscle in the periosteum. A new muscle is made by combining paralyzed and sound muscle, and it is connected directly with the bone by implanting the tendon in the periosteum at any convenient point. The tendon is lengthened, if necessary, by cutting it in steps (Bayer), and shortened by running a thread lengthwise through it, doubling on itself like a hairpin; when the ends are drawn up tight, the tendon is made shorter and wider as it crinkles. The principal advantage of this method is the solidity of the result, as it is unnecessary to use an atrophied tendon, and also the latitude it allows the surgeon in locating the transplantation. Observations are described and illustrated showing the fine results attained in cases of a paralyzed hand, foot, knee or hip-joint. In the latter case the biceps and semitendinosus are united to the anterior surface of the femur, but as there is no tendon that can be utilized, an artificial one is supplied, made of strong silk braided in with the fibers of the muscles and brought down to the periosteum of the femur. It has filled in with connective tissue, in his three cases, and is now, after six months, the diameter of a pencil in one. In another the length of the artificial tendon was 15 cm. He considers tendon transplantation for paralysis, especially in children, and the use of the solid, light, inexpensive and durable orthopedic apparatus now made of celluloid, stiffened with steel wire, wonderful progress in the domain of orthopedics.

Asepsis Contra Antiseptis. O. LANZ.—Our instruments and dressings can be considered aseptic after the usual heat

sterilization, but the patient's skin, the surgeon's hands and the ligatures are still dubious links in the chain. Lanz has for years been using a receptacle for ligature silk, which he urgently recommends to insure against thread abscesses, while it saves silk and is extremely convenient in every way. The silk is wound in a loose oval ball, and placed in a glass or porcelain shell like a capsule, with a hole at each end for the thread. There are three holes near the edge of each half, allowing free access to the fluid, while by pressing the halves closer together these openings are closed. The silk nut, as he calls it, is sterilized with steam under pressure for a short time, and then boiled for a minute in sublimate, after being treated with ether and alcohol. It is then placed in a glass vessel with a overhanging telescope cover. This receptacle spreads out above the nut into a second wider chamber, and the lower, holding the nut, is closed with a watch-glass with a hole in the middle for the silk. The receptacle is filled with a solution of sublimate in which the end of the silk rests. He indorses Kocher's advice to scab over with iodine at once, even the slightest erosion. He also recommends disinfecting the hands immediately after any septic contact, as if for an immediate aseptic operation, to prevent the germs gaining access to the nails, etc.

Restriction of Aseptic Field in Operations. G. WALCHER.—It is a great mistake, Walcher thinks, to train young surgeons in the idea that expensive aseptic operating-rooms are necessary, as few are able to meet with similar conditions in their practice. He thinks that sepsis should be absolute, but limited to a small area, and outside of this area everything be considered dangerous. For a laparotomy, for instance, in his clinic or maternity, the table is covered with a clean sheet, and after the abdomen has been shaved and thoroughly disinfected with soap, ether and sublimate, the limbs are covered with towels lying in sublimate solution, as far as the mons veneris, and the trunk from the stomach down to the umbilicus, all fastened with aseptic safety-pins. This area alone is considered aseptic, with the hands and forearms of the operators and three dishes holding the instruments, dressings and sponges in a sublimate solution. Everything else, aprons, tables, napkins, etc., although clean, are yet considered septic, and any contact with them requires new disinfection. If a thread hits against anything in being handed over, it is thrown away and a fresh one substituted. The results of this restricted aseptic area seem to be highly satisfactory as only one death from sepsis has occurred in 8000 deliveries, and only two in the last 100 laparotomies, and in both of the latter there was pre-existent infection.

Surgical Suture and Ligature Material. H. BRAUN.—The chief point in this communication is the author's recommendation of "collodion thread," that is, thread rendered impermeable for secretions and bacteria by being soaked in collodion. It has all the advantages of celluloid thread without its disadvantages.

The Catgut Question. C. LAUENSTEIN.—The seven principal methods of rendering catgut aseptic are described and compared, and Lauenstein considers that each is able to guarantee absolutely germ-free catgut. If infection occurs when catgut thus prepared is used, it must be attributed to secondary infection, either from the air or hands of the operator or from the skin or mucosa of the patient. For this reason each individual case must be studied to determine the most advantageous and appropriate manner of using the catgut in each instance. It seems perfectly rational from the practical as well as the theoretical point of view, to impart antiseptic properties to the catgut. The demonstrated possibility of rendering catgut absolutely aseptic, combined with its absorbability, ensure it the highest place in the equipment of the surgeon. It can only be surpassed by the discovery of an absorbable thread that does not swell in the living tissues nor offer a favorable soil for the development of microbes.

Pocket Sterilizer. BOFINGER.—A zinc box, $1\frac{1}{2}$ by $9\frac{1}{2}$ by 4 cm., holds the instruments usually necessary, in a folding duck case in the lid. The perforated trays hold a bottle for alcohol, and two small square alcohol lamps, with other compartments for syringe, etc. The legs are folded against the side when not in use. The instruments, etc., can be sterilized

in the steam or laid directly in the boiling water in the bottom of the box, which boils in five minutes over the two lamps. With an ample supply of instruments the total weight of the box is about 2 $\frac{1}{5}$ pounds.

St. Petersburger Medicinische Wochenschrift, April 7.

Bacillus of Whooping-Cough. A. UCKE.—Reviewing the various communications that have been made in regard to the causal agent of whooping-cough, Ucke concludes that the majority of the authors, Czaplowski and others, have described one and the same bacillus, a very small rod with swollen ends, which can easily be mistaken for a diplococcus. Found in large amounts in fresh sputum, it may assist in differentiating the affection.

Gazzetta degli Ospedali (Milan), April 8 and 17.

Morphologic Modifications of Koch Bacillus; Their Prognostic Significance. S. MIREOLI.—A number of experiences are related in detail, showing that in cases of latent tuberculosis and cases improved with serotherapy, the tubercle bacillus changed its shape and simulated the streptococcus in appearance, both in the clinic and in experimental research. The author concludes that these "streptococciform modifications" indicate a more favorable prognosis, as they are evidences of attenuated virulence. The chief modification is in the length; the bacillus becomes two, four or eight times its typical length, stretching out thin and long, and also shows granulations.

Circular Suture of Arteries by Direct Coaptation of Endothelium. A. SALOMONI.—The intima of each stump is exposed and the two parts brought together, with temporary hemostasis with fingers or forceps. The stumps are then sutured together with very fine silk, in a "knotted suture" including the entire thickness of the walls of the vessel. In a dog killed eighteen days after the abdominal aorta had been sutured in this way, the artery was found practically normal in every respect. The suture healed over with no contraction of the lumen of the vessel. "Coaptation of endothelial portions of the stumps prevents the formation of fibrous deposits and ensures adhesion with the caliber of the vessel unaffected."

Case of Tabes Consecutive to Trauma. E. GASPARDI.—This is a typical observation of locomotor ataxia developing a few months after a stab wound in the brachial plexus, in a young man with no venereal history nor heredity, always very robust. The symptoms were particularly pronounced on the side of the lesion.

Action of Chloroform on the Blood. V. BACCARINI.—In the summary of this report of extensive experimental research the writer asserts that chloroform has an intense hemoglobinolytic action, also a cytolytic, but less pronounced, and it diminishes the respiratory capacity of the red corpuscles. The latter die sooner and in greater numbers than normally, especially the young corpuscles. This action lasts from a few hours to a few days, and is more pronounced as the narcosis is longer and deeper. Not all the modifications noted are to be ascribed directly to the chloroform, but rather to a circulus vitiosus, which it establishes.

Differences Between Pathogenic Action of Behring's and Tizzoni's Tetanus Toxin. G. TIZZONI.—First establishing that every tetanus toxin rapidly deteriorates with age, which accounts for the contradictory results obtained by different investigators, Tizzoni shows that there are evidently substantial differences in the constitution of his and Behring's toxin. The pathogenic action of his toxin is $\frac{3}{5}$ that of Behring's in animals most sensitive to it—guinea-pigs—and 166 times as toxic for less susceptible ones—rabbits.

The Bicycle and Insanity. C. LOMBROSO.—As the result of extensive research Lombroso announces his conviction that the introduction of the bicycle has materially increased the number and the causes of cases of insanity. He admits that it has added much to the pleasures of life and put an end to the isolation of remote hamlets and farms, but at the same time its criminal influence is so great that the old formula: "look for the woman," should be changed to "look for the bicycle," in the majority of cases.

Societies.

COMING MEETINGS.

- AMERICAN MEDICAL ASSOCIATION, Atlantic City, N. J., June 5-8.
 Illinois State Medical Society, Springfield, May 15-17.
 American Pediatric Association, Washington, D. C., May 7-9.
 Ohio State Pediatric Society, Columbus, May 8.
 Nebraska State Medical Society, Omaha, May 8-10.
 Washington State Medical Society, Spokane, May 8-9.
 Oklahoma Territory Medical Society, Oklahoma City, May 9.
 Ohio State Medical Society, Columbus, May 9-11.
 Kentucky State Medical Society, Georgetown, May 9-11.
 Medical Association of State of Missouri, Mexico, May 15-17.
 Medical Association of Montana, Butte, May 16.
 Iowa State Medical Society, Des Moines, May 16-18.
 Arkansas Medical Society, Jonesboro, May 14-16.
 American Medico-Psychological Association, Richmond, Va., May 22-25.
 Connecticut State Medical Society, New Haven, May 23-24.
 Association of Military Surgeons of the United States, New York City, May 31 to June 2.
 American Laryngological, Rhinological and Otological Society, Philadelphia, May 31, June 1 and 2.
 North Dakota State Medical Society, Grand Forks, May 23-24.
 Indiana State Medical Society, Anderson, May 24-25.
 New Hampshire Medical Society, Concord, May 31 and June 1.

New York County Medical Association.—Dr. Charles E. Denison has been made treasurer, and Dr. J. W. Draper Maury, corresponding secretary of the Association.

Paducah Medical and Surgical Society.—The annual election of officers for this Society occurred at a recent meeting held in Paducah, Ky., resulting as follows: president, J. D. Robertson; secretary, J. E. Caldwell; treasurer, Horace Rivers.

Erie County Medical Society.—Officers were elected as follows, at the April session of this Society, held in Sandusky, Ohio: president, Charles Graefe; first vice-president, E. Stanley; second vice-president, M. J. Love; secretary and treasurer, H. C. Schoepfle.

Tolland County Medical Association.—The annual meeting of this Connecticut organization was held April 17, in Rockville. Following are the newly-elected officers: president, F. L. Smith, Stafford Springs; vice-president, T. F. O'Laughlin, Rockville; clerk, E. T. Davis, Ellington.

Windham County Medical Association.—This Association's 107th annual meeting was held at Norwich, Conn., April 12. The following are the newly-elected officers: president, S. B. Overlock, Pomfret; vice-president, Laura H. Hills, Willimantic; clerk and treasurer, James L. Gardner, Plainfield.

Medical Association of District of Columbia.—At the recent meeting of the standing committee of this Association, Washington, D. C., Dr. G. S. McLean was elected president and Dr. Clifton Mayfield secretary. The committee will continue its efforts, begun last year, to enforce the strict observance of the medical practice act of the District.

Austin Flint Medical Society.—The annual meeting of this Society was held in Waverly, Iowa, recently, and the following officers elected for the ensuing year: president W. A. Rohlf; vice-president, G. W. Appleby; secretary and treasurer, J. C. Powers of Hampton. Clear Lake was chosen as the place for the next meeting, to be held in July.

Conference of Health Officers.—The tenth annual conference of Indiana health officers will be held in Indianapolis, May 8-9, under the auspices of the State Board of Health. The meetings will be held in the Medical College of Indiana, the first session at 10 a.m., May 8. There will be a symposium on

school hygiene, opened by a paper on "The School House," by Louis Gibson, and following this a consideration of the various phases of school hygiene and papers on various sanitary subjects.

Louisiana State Medical Society.—At the close of the annual meeting, just held in New Orleans, the following officers were elected for this Society: president, F. W. Parham; vice-presidents, C. J. Landfried, J. Callan, C. M. Smith, T. G. Ford, O. M. Patterson and R. C. Webb; treasurer, H. S. Coeran; recording secretary, H. B. Gessner; corresponding secretary, A. G. Friedrichs.

Texas Medical Association.—At the annual meeting of this Association held in Waco, Texas, April 24-27, it was decided to recommend that the state health authorities adopt the quarantine regulations agreed on at Atlanta and indorsed at New Orleans. The question of medical legislation was also given consideration, and representatives are to be urged to support the bill for the regulation of practice in the state.

Medical Society of the State of California.

Annual Meeting, San Francisco, April 17-19, 1900.

Dr. George Chismore, the President, presiding.

MEDICAL LEGISLATION.

DR. THOMAS ROSS, Sacramento, read a paper on this subject, in which he reviewed the work done by the profession and presented the status of the people and the states in their attitude toward the profession. He insisted on a higher and a better preliminary education than many medical schools have heretofore possessed, if we desire to raise the standard of professional attainments, for to be a competent physician to-day requires the highest order of attainment, untiring industry and unselfish devotion to the interests of the profession and the wants of suffering humanity. The examination for license to practice should only be open to graduates of colleges having a four-years course. These examinations should not be too technical but should fairly test the professional knowledge of the applicant. There should be one board of examiners only, and the examination should be the same for all, except that on materia medica and therapeutics. He thought that the fairness and liberality of the provisions of such a law would command the respect of the people, and would elevate the profession by excluding the illiterate from the study and practice of medicine.

PATHOLOGY AND TREATMENT OF ANEMIA.

DR. W. N. SHERMAN, Fresno, treated of the changes in composition, and the varying relation of the corpuscles, and their changes in shape, size and color. He spoke of the value of an early and frequent microscopic examination of the blood for diagnostic purposes. He classified anemias with reference to their origin, the primary forms including chlorosis, pernicious anemia, etc., and the secondary, resulting from nutritive disturbances in the blood, and the direct loss of blood by hemorrhage. The rest of his paper consisted in a consideration of chlorosis and idiopathic anemia. He entered rather exhaustively into the technique of both microscopic and chemical examination of blood. In regard to treatment of severe anemias, he placed rest as the most important measure, and cited cases where all therapeutic treatment failed, while, placed in bed for a time, patients respond quickly to medicine. Attention to the secretions, diet, and skin, and mental condition, are all-important. The great therapeutic agent in this disease is the Bland pill, no other preparation of iron comparing with it. The next best is arsenic; the improved Bland pill contains this article and is a very desirable combination. In severe cases oxygen by inhalation is good.

BUBONIC PLAGUE.

DR. HENRY A. RYFKOGEL, Oakland, presented a paper on the "Present Pandemic of Bubonic Plague." He considered the history of the disease, and gave a resumé of former epidemics. He also referred to the origin of the present pandemic and its progress; the plague in China; in Japan; in South America; in the Sandwich Islands; in Australia; in the United States; and gave a description of the specific bacillus, and discussed

the methods of carrying infection, and the possibilities of further invasion, closing with a few words on prophylaxis.

TUBERCLE BACILLI IN URINE.

DR. MAURICE W. BROWN, Alameda, referred to a class of pyuria in which tuberculosis of the kidney or bladder is probable. He spoke of the differentiation of tuberculosis of the bladder from tuberculosis of the kidney. In obtaining urine for examination, the smegma bacillus is the principal source of error, therefore disinfection of the prepuce and glands should be most thorough. He considered the microscopic technique for the demonstration of tubercle bacilli, and reported two cases of tuberculosis of the kidney.

PNEUMONIC COMPLICATIONS IN PHTHISIS.

DR. W. OPHULS, San Francisco, read a paper on this condition, which he thought most often due to aspiration of contents from pulmonary cavities. They differ according to whether they are due to simple tubercle bacilli infection, or to mixed infection of these bacilli with other pathogenic bacteria. These pneumonic complications have a great influence on the general course of the disease. The paper was based on the personal study of about sixty post-mortems.

BRONCHOPNEUMONIA.

DR. WM. FITCH CHENEY read a paper describing the nature of the disease and its dangers to life, the latter being: 1, mechanical, from obstruction, and 2, toxic, from infection. Probably the greatest menace to life is that of diminished air space from occluded tubes and collapsed sacs, which leads to deficient oxidation of the blood, and thence death from asphyxiation. Looking at the disease either from the standpoint of pulmonary obstruction or toxemia, our first duty in treating a case of bronchopneumonia is stimulation. The more stimulant furnished the patient the more opposition offered to the progress of the disease. Nutritious food should be given in sufficient amount, for there is no drug equal to food as a sustainer of life. Milk, peptonized if necessary, is the best diet, and at least two quarts should be taken in twenty-four hours for an adult. There is no objection to animal broths if the patient tires of milk, but milk gives a maximum of nutrition with a minimum of bulk, and always deserves first choice. Alcoholic stimulants are next in importance, and should anticipate symptoms of depression. Chief among stimulant drugs comes strychnin sulphate. 1. It acts as a stimulant to the respiratory center. 2. It increases the reflex activity of the spinal cord, exaggerates the impression conveyed to it by the mucus in the tubes, making the cough in turn more forcible and efficient, and so helps to cause elimination, or at least to prevent accumulation of the viscid exudate. 3. It acts as a direct stimulant to the heart, increasing the force of the contractions of the right ventricle, and so helping it overcome any obstacle in the way of its work.

moderate, 1/30 gr. every eight hours as indicated, to once in six or once in four hours, for an adult. The only other drug advocated for routine administration in this disease is the carbonate of ammonia, for its stimulating rather than its expectorant qualities. The temperature must be taken at least three times a day, and the number of respirations and pulse counted frequently. The cough should not be interfered with unless it becomes troublesome. Dover's powder is the author's favorite remedy for this affection. Pain can usually be overcome by hot applications to the chest. He thinks the fever rarely becomes high enough to constitute a source of danger. He decries all high depressing antipyretic drugs, a high temperature usually meaning a wide area of infection and excessive productions of toxins, calling for additional stimulants rather than depressing drugs. He would rather recommend sponging of the extremities or entire body with equal parts of water and alcohol for high fever. Cyanosis demands stimulation, atropin and digitalin should be here added to the strychnin, and given hypodermically. Caffein is another useful drug. Oxygen should be administered continually until normal color is restored. The author closes his paper with some remarks referable especially to the treatment of this disease in infants.

MANAGEMENT OF LABOR.

DR. WM. J. G. DAWSON, St. Helena, in a paper on "A Few Practical Points in the Management of Labor," called atten-

tion to the ordinary duties of the obstetrician, to the use of unguents in dry labor; douches and chloroform in rigidity of the os, and referred to ordinary measures for protection of the perineum. He believes that modern teaching is somewhat responsible for laceration of this body, and that forceps are too frequently applied when not needed. He deprecates the modern method of external examinations only, and advocates repeated examinations during the first and second stages. In the third stage of labor he depends on uterine contractions for delivery of the placenta, and does not use the Credé method. He applies pressure over the uterus and traction on the cord, and keeps up firm pressure on the uterus by the hand as a preventative of postpartum hemorrhage.

UTERINE SCRAPINGS.

DR. HAROLD BRUNN, San Francisco, in a paper on the "Value of Microscopic Examination of Uterine Scrapings," referred to the frequent curettement, and the prevalent ignorance as to the pathology of the endometrium. He called attention to the similarity of the symptoms and microscopic appearance of the endometrium in benign and malignant diseases. He gave the details of performing a diagnostic curettement, and preservation of scrapings, methods of mounting, and called attention to the relations between the pathologist and surgeon.

SHOCK.

DR. E. H. WOOLSEY, Oakland, read a paper citing cases of shock from a variety of causes, from mental emotion to grave injuries, including shock from cold drinks, renal calculi, catheterization, intestinal perforation, rectal dilatation, etc. His remarks dealt chiefly with the tracing of the process from cause to effect; entertaining the view that the phenomena of shock are reflex effects.

SUBARACHNOID SPACE.

DRS. DUDLEY TAIT AND G. E. CAGLIERI, San Francisco, presented a paper on "Experimental and Clinical Notes on the Subarachnoid Space." This paper was awarded the prize, by the prize essay committee, and will appear in THE JOURNAL.

SURGERY FOR GALL-STONES.

DR. BEVERLY MACMONAGLE, San Francisco, presented a paper on "Some Surgical Methods of Treatment for Gall-Stones," the first method being the removal of the gall-bladder with gall-stones, with drainage. The second is to open the gall-bladder, remove the gall-stones, and attach the gall-bladder to the abdominal parietes, with drainage. The third method is to open the duodenum, dilate the opening from the common duct to the duodenum, and remove the stones, closing the duodenum and abdomen. A fifth is to open the gall-bladder, remove the gall, and close the gall-bladder and abdomen, without drainage. Dr. MacMonagle cited illustrative cases for each of these methods and considered the technique of each. He believes that the second meets the requirements of most operators.

DR. J. HENRY BARBAT said the removal of the gall-bladder is unjustifiable if the cystic duct is patulous, and gall-stones exist much more frequently than recognized. He recently removed 286 stones from the gall-bladder of a patient who had been treated for almost everything else.

DR. CLINTON CUSHING thinks it perfectly safe to remove the gall-bladder, and that it is of no more use than the appendix vermiformis.

DR. F. B. CARPENTER, San Francisco, thinks that if the gall-bladder is diseased, it should be removed. The common duct should be thoroughly examined before the gall-bladder is closed, in all cases in which it is incised.

APPENDICITIS.

DR. J. HENRY BARBAT, San Francisco, presented a paper entitled "A Few Notes on Appendicitis." This paper will appear in THE JOURNAL.

LIGATION OF INTERNAL JUGULAR.

DR. CHAS. G. LEVISON, San Francisco, presented a paper on "Ligation of the Internal Jugular Vein During the Removal of a Malignant Growth of the Neck." It discusses a case operated on by the writer, and followed five days after by death from a thrombosis of the jugular vein, lateral and sigmoid sinuses.

ABORIGINAL TREPHINING.

DR. PHILIP MILLS JONES, San Francisco, presented a paper treating of the methods in vogue in the Pacific Islands, within

historic times, and of the experimental work of the author. He exhibited some trephined skulls.

PROSTATIC CALCULUS.

DR. JOHN C. SPENCER, San Francisco, in this paper reviewed the pathology and etiology, dividing all cases into either essential or adventitious, and treating especially of the essential form. He cited the conclusions of many authorities as to the origin of the trouble, made suggestions as to treatment, and reported a case.

IS GONORRHEA CURABLE?

DR. M. KROTOSZYNER, San Francisco, read a paper expressing his opinion that gonorrhoea is in many instances an incurable disease. Our diagnostic apparatus does not enable us, in some instances, to demonstrate with safety that the disease is permanently extinct. Everybody who has ever suffered from gonorrhoea should permit a most careful examination in order to remove diseased foci amenable to our diagnostic apparatus.

Sacramento was selected as the next place of meeting. The officers elected for the ensuing year are president, Thomas Ross, Sacramento; first vice-president, W. J. G. Dawson, St. Helena; second vice-president, Wallace A. Briggs, Sacramento; secretary, George H. Evans, San Francisco; treasurer, E. E. Kelly, San Francisco.

Medical Association of Georgia.

The Fifty-first Annual Meeting, Atlanta, April 18-20, 1900.

DR. F. W. McRAE, President, presiding.

REPORT ON MEDICAL LEGISLATION.

The Committee on Medical Legislation reported, through its Chairman, Dr. W. S. Elkin: 1. In favor of making renewed efforts to secure the passage by the legislature of the two bills introduced last session, providing for privileged communications to physicians and patients and for expert services in the courts of the state. 2. In favor of so amending the by-laws that the committee on medical legislation shall consist of six members who reside at the capital of the state, instead of nine members from different parts of the state. 3. In favor of an appropriation from the treasury of the Association of \$50 or so much thereof as may be necessary, for the use of the standing committee on legislation.

The report was unanimously adopted.

A PASTEUR INSTITUTE.

A committee was appointed to investigate the matter of establishing a Pasteur institute in Atlanta for the treatment of hydrophobia. This committee subsequently reported that it had investigated the matter and was persuaded that the establishment of such an institution would be a great benefit to suffering humanity, not only in Georgia, but throughout the entire South. It would also benefit the profession by furthering scientific investigations. As to the best method for raising the means to establish the institution, or whether it should be in connection with the Grady Hospital, or College of Physicians and Surgeons, the committee did not decide, and asked for further time, with power to act, such action to entail no financial obligations on the Association. The following resolutions were accordingly introduced and adopted:

Resolved, That the Medical Association of Georgia endorses the establishment of a Pasteur institute and laboratory in Atlanta and pledges its hearty support.

Resolved, That the profession will endeavor to secure through legislation 50 per cent. of the dog tax to support said institution when established.

HEALTH MEASURES, ETC.

A bill was framed, introduced, and adopted, creating a department of health and health officers in the state.

A committee appointed last year to confer with the medical societies of other states, inviting their co-operation in a memorial to Congress asking an increase in the rank, pay, and allowance of the Surgeon-general of the United States Army, reported favorably, and the report was adopted.

President McRae read letters from Senators A. O. Bacon and A. S. Clay in which it was stated that these gentlemen would do their utmost to defeat the Gallinger bill when it

comes up for discussion and final disposition in the Senate of the United States.

CONTINUED USE OF ANTISEPTIC AND ELIMINATIVE TREATMENT OF TYPHOID FEVER WITHOUT ANY DEATHS.

DR. T. VIROIL HUBBARD, Atlanta, read a paper with this title. The author has treated twenty cases of typhoid fever by the antiseptic and eliminative method without any deaths. Other men have treated a larger number without any, and the collective results give a mortality of less than 2 per cent. The physician who has never witnessed the contrast in the clinical picture of a typhoid patient on the eliminative treatment, as compared with the expectant plan, can no more appreciate its efficacy than a person born blind can appreciate the beauties of Nature. If he has never witnessed the prompt disappearance of delirium, the restoration to consciousness to the clouded intellect, prompt return of the appetite and digestive capacity, and gradual but sure reduction of temperature, he has in store for himself one of the triumphs of his profession, and a scene which will give him renewed confidence in the healing art.

TYPHOID FEVER, WITH REPORT OF CASES AND COMMENTS.

DR. W. B. HARDMAN, Harmony Grove, followed with a paper on this subject. He thinks the Brand treatment of the disease by plunge baths is impracticable, because it **can not be used** in the country or in small towns. He vigorously defended the Woodbridge treatment, and cited sixteen cases, with details, which he had personally treated the past year, using the Woodbridge method in each. Of the sixteen, only two patients died. In all of the others the temperature was brought to normal within fourteen days, and they were put on the road to convalescence. He does not follow the directions of Woodbridge to the letter, but uses his own judgment in modifying his instructions. Still, the principle of this treatment is adhered to, and calomel freely used in all cases.

SURGICAL CASES.

DR. WILLIS F. WESTMORELAND, Atlanta, reported a series of interesting surgical cases, and exhibited specimens. One was a case of carcinoma of the cecum; one a case of suprapubic cystotomy for stone in the bladder; one arthrotomy with excision of the head of the humerus for an old dislocation of the shoulder-joint. He showed typical specimens of osteomata.

BRAIN TRAUMATISMS.

DR. HOWARD J. WILLIAMS, Macon, read a paper on this topic. Except in the grosser lesions involving the motor areas particularly, localization of disturbed cerebral functions has generally been of but little practical value in indicating the point of the brain most importantly involved; he said: The reasons for this are: 1. In the large majority of brain traumatism multiple lesions exist; many special functions are implicated and conflicting symptoms appear. 2. The general symptoms of cerebral shock, or of concussion, and compression usually so mask the symptoms pointing to special regions involved that important lesions can not be discovered. 3. The general depression common to various lesions may be so prolonged that when it is relieved, the symptoms pointing to special obtunded functions may be discovered too late to be of working value, secondary changes having destroyed the cells of the particular regions involved. 4. While in some regions of the brain a cerebral function is circumscribed, in other parts it is diffused over large areas. Here compensation of the obstructed functions is early taken up by unaffected cells, the functions are restored, and the significant symptoms have disappeared before the general depression has passed off; partial loss of power of the part affected may later become permanent when secondary changes have destroyed the involved area. Dr. Williams reported nine interesting cases.

SPLENECTOMY FOR CONGESTIVE HYPERTROPHY.

DR. J. WESLEY BOVÉE, Washington, D. C., reported "a successful case of splenectomy for marked congestive hypertrophy, with remarks." The principal reason, usually, for removal of the spleen is its enlargement, and this produces marked distress according to its size, the number and character of adhesions and the interference with the function of other organs. The sense of intolerable dragging when the tumor

is large often demands removal, provided other conditions permit it. This enlargement is usually due to paludal, tubercular or idiopathic causes, malignant disease, wandering of the organ, axial rotation, echinococcus and other cysts, chronic congestion, amyloid disease and injuries, such as rupture. Perhaps the most frequent cause of enlargement—leucocythemia—is the one condition in which the operation of extirpation should almost never be performed. More than one hundred cases of splenectomy for leucocythemia have been reported and in but three of them was it successful. Such results should be sufficient to put this indication for the operation practically beyond dispute. Some writers, however, believe the operation is justifiable when the relative proportion of red to white blood cells is not lower than fifty to one. In some cases perhaps this proportion may not be markedly dangerous, but we must remember the spleen does reach a tremendous size in leucocythemia, often weighing from twenty to fifty pounds and the adhesions may be formidable. In such cases, certainly, the fifty to one rule would be a very dangerous one were it not that in these very marked cases of enlargement, the ratio is usually greater than the one mentioned. It shows, however, the necessity of knowing the blood conditions. Nor should the proportion of red and white blood-cells be all we should attempt to learn in examination of the blood. It is well known that different varieties of both red and white blood-cells have different functions and that the relative numbers of these species of them vary quite markedly in different specimens of blood, whether taken from the same or different patients. This is certainly an element of great importance. Aside from this, it is of the greatest moment to know the hemoglobin percentage of the blood of a patient suffering from a leucocythemic spleen. If this be not far below the normal, as shown by the present inaccurate instruments, the prognosis of the surgeon is less grave.

Splenectomy is not an operation to be lightly entered on with scarcely any knowledge of the conditions demanding it and of those absolutely contra-indicating it. It is fully important to know when not to do the operation as when to intervene surgically. He reported a case in detail.

The following officers were elected for the ensuing year: president, Samuel C. Benedict, Athens; vice-presidents, R. M. Harbin of Rome, and V. D. Lockhart of Mayesville; secretary, Louis H. Jones, Atlanta. The next place of meeting is Augusta, the third Wednesday in April, 1901.

Philadelphia Pediatric Society.

March 13, 1900.

TUBERCULOUS CAVITY IN CHILD.

Dr. D. J. M. MILLER presented a girl, 8 years of age, with a tuberculous cavity in the lung, with skiagraph. The child's father died of phthisis, and was constantly attended by her. One year after his death she first showed symptoms of the disease. As a rule cavities are not so frequent in children as in adults. In this case a residence of twelve weeks in a hospital brought about marked improvement. Within six weeks she gained six pounds. When first admitted she had night sweats and considerable fever.

SECONDARY ANEMIA IN CHILD.

Dr. D. J. M. MILLER also presented a case of profound secondary anemia in a girl 2 years old, who had been under observation for three weeks. The disease probably originated eighteen months ago, with general increase in pallor and loss of appetite, but there was no diarrhea. The spleen and liver were slightly enlarged, but there was no lymphatic enlargement. There was slight tenderness over the tibia. First examination of blood showed: red cells, 3,984,000; leucocytes, 24,000; hemoglobin, 23 per cent. Several weeks later the red cells numbered 3,984,000, leucocytes 12,200, and the hemoglobin was 23 per cent. The condition therefore appeared to be one of chloro-anemia with moderate leucocytosis. There were no nucleated red cells.

Dr. ALFRED STENGEL, in discussing the first case presented by Dr. Miller, said that the diagnosis of small cavities in the lungs in children is extremely difficult, since many of the physical signs present under normal conditions prevent the

signs from becoming manifest. Thus a cracked-pot sound may be obtained in a healthy chest during the time the child is crying.

Dr. F. SAVARY PEARCE thought the symptoms of the second patient pointed to rickets.

Dr. ALFRED HAND thought the condition might be brought about by rickets, or by gastro-intestinal disturbances due to bad hygiene.

VALVULAR ENDOCARDITIS AFTER CHOREA.

Dr. JOHN M. SWAN presented a case of chronic valvular endocarditis following chorea. The child was first seen in June, 1898, and was suffering from short cough, dyspnea and edema of the ankles. The family gave a history of rheumatism. In 1897 the child had been treated for arthritic troubles and later for chorea. The disease first began in the hands, then in the arms and legs. The tongue had manifested choreic movements. A soft murmur had been heard over the base of the heart, the pulse was accelerated and still later a double mitral murmur was transmitted to the axilla. The heart's action became tumultuous. There had been no albumin nor glucose present. The child was sent to the country but became worse, the feet and hands became swollen and ascites developed, followed by the appearance of albumin and casts in the urine. During the treatment the urine suddenly increased to a very large quantity, after which steady improvement set in and the child was able to get out of bed. Mitral regurgitation and also aortic stenosis were now detected. Hot baths were given daily, milk diet, digitalis, strychnin and Rochelle salts when needed. In February, 1900, the child weighed 60 pounds, attended school regularly and was able to do general household work. The pulse is now full and the rhythm regular. The apex is in the sixth interspace. The murmurs are not so distinct as formerly, and the urine is practically normal.

Dr. F. A. PACKARD thought that probably the valvular leakage might in part be due to pericarditis which had been present.

TUMOR OF KIDNEY IN CHILD.

Dr. J. H. MCKEE reported a case of large tumor of the kidney, occurring in a girl 6 years of age. There was no history of tumors on the father's or mother's side. The child had been healthy and strong, her only previous illnesses being measles and chicken-pox. Three months previously she began to lose flesh and later a pain in the leg developed. Still later there was abdominal enlargement, constipation, and cachexia. The abdominal enlargement was irregular on the left side, and dullness extended downward to the anterior superior spine, and in this region bulging was noticed. At one time a peristaltic wave had been detected, but there had never been much tympany. A nodular growth was also found in the region of the ribs. The urine contained no albumin, nor glucose, but some time later albumin was found, together with casts and red blood-cells. On October 4 an operation was performed by Dr. T. S. K. Morton, followed by temporary improvement, but death occurred later, probably from a recurrence elsewhere.

Detroit Medical and Library Association.

Detroit, Mich., April 9, 1900.

Dr. Carl Bonning, President.

SYMPOSIUM ON ENDOCARDITIS.

Dr. W. M. DONALD considered the etiology and pathology, saying, in part: Valvulitis and endocarditis are synonymous terms. Three classes exist—acute simple, acute malignant and chronic. It is claimed that 20 per cent. of all cases of acute simple endocarditis result from rheumatism, but almost any of the infectious diseases may be a predisposing factor. Chorea must not be forgotten. Chronic valvular defects seem to be the predisposing cause of malignant endocarditis. Following this come pneumonia, meningitis, septicemia and erysipelas. The chief causative agent of the third form is a pre-existing acute endocarditis. Alcohol, syphilis, gout, overindulgence in rich food and severe exertion must also be considered as of etiologic value. In the first form the principal pathologic lesions are vegetations—granulation tissue capped with fibrin on the valves at their point of closest contact.

These vegetations are in time absorbed, leaving only a nodular thickening of the valve. In the second form the vegetations go on to necrosis, with frequently more or less ulceration, and even abscesses may form. Bacteria are present in large numbers, among which are the bacillus of pneumonia, and the staphylococcus and streptococcus pyogenes. In the third form, the edge of the valve is thickened and has nodular outgrowths. Advanced stages show curling up and retraction of the valve's edge. Adhesions may co-exist as well as calcification of the valves and surrounding tissues.

DR. W. R. CHITTICK presented the symptomatology, and said: The signs of acute simple endocarditis may be vague. A systolic murmur heard at the apex of the heart, indicating mitral regurgitation, is the sign most frequently met with, though not a settled question. The aortic valve may become involved and cause a double aortic murmur—a diastolic murmur being always organic. Accentuation of the pulmonary second sound, and dullness on percussion when due only to rheumatism are certain signs of endocarditis. The symptoms and signs of the second variety are precordial distress, pain, shortness of breath, dropsy, extreme pallor, great rapidity of the pulse, diastolic aortic murmur. A systolic mitral murmur with accentuated pulmonary second sound and evidence of engorgement of the right heart, with the presence of fever and other grave symptoms are characteristic. The spleen is enlarged and tender, and changes in the urine, paralysis, delirium, convulsions, headache, coma may follow. The symptoms often closely resemble those of typhoid fever. The symptoms of the third variety are usually shortness of breath on exertion, cough, and later dropsy. Palpitation, intermittent action of the heart and derangements of the digestive tract may occur. Blueness of the lips, ears, nose, etc., and enlargement of the veins of the cheeks and nose are often present.

DR. G. W. WAGNER considered the diagnosis and prognosis. If in the course of any acute infectious disease, especially rheumatism, a heart murmur is discovered, the time of its occurrence, its distribution, accentuation of the second sound and the changes in the heart's action which follows will usually indicate endocarditis. Chief among the points brought out were: In aortic lesions the stethoscope should be placed over the carotids in the neck, to diagnose the presence or absence of the second sound; the differentiation of aortic stenosis from certain changes due to anemia; of aortic incompetency from syphilis and degeneration changes; of mitral incompetency from accidental murmurs; the signs of mitral stenosis, and pulmonary stenosis and insufficiency. As to prognosis, we must base our conclusions on a careful study of the nature of the disease and degree of compensation present, as well as on the general condition of the patient, his occupation, habits, etc.

DR. F. L. NEWMAN took up the question of treatment. In acute endocarditis it should be directed toward limiting the course and effects by modifying the cause. The cardinal point is to quiet the restlessness of the heart by absolute rest in bed. In the sthenic cases, aconite is given; if there is pain, *pulv. Doveri*; in asthenic conditions, when the heart weakens, digitalis, strychnin, ammonia or ether—usually digitalis is not required until later on when valvular disease is supervening. As to local measures, authorities differ. Ice to the region of the heart is often very grateful to the patient. Belladonna plaster over the heart, by its very pressure, is soothing. In chronic endocarditis no treatment is necessary until symptoms of dilatation appear. Up to this time the patient should avoid anything that subjects the heart muscle to sudden strain. Drugs are prone to do harm during the stage of compensation. When the latter is only partially established and signs of cardiac failure occur, the patient must be put to bed and carefully nursed. In all forms of cardiac dilatation from valvular lesions, our sheet-anchor is digitalis. Strophanthus is next in importance. Strychnin is one of the best cardiac tonics. Caffein has a very uncertain action on the heart, but a very decided one on the kidneys. Nitroglycerin has no action on the heart, but decreases the resistance against which systole is performed. The doctor spoke of the action of heroin, gr. 1/12 every two hours for three times, as relieving a patient of his distressing cough and vomiting after all other regular means had failed.

New York Academy of Medicine.

April 5, 1900.

Dr. Wm. H. Thomson, President.

PREVENTION, MANAGEMENT AND EARLY DIAGNOSIS OF SCARLET FEVER.

DR. FLOYD M. CRANDALL presented this paper. Scarlet fever is peculiarly a disease in which much can be accomplished by prophylaxis. Sometimes children will be exposed quite thoroughly, even so late as after the initial vomiting, and still escape. In 90 per cent. of his cases, the period of incubation was between two and six days. The symptom-complex of vomiting, fever, rapid pulse and sore throat, when present, made it highly probable that the disease was scarlet fever. In his experience, the vomiting was the most constant symptom of all, and had often been violent and projectile. A pulse of 150 was not unusual at the outset. The so-called "strawberry tongue," i. e., a tongue in which the red papillæ show on a white ground, is not the true "strawberry tongue;" the latter, like the fruit after which it is named, has dark red dots or papillæ on a red and roughened ground. This kind of tongue is very characteristic of scarlatina, but unfortunately it is of so late occurrence that it is not of much diagnostic value. In estimating the progress of the disease, and when it will be proper to raise the quarantine, one should search with special care for desquamation around the fingers and on the hands. It is only in a very general way that the statement that the disease lasts forty days can be accepted. Another fact that should be borne in mind in this connection is that there is danger of contagion so long as there is any purulent discharge present as, for instance, a suppurative adenitis or otitis. The question of the advisability of closing the schools because of an outbreak of such a disease as scarlet fever must be decided by the character of the community. For example, in a large city like New York, the closing of the schools would bring the children more closely together, whereas in rural districts such a measure would probably keep them apart, and so tend to check the spread of the disease. When in attendance on a case of scarlet fever it is the part of prudence for the physician to wear, while in the sickroom, a cotton gown reaching from the head to the feet. This garment should be kept in the sickroom. People, as a rule, did not object to such a precaution, but, on the contrary, think all the more of a physician who is so careful about the welfare of others; moreover, if scarlet fever should break out mysteriously in another of the families attended by the same physician, the latter is not so likely to be censured, or suspected of having carried the contagion. During an attack, the anointing of the body surface with some bland oil not only prevents the dissemination of the disease but soothes the patient and often reduces the temperature. However if irritating antiseptics are employed, they are likely to do harm, and will most probably prolong the period of desquamation. Pruritus is relieved by a 5 per cent. boric acid ointment. Lard is objectionable because of its proneness to get rancid.

TREATMENT OF SCARLATINAL NEPHRITIS.

DR. ROBERT COLEMAN KEMP read a paper on this topic. He expressed the opinion that this form of nephritis is one peculiar to scarlet fever. It usually develops between the second and fourth weeks of the disease, and is a diffuse nephritis associated with general dropsy. The first sign is a sudden fall of the specific gravity of the urine, followed shortly afterward by a rise in specific gravity, a diminution in the quantity of urine, and a deepening of its color. It is during this early stage that active treatment should be instituted. As a rule, albuminuria and anasarca do not occur until later. As oxygen is a good cardiac stimulant, and an aid to the elimination of toxins, it is a very useful remedy in scarlatinal nephritis. Its early use is the keynote of success here. Enteroclysis with saline solution at 110 to 120 F. will be found very beneficial. As a rule, it will cause the secretion of four or five times as much urine as the quantity of saline solution used.

DR. H. D. CHAPIN said that in recent years he had seen a much milder type of scarlet fever than formerly. In this city the most prolific causes of the spread of such diseases as scarlet

fever are the dispensary waiting-rooms and the crowding of school children's clothing in close wardrobes.

DR. C. G. KERLEY said that the most characteristic symptom of scarlet fever is the sore throat; the other symptoms may be exceedingly slight and easily overlooked. He has known the period of incubation, in exceptional instances, to be as long as twelve and fourteen days. He has found colonic washings at 110 F. the most successful treatment for the nephritis.

DR. J. E. WINTERS insisted that it was rare for physicians to meet with a fatal case of scarlatinal nephritis. Albuminuria is no more frequent in the early stage of scarlatina than in measles, and even when it does occur in those cases which subsequently develop nephritis there is invariably an interval in which no renal disease is present. It is worthy of note that scarlatinal nephritis occurs most commonly in mild epidemics, in the mild season of the year, and in dispensary and tenement house practice or among those children who are allowed to get out of bed too soon. It is invariably a glomerular nephritis, and it is always ushered in by a sudden rise of temperature. The indication for treatment is to diminish the quantity of blood going to the Malpighian tufts, and this he has found best accomplished by the administration of aconite up to its physiologic effect. Such treatment will speedily cause an increase in the quantity of urine, and associated with this will be an increased activity of the skin, so that abundant opportunity is afforded for the elimination of toxins. Enterocolitis with saline solution is useful in certain forms of nephritis, he says, but he is totally opposed to its use in scarlatinal nephritis.

Surgical Section, April 9, 1900.

RELATIVE BEARING OF CONJOINED TENDON AND INTERNAL OBLIQUE MUSCLES ON RADICAL CURE OF INGUINAL HERNIA.

DR. JOSEPH A. BLAKE read a paper based on twenty-five dissections he had made, and which went to show that the conjoined tendon never extends on the internal surface of the rectus for more than five-eighths of an inch, and that it is such a weak structure as not to be worthy of consideration in hernia operations. The main reliance must be on the external oblique.

STERILIZING CATGUT.

DR. C. A. ELSBERG presented "A Preliminary Report and Demonstration of a New Method of Sterilizing Catgut." The method is simple and inexpensive, and bacteriologic investigations prove it to be thoroughly efficient and reliable. The fat is first removed from the catgut by immersion for forty-eight hours in a mixture of chloroform, one part, ether, two parts. After this mixture has evaporated from the catgut, the latter is tightly wound in one layer on glass spools, and immersed for twenty or thirty minutes in a hot saturated solution of ammonium sulphate in water. When removed from this it is immersed and agitated for a few minutes in sterile water, or in a weak solution of bichlorid of mercury or of carbolic acid to remove the salt which tends to crystallize upon it. It is then sterile, and can be preserved in alcohol, or in the dry state. Such catgut has been found to be remarkably strong, soft and pliable, and yet is absorbed in the tissues in from four to eight days. If it is desired to chroicize the catgut it is only necessary to substitute a 1 to 1000 solution of chromic acid in water for the plain water used for making the saturated solution of ammonium sulphate. Catgut prepared by this new process has already been used by several surgeons with the greatest satisfaction.

Topeka Academy of Medicine and Surgery.

Topeka, Kan., April 2, 1900.

President—B. D. Eastman.

TYPHOID FEVER.

DR. S. G. STEWART read a paper on this subject, and laid special stress on some of the more common symptoms observed at the bedside. The disease is characterized by being an acute infectious disease transmitted chiefly by water and milk, the latter usually infected by washing the milk cans with infected water. The course is from three to four weeks, and frequently from one to three months. During the second week the rose

spots in various degrees of severity make their appearance. The pathology is the most important part of the disease. Lesions may be extensive over the intestines. Some have been found in the duodenum and even in the stomach. There is no organ in the body that does not suffer from the arrest of nutrition. In making the diagnosis one must always take into consideration the degenerations in all parts of the body. If we had the ideal sanitary regulations we would have no typhoid fever. The typhoid cases in Topeka are in the people who drink well water.

Besides the poison from the typhoid bacilli, the system absorbs an additional amount from the decomposition of intestinal contents. Putting antiseptics into the intestines has been overdone. Iodin is used largely, as some think it increases nutrition, but if given for a long period it produces iodism. It is the same with many other drugs; if given too long depression results. Many are not so harmful, e. g., creosote, carbolic acid and salol. The latter is probably one of the safest and best. However much we put into the intestinal tract, we do not make it aseptic. We have very little to hope for from such medication. Opium should not be given to control the bowels, as it makes them more tympanitic. The doctor relies principally on *fel bovini purificati*. He reported a case of a family of twelve, all taken down with typhoid about the same time.

One of the family did hard work on a farm for several weeks, after being directed to go to bed and stay there. Finally he came down with sharp pain in the right inguinal region. Dr. McClintock performed an operation and found peritonitis from typhoid perforation. Drainage was established and the patient rallied for a little over a week, when an abscess formed in the left lung and large quantities of gangrenous pus were expectorated. Then abscesses formed all over the body, and later the right lung became involved and the patient died after an illness of twenty-one weeks. Peptonized milk was used entirely. He especially emphasized the fact that one must not depend too much on chemical antiseptics, and must meet the indications as they arise.

DR. O. P. DAVIS spoke on the pathology of typhoid, and said that Dr. Osler and others describe general systemic typhoid without intestinal lesions. The characteristic lesions are found in the intestines, particularly in the region of the ileocecal valve. In the first week there is a condition of hyperemia and catarrhal symptoms, in the second a condition of hyperplasia, in the third necrosis begins, and in the fourth cicatrization. The scars in typhoid lesions are pigmented, and a diagnosis may be made some years after the disease. He described the bacteriologic examination of the feces, blood and urine. Leucocytosis is never present in the early stage of typhoid, but is found in some other infectious diseases.

DR. R. E. MCVY spoke of the treatment. The trouble begins in the sympathetic nervous system, and so there are two factors to treat, the nervous system and the glands. The majority of patients are overtreated. He spoke of a patient being overdosed and having forty-six movements a day. He stopped all medicine when he took charge, and then gave bismuth. Recovery followed. He gives milk chiefly because it is absorbed by the veins, and does not see any use in pepsin or pancreatin. Acids are frequently of some use e. g., nitrohydrochloric. He does not object to exercise in the early stages, as it keeps up the tone of the muscular tissue, nor does he think a typhoid runs over thirty days; when the patient is ill longer it is something else.

DR. STEWART, in closing the discussion, said that the bacilli do live outside the body, but do not propagate outside. They will live for months and months in ice. The nervous system is affected by the degenerations.

Water treatment takes the place of any antipyretics. Sponge baths are better than opium, to treat delirium, restlessness, etc.,. He disinfects both the stools and urine, and never uses chemical antipyretics, for we lessen the chances of the patient's life when we lower the temperature with the latter. His advice is to sit down and study the case and meet the indications as they arise.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

61 MARKET STREET, CHICAGO.

SATURDAY, MAY 5, 1900.

TRIGEMINAL NEURALGIA.

Pain may arise from irritative disturbance at any point in the course of a sensory nerve between the cerebral cortex and the periphery, and the exciting cause may be of most varied character—inflammatory, degenerative, toxic, organic, structural. The treatment must necessarily vary accordingly. To functional disturbances we shall make no reference further than to express the opinion that derangement of function always depends on, or at least is associated with, physical alteration of structure, although this may be of such an impalpable nature as to be beyond our present powers of observation. It is probable that under these conditions the alterations that take place may be looked upon as of a nutritional, chemical or toxic origin. These considerations are of importance in connection with the treatment of the group of disorders known as neuralgias, and than which no more painful affection exists.

At the recent joint meeting of the College of Physicians of Philadelphia and the Philadelphia Neurological Society, the subject of "The Fifth Nerve in Its Surgical and Neurological Aspects" was taken up for consideration, by eminent authorities, and a number of important facts brought out. Among other things the first American case of tumor of the Gasserian ganglion and the third in the literature was reported, the new growth being an endothelioma. The patient survived two severe operations, but unfortunately obtained no relief, and in view of the nature and extent of the lesion recurrence is almost certain. In the next place a new operation for the removal of the ganglion was described, which commends itself for its simplicity, its bloodlessness, its ease of execution and its effectiveness. This consists in resection of the zygoma, turning back of the temporal muscle, trephining of the temporal bone, retraction of the middle meningeal artery, and exposure and removal of the ganglion, without the necessity of entering the meningeal cavity. The operation has already been performed successfully in four cases that were reported.

The discussion failed, however, to settle conclusively the ultimate pathology of tic douloureux and no evidence was put forth to show that the disease may not be due to disease of the cortico-medullary neuron. The tendency for the pain to return after removal of the nerve-trunk or even of the ganglion, and to appear in a second nerve after one previously affected has been resected would seem to indicate that, in some cases at least, the source of pain is beyond the ganglion. Of the util-

ity of operation, peripheral or central, sufficient evidence was afforded, but no assurance of success can be predicated in advance of the operation. As in other matters, time alone is here the final arbiter. The suggestion that instead of removing the ganglion division of the root of the sensory portion of the nerve, between the pons and the ganglion, should be practiced, is worthy of serious consideration.

Considering that the discussion was from a surgical standpoint, little was said of medicinal treatment, although it was pleasant to hear that occasionally spontaneous disappearance takes place. Nevertheless, it would seem axiomatic that all ordinary therapeutic resources should first be exhausted before surgical intervention of any sort is undertaken; and then it will be wisest to first attempt the simpler operation of stretching or resection, reserving the more radical procedure of excision of the ganglion as a final resort.

BLEEDING IN THE TREATMENT OF UREMIA.

It is probable that bleeding will never be employed again to the extent it has been in the past, but the question is frequently raised whether it is at present being practiced to the degree that its efficacy makes it worthy of. There can be no doubt that there are certain conditions that nothing will relieve so promptly and so certainly as does free venesection. One of these consists in the state of venous stasis resulting from failure in the activity of the right heart, whether due to degeneration of its muscular wall or secondary to similar failure on the part of the left heart or to pulmonary obstruction or to regurgitation through the tricuspid valves. Probably some conditions of local hyperemia or stasis, as of the brain or the lungs or the kidneys, may be relieved by the same measure. Then there is reason to believe that various toxic states, such as diabetic coma or uremia, or such as sometimes occur in the course of infectious diseases, can be ameliorated by free bleeding, and the results are probably even more satisfactory when subcutaneous infusion is practiced at the same time. By the bleeding it is hoped to remove from the circulation certain noxious substances that have failed of elimination through the natural channels, either because of their production in excess or because of deficiency in the functional activity of the emunctories; and by the infusion to maintain the mechanical integrity of the circulation, and perhaps also to effect dilution and elimination of toxins remaining in the tissues. It is a question, however, whether sufficient of the poisonous matter can be removed by even a free bleeding to bring about a distinct effect on the general condition, although it may be that when the system is partially relieved it becomes capable of ridding itself of the remaining incubus.

After all has been said, however, the fact remains that a satisfactory explanation of the mechanism by which the therapeutic effects of bleeding are brought about has not yet been forthcoming. In view of this fact Richter¹

¹The papers presented at this meeting appear in this and last week's JOURNAL.

¹Berliner Klin. Wochn., Feb. 12, 1900, p. 138.

undertook a series of experiments with the object of deciding the question in so far as it concerns uremic intoxication. He points out that uremia may be accepted as an indication of renal insufficiency. Now, it has been shown that this latter condition is attended with retention in the blood, of the molecular products of disintegration, with increased molecular concentration. Increase of the osmotic pressure, as indicated by a reduction in the freezing-point of the blood, may under certain circumstances be considered the index of deficiency in the activity of the renal function. It has, however, not yet been demonstrated that this increase in osmotic pressure is the cause of the uremia. In fact, on the one hand, increased molecular concentration of the blood in cases of disease of the kidneys may be unattended with uremic manifestations; while, on the other hand, it may be wanting in the presence of profound uremia. It is thought that increase in the osmotic pressure and the poison that gives rise to uremia have a common origin, namely, the proteid molecule. Richter has found, however, that profound uremia is almost invariably attended with increased molecular concentration of the blood. He undertook, therefore, to determine how the latter would be affected as a result of venesection, with or without subsequent subcutaneous infusion, in animals in which renal insufficiency was induced by previous treatment with substances capable of exciting nephritis or which had been subjected to nephrectomy.

It has been shown that the normal molecular concentration of the blood is not influenced by bleeding alone. It was found, further, that the renal insufficiency that was developed slowly and gradually as a result of cautious administration of renal poisons, such as cantharidin and aloin—as indicated by increased molecular concentration of the blood—was not influenced by bleeding. A distinct parallelism was observed between improvement in the nephritic process and the degree of molecular concentration of the blood. With the disappearance of the symptoms of nephritis the reduction in the freezing-point was restored to the normal. Also, when the molecular concentration of the blood was rapidly increased by the administration of renal poisons capable of inducing acute toxic diffuse nephritis, no noteworthy diminution in osmotic pressure was observed after bleeding, with or without subcutaneous infusion.

Although these observations fail to supply an explanation of the mechanism by which bleeding affords relief in cases of uremia the results obtained clinically by this measure are not therefore to be impugned.

DANGERS FROM FORMALDEHYDE.

The local newspapers have, within the past few days, contained accounts of accidents from disinfection by formaldehyde gas, and it was said that a number of the employees of the Chicago Health Department were suffering from its effects. In one case insanity was reported as the result. A careful inquiry reveals that the reports were somewhat exaggerated, and that in no case

was serious permanent injury received so far as known. The method used in Chicago is that of spraying on sheets, and there are certain dangers connected with the use of formaldehyde in this way especially to those who, as public disinfectors, are compelled to repeatedly expose themselves to its vapor, but these are chiefly confined to the disinfection of large spaces that necessitate a comparatively prolonged stay in the gradually vitiated atmosphere; in ordinary-sized rooms, they are minimal if they exist at all. There is also a certain inconvenience from the temporary irritation of the air-passages, and catarrhal affections from these are common from this cause. The skin must also be protected, as exposure produces a troublesome eczema that sometimes leaves a permanent thickening. In two cases a temporary mental derangement, lasting for a few hours, has been observed, and a dazed condition for a brief period in others after excessive exposure. In one case complete unconsciousness for a number of hours followed the accidental douching of the head and face with the formalin solution, but left no permanent ill effects. There are reports also of alopecia having occurred from this cause, though the Chicago health officers have had no such experience. So far as known all the accidents have occurred to those who have had to expose themselves professionally as disinfectors; none are reported to others.

These facts show that formaldehyde is an agent that must be handled with some care, and that while the sheet method of disinfection has its advantages, it also has its perils when applied to very large spaces, such as storehouses, large hospital wards, dormitories, etc. The fact, however, that the Chicago Health Department's officials have made many thousand disinfections with but few such accidents, and without serious permanent injury to anybody, shows that these may be exaggerated, and experience will probably develop some appliance that will reduce them to a minimum. Perhaps also some form of generator may be produced that will be as efficient as the sheet method, although, according to the Chicago experiences, this is still a desideratum. Like every other powerful agent used in medicine for good, formaldehyde needs careful handling, but the fact that with all its powerful toxic action on the nervous system, as well as its action as a local irritant, no permanent injury has been received from it by any one, is strongly in its favor as a comparatively safe disinfectant.

THE MASSACHUSETTS GENERAL HOSPITAL.

The eighty-sixth annual report of the trustees of the Massachusetts General Hospital is an interesting document, as this hospital shows a high grade of organization in all its various departments and has excellent plans for increasing its usefulness in the future. Without going into unnecessary details, mention should be made of certain things that must be of great interest to medical men. Thus we find that the library of the hospital maintains a healthy growth; it now contains something

over 5000 volumes. The trustees have assumed the expense of publishing reports of the clinical meetings of the staff and steps have been taken for the immediate publication of important investigations in clinical pathology. The clinical-pathologic laboratory of the hospital has successfully demonstrated its increasing usefulness in the general work of the institution, and its needs as outlined by its directors have received full recognition. From the report of Dr. Wright, the director of the laboratory, we learn that the existence of the latter is due to a special fund raised by friends of the hospital. He calls especial attention to the need of such laboratories in order to bring the work of hospitals up to the standard, and he emphasizes also the scarcity of properly-equipped special ones of this sort in this country. While we have a multitude of public and other hospitals, there are probably not over half a dozen laboratories in connection with them worthy of the name. And yet it is safe to say that if the medical staffs of hospitals of fair size will make determined efforts toward securing properly-equipped laboratories and competent pathologists the efforts will be successful. It is generally acknowledged that the strength of Germany and other European countries in medicine, in the broad sense, rests largely on the prominence given the laboratory as a necessary department of a large hospital.

While such laboratories are primarily designed as aid to the medical and surgical work of hospitals, they are also means of advancing knowledge of the subjects with which they deal. The number of interesting and important special studies pursued under Dr. Wright's charge, makes a decidedly creditable showing and clearly demonstrates how such laboratories help to make hospitals useful in the widest sense and factors of great consequence in building up medical knowledge. The trustees of the Massachusetts General Hospital are to be congratulated on the foresight and wisdom they show in fostering laboratory work, and in connection with the other work of their hospital, and it is to be hoped that other hospitals will soon follow the good example they have created. Let it be thoroughly understood that a hospital of any size, without a properly-equipped laboratory in the charge of a competent director, is not doing and can not do its full duty to its patients, to its supporters, and to humanity at large, and the present unsatisfactory condition of things will change for the better. Endowments and appropriations for this good purpose can be secured elsewhere as well as in Boston. The way in which such matters are conducted is a good index of the intelligence and the spirit of the man, medical and non-medical, in a community. It goes without saying that in no way can the medical profession better strengthen its own cause than by securing as many complete and well organized hospitals and similar institutions as possible. There is abundant room for advance in the mere organization of the work of the staffs of many of our hospitals, and in the scramble for position this important work has been much neglected in the past.

THE OHIO MEDICAL PRACTICE ACT.

The passage of the Love bill, by the Ohio legislature, is evidence of the influence that the medical profession can exert in a state when it is duly aroused. There was a vigorous and determined opposition to the movement for medical reform, and an active lobby working against the bill. The newspapers, or at least a large part of them, threw their influence against it, and all the forces of quackery—osteopathy, "Christian Science" and other kindred delusions—were worked their utmost for its defeat. The osteopaths were especially energetic in their endeavor to legalize their practice, but their bill failed to pass and the most they could get was admission to practice on passing examination in the requisite branches. We doubt whether the Kirksville, Mo., institution will turn out many qualified practitioners for Ohio, unless it mends its ways. The power of the 8000 physicians in Ohio was made to be felt by the politicians, and the result should encourage those in other states where medical reform is needed. The unfortunate movement of the medical students—also previously noted in *THE JOURNAL*—which appeared to possibly threaten the success of the bill, also came to nothing practically, and the legal status of the medical profession in Ohio, as a contemporary¹ puts it, "is in better form than ever before in the history of the state."

A MALARIA EXPERIMENT.

The British Government, it is said, is about to inaugurate an interesting experiment of a kind that ought to make the antivivisectionists indulge in one of their customary howls. It is directly in the line of human experimentation, and as condemnable in its way as some of those that have recently given these philanthropists so much concern. It is proposed, so the report goes, to build a hut in the most pestilential spot of the malarial Roman Campagna, make it mosquito proof with screens, etc., and have two medical experts live there during the unhealthy season of May to October. The antivivisectionists may not object to this so far, but the subjects of the experiment are to have servants to wait on them and be exposed to the same risks without having the stimulus of scientific zeal or the hope of honor or reputation. If these four persons do not acquire malaria, it will prove that it is avoidable with proper precautions. As a further proof it is proposed to breed the malaria-bearing mosquitoes, feed them on infected individuals and then transport them to England and have them there inoculate individuals who have never been otherwise exposed, who are expected to develop the disease. If this report is correct, no one can really deny the possible value of the experiments, but the humane societies will probably have their say about it, and would prefer to have mankind go on the good old way and get bitten, "as Nature intended."

THE SUPERVISION OF MEDICAL COLLEGES.

The Superintendent of Public Instruction, of the State of Michigan, recently appointed Judge A. J. Mills, of Kalamazoo, and Dr. F. F. Pitcher, of Detroit, as a commission to visit and report on the medical colleges in the state. They have made their report and, while

¹Cincinnati Lancet-Clinic, April 21.

they put the stamp of their disapproval on the policy of chartering private medical colleges, they suggest certain regulations to be followed in case such a policy is continued. Among these are a fixed standard of preliminary qualifications and graduation and examinations by independent boards for both, the assurance of the financial responsibility and adequate teaching resources of the institutions, and a constant and thorough inspection of them by competent official visitors. They further recommend the refusal of charters for medical colleges in small towns where the medical, clinical and hospital facilities are not ordinarily found. These suggestions are sensible and should be also practical, and, if followed out, will certainly tend to improve matters. This country is suffering from a surplus of medical education, the quality of which is often correspondingly deteriorated. While a certain proportion of our medical colleges are approximately what they should be, there are many that could well be spared, and some of the genuine "cheap and nasty" type. Yet they all turn out M. D's. and, so long as they exist, there will be a surplus of doctors, such as they are. The filtering process of state examinations, if sufficiently rigid, will help matters, but it would be a still further advantage if we could purify the fountain-head by strict state supervision, as proposed by this Michigan commission.

ALCOHOLISM IN MEXICO.

According to an exchange,¹ which from contiguity might be expected to be well informed, alcoholism is making startling strides in Old Mexico. The alcohol habit, it says, is reported to be rapidly spreading to all ranks of Mexican society and the mortality statistics which come from the superior or national health board show, for each year, a steady increase in the number of deaths from cerebral congestion due to alcoholism. The national government has, it is said, become alarmed at this showing, and the increase of poverty and crime that goes *pari passu* with this cause. This increase of alcoholism among the Latin races has also been reported elsewhere, and if we include France among them, it has become one of the more serious problems of their civilization. When the local alcoholic drinks heretofore prevalently used among them are supplanted or supplemented by those of the Anglo-Saxon, the danger-point is brought within the vision of those who had before ignored it. It is an unfortunate fact that wherever the northern races go they carry their vices with them, and the American and English bar is one of the most active factors in their conquering advance. Mexico will do well for herself if she puts a check on the development of this special feature of modern civilization.

PROVISION FOR CONSUMPTIVES.

In view of the influx of indigent consumptives into Colorado, some benevolent gentlemen of that state are reported to have projected a novel sort of institution which will combine the characters of a consumptive sanitarium and a self-supporting farm colony. It is needful they claim, in order to obtain the full benefit of the Colorado climate, to exercise the body and fully inflate the lungs with the rarefied air, hence outdoor occupation is

desirable. The design is therefore to furnish light employment which will enable the not-too-far-gone consumptive to maintain himself while obtaining at the same time the full benefit of the aseptic and stimulating atmosphere. The promoters of the proposed establishment therefore are aiming to secure land near Denver, which they propose to lay out in market farms and gardens for the use of weak-lunged patients. The plans as given out are not detailed in full, but it would seem that the colony idea is most prominent, though the hospital or sanatorium feature will probably not be neglected. The intention is said to be to furnish a means whereby a man or woman can secure the best accommodations and medical attendance at moderate cost, and can, if they are able, earn enough or more to pay their expenses. As yet the project is only embryonic, but it is to be hoped that it may develop and mature to meet the fullest expectations of its projectors. If successfully carried out it ought to be a most beneficent aid to a large number of sufferers, and may also help to relieve the congestion of the cities of the state by needy consumptives. The chief mover in the enterprise is, apparently, the state secretary of the Y. M. C. A., W. M. Danmer, who estimates that about \$100,000 will be required to carry out the project. He thinks that as patients are sent from all parts of the country it is only fair that other regions thus contributing should respond to the appeal.

PATHOGENESIS OF EXOPHTHALMIC GOITER.

Two views in particular have prevailed in the past with regard to the pathogenesis of exophthalmic goiter, according to which the symptoms were considered dependent on disease of the cervical sympathetic, or of the medulla oblongata; but no constant lesion has been found, and such as have been discovered have been present also in association with other conditions. It has been shown experimentally that section of the cervical sympathetic is attended with dilatation of the blood-vessels of the head and neck, retraction of the eye-balls, drooping of the eyelids, contraction of the pupils; stimulation of the central extremity, with contraction of the blood-vessels, protrusion of the eyeballs, retraction of the eyelids, dilatation of the pupils; and stimulation of the peripheral extremity, with increased action of the heart. For the development of the symptoms of exophthalmic goiter through the agency of the cervical sympathetic it would therefore be necessary for some fibers to be in a state of paralysis, and others in a state of irritation. Certain other nervous, respiratory and circulatory symptoms would, however, be left unexplained on the assumption of disease of the cervical sympathetic solely, while within a small area on the floor of the fourth ventricle are situated structures—the vasomotor, the cardiac accelerator, the pneumogastric, and the diabetic centers—derangement of whose function would give rise to many of the symptoms of exophthalmic goiter. It has been further demonstrated experimentally, that division of the restiform bodies is attended with acceleration of the heart, exophthalmos, vasomotor paralysis in the ears, neck and thyroid gland, widening of the palpebral fissure, infrequency and incompleteness of winking, and sometimes enlargement of the thyroid gland. More than fifteen years

¹Texas Medical News, April.

ago it was found that improvement in the symptoms of exophthalmic goiter followed partial or total removal of the thyroid gland, and the operation has since been repeated successfully in a considerable number of instances. It was not, however, until some years later that the conclusion was reached that the manifestations of exophthalmic goiter are probably dependent on deranged functional activity of the thyroid gland, as a result of which either toxic substances are sent into the blood or toxic substances present are not neutralized by an internal secretion of the thyroid gland. Subsequently, however, hypertrophy of the gland was found, and it was definitely concluded that the symptoms of the disease were dependent on intoxication resulting from excessive secretory activity of the thyroid gland. Further, it was learned that similar manifestations could be induced artificially by the excessive therapeutic administration of thyroid gland. More recently resection of the cervical sympathetic nerve has been practiced in some cases of exophthalmic goiter, with reported success. Additional confirmation of the view that the cervical sympathetic is involved is afforded by some observations recently made by Haskovec,¹ who found, experimentally, that acceleration of the action of the heart takes place after injection of thyroid extract when the vagus is divided and when also the peripheral extremity of the nerve is paralyzed by atropin. The cardiac acceleration failed to take place, however, when thyroid extract was injected after division of the spinal cord at the junction of the cervical and dorsal portions, and also after excision of the cervical sympathetic. The only reasonable conclusion to arrive at from the available evidence is that exophthalmic goiter is a constitutional thyroid intoxication expending its force especially on the sympathetic nervous system and the medulla oblongata.

BACTERIOLOGY OF LOBAR PNEUMONIA IN TYPHOID FEVER.

While the bacillus of typhoid fever has been repeatedly isolated from the consolidated lung in typhoid fever, it has not been successfully demonstrated in the sputum during life, though sought for by competent men. It is therefore of interest to note that v. Stühlern² was able to secure this organism as well as the micrococcus lanceolatus in pure culture from the sputum of a typhoid patient in whom consolidation of the lower left lobe developed on the tenth day of the disease. Bacteriologic examination of the blood gave negative results. In a second fatal case of pneumonia developing in the fourth week of the fever, cultures of typhoid bacilli, micrococcus lanceolatus, and staphylococcus were obtained from the sputum and from the fluid aspirated from the affected lung. In this case also the blood remained sterile, but the urine contained typhoid bacilli. Thrombosis of the femoral vein developed, and after death typhoid bacilli and staphylococci developed in cultures from the thrombus. Bacilli like the typhoid were found also in the sections from the pneumonic lobe. In a third case of this kind, examined bacteriologically post-mortem only, typhoid bacilli and diplococci were demonstrated in the

lung. An important fact in connection with the two first cases is this, that the sputum was decidedly hemorrhagic, and in the third case the affected lobe was hemorrhagic; v. Stühlern states that Curschmann has observed that the sputum is hemorrhagic in pneumonia complicating typhoid oftener than in pure pneumonias. Hence it would seem that perhaps this peculiar feature of pneumonia in typhoid is in some way dependent on the typhoid bacilli being present in the consolidated districts. It is to be remembered, however, that the hypostatic congestions of the lungs in typhoid may be the reason for the hemorrhagic sputum. At all events the fact remains that the sputum in typhoid may contain typhoid bacilli—an additional spur to the most careful disinfection of all the external secretions of typhoid patients. Indeed, it is just as essential to disinfect urine and sputum as it is to disinfect the feces on which formerly was laid so much stress. Perhaps more attention should be paid to perspiration also than has been given it.

Medical News.

WE RECENTLY mentioned that the Paris Académie de Médecine had voted in favor of adding measles to the list of diseases required to be reported. "Infectious pneumonia and bronchopneumonia" are now on the list.

NEW MEDICAL JOURNALS.—Three new publications have just appeared: the international journal, *Lepra*, with articles in English, French and German, founded by James Nevins Hyde, Dehio, Ehlers, Hansen, J. Hutchinson and Neisser (J. A. Barth, Leipsic); a journal, published by Fraenkel, Gerhard and von Leyden, devoted to questions concerning tuberculosis and sanatoria (Veit & Co., Leipsic); a third, a quarterly devoted to the scientific, unprejudiced discussion of the alcohol question, published by Baer, Boehmert, Strauss and Waldschmidt (Boehmert, Dresden).

THE HOSPITAL SHIP "MISSOURI."—This ship, which for two years has done excellent service, first between Cuba and Porto Rico and the home ports and afterward between the Philippine Islands and the United States, has terminated her connection with the medical department of the Army. She has been transferred to the quartermaster's department, on the recommendation of the surgeon-general, as the Army Transport Service is now so well conducted that sick men can be brought across the Pacific in comfort on the vessels of this service.

RETIREMENT OF COLONEL ALDEN.—Colonel Charles H. Alden, assistant-surgeon-general United States Army, who has been chief assistant to the Surgeon-General for the past seven years, was retired April 28, on account of having attained the age of 64 years, the age limit for active service. Dr. Alden was appointed an assistant-surgeon with the rank of first lieutenant June 23, 1860. Five years later he was promoted to a captaincy and, July 28, 1866, he was made a major and surgeon. He received his promotion to a lieutenant-colonelcy in November, 1888, and to a colonelcy in 1892. On the evening of April 25, last, a dinner in honor of this officer was given by the medical officers of the Army stationed in Washington, D. C., and at neighboring posts. On the evening of the day of retirement a reception was given by the Surgeon-General of the Army and Mrs. Sternberg, at which the medical profession of Washington had an opportunity to congratulate Colonel

¹ Wiener Med. Woch., January 6, p. 65.

² Centralbl. f. Bact., Abth. 1, 1900, xxvii, 354.

Alden on the close of his long career of active service. This retirement promotes Lieut.-Col. Albert Hartsuff to the rank of colonel, Major Charles L. Heizmann to be lieutenant-colonel, and Captain and Assistant-Surgeon Edward Everts to be major and surgeon, U. S. A.

PROGRESS OF THE PLAGUE.—According to the *British Medical Journal* of April 21, the mortality from plague subsided considerably in Bombay during the last week of March and gave evidence that with the approach of hot weather the health statistics are slowly approaching normal. In Calcutta, the death-rate has run up with appalling rapidity, being, from March 22 to 28, respectively, 112, 156, 116, 148, 138, 119, and 129. The well-to-do natives are still leaving the city in large numbers, so that trade is greatly disturbed and "the markets are dead." The plague, however, is confined for the most part to two wards and fresh cases in disinfected houses seem to be extremely rare. But notwithstanding the fact that considerable success has attended the attempts to popularize inoculation for plague in some districts, the disease is still carrying off about 5000 every week in India, and causing unrest and disturbances in important centers because of the preventive measures which have to be adopted. Editorially, *The Lancet* of April 21 tells of a serious riot where the militia had to be called out because the people had set fire to the segregation camp and thrown the bodies of five of the policemen who had opposed them into the flames. During the week ending April 12, there was only one new case on the Island of Mauritius, but Formosa reported eighty-three. In Buenos Ayres there are still a few cases, while Asuncion has reported none during the last twenty-five days.

NEW YORK.

THE TWENTY-FIFTH annual meeting of the Alumni Association of the Medical Department of the University of Buffalo was held the 27th ult., and the commencement exercises of this institution the same evening.

DR. EVAN BARKER JONES, Brooklyn, has been authorized by the courts to change his name to Barker, in order that he may become heir to \$200,000 left him by a great uncle on condition that he would assume his surname and coat of arms.

HOSPITAL MANAGEMENT.

The signing of the Burnett bill, by Governor Roosevelt, means the beginning of important changes in the management of the Manhattan and Long Island state hospitals for the insane. It is generally understood that back of this bill, which has now become a law, has been the influence of the State Commission in Lunacy, and the measure has been urged in the interest of economy, it being alleged that the new plans contemplated by this bill would effect a large saving in the matter of unnecessary salaries. Four medical superintendents are summarily legislated out of office, viz.; Dr. A. E. Macdonald, general superintendent of the Manhattan State Hospital, on Ward's Island; Dr. Oliver M. Dewing, general superintendent of the Long Island State Hospital, at King's Park; Dr. Robert M. Elliott, medical superintendent of the old hospital at Flatbush, and Dr. Herman C. Everts, medical superintendent of the hospital at King's Park. Under the new law the Manhattan State Hospital will be divided into a female division, a male division and the Central Islip colony. The Long Island State Hospital will be divided into two separate institutions, one at Flatbush, and the other at King's Park.

New York City.

DR. ABRAHAM JACOBI, having reached the age of 70 years, the students of the College of Physicians and Surgeons recently presented him with a silver cup. He intends going to Paris shortly to read a paper on "Infant Feeding," at the International Medical Congress.

DR. H. W. WILEY, chief of the Division of Chemistry, U. S. Department of Agriculture, Washington, D. C., delivered an address on "Food Adulteration and its Relation to Public

Health," at the first anniversary of the Hundred Year Club, held the 24th ult.

MEDICINE IN MISSIONS.

The questions of the advisability of training natives in medical lines and where they should be trained received considerable discussion at a recent meeting of the Ecumenical Missionary Conference. Dr. Edward S. Fry, of Edinburgh, expressed the opinion that the native agency for medical missions is as important as any other, and that the best method of training the natives will depend on existing conditions, but in most cases they should receive their instruction in their own country. Dr. A. P. Peck, dean of the medical department of North China College, spoke of the training in mission hospitals. Dr. John C. Berry, Worcester, Mass., from his experience while stationed in Japan, pointed out that trained nurses are almost as important as trained physicians in medical missions, and disapproved of taking natives to Europe or America to study medicine. Dr. Moses C. White, New Haven, Conn., favored training them in America, and pointed out that the impracticability of dissection, etc., in certain countries makes such training all the more necessary.

PHYSICIAN SUES INSURANCE COMPANY.

Dr. Sidney H. Carney, who for many years was in the employ of the New York Life Insurance Company, brought suit against that company some months ago for \$168,000, claiming that he had been wrongfully discharged, and that he had an oral contract whereby he was to be a salaried expert for life. This contract was entered into in 1869, the agreement being that after the third year his salary should remain at \$6000 until changed by the parties of the contract. He was discharged in 1895, at which time he was drawing a salary of \$12,000 a year. By mortuary tables it was estimated that he should live for fourteen years more, and accordingly suit was brought for \$168,000. Judge Haight, of the supreme court, dismissed his complaint of breach of contract, and an appeal was taken. The appellate division has just handed down an opinion, sustaining the previous decision. The defendant denied that there was a life contract, and asserted that it was void by the statute of frauds.

STRANGE AFFECTON OF MEMORY.

A young student of law recently forgot who he was, and wandered about the city endeavoring to discover his identity and where he lived. He visited the Astor Library and several hotels in quest of information, and finally walked into a police station, and, in a bright, clear voice, astounded the sergeant at the desk by the query: "Can you tell me who I am?" "Where I am, and to whom do I belong?" The sergeant told him he was in New York City, and tried, but in vain, to get the young man to recognize some of the well-known office buildings. Finally, in a sad and somewhat discouraged manner, the young man said: "Could you tell me if there is a young man missing that looks like me?" He was directed to police headquarters, where he repeated this question. A search of the records of those missing showed a description answering that of the inquirer, and accordingly a detective was sent with him to the address given, where his mother and sisters were almost overcome with joy at seeing him again. He did not, however, understand their emotion, and asserted that he did not know them nor the place. When questioned by his physicians, he wrote answers promptly to inquiries regarding persons with whom he had had business dealings, but any reference seemed to be a signal for his memory to fail him again. At latest account he was slowly recovering from his amnesia.

REPORTING CONTAGIOUS DISEASE.

The Health Department is stirred up over the published assertion of Virgil Prettyman, principal of the Horace Mann High School, that the health authorities have been negligent in reporting cases of contagious disease. He charged that out of 20 cases of measles in his school, only 3 had been reported to him by the Board of Health, and only 2 out of 7 cases of scarlet fever. Dr. F. H. Dillingham, assistant sanitary superintendent for the Borough of Manhattan, promptly set on foot an investigation, but was hampered in his work by the fact that some of the cases dated back to January. However,

according to Mr. Prettyman, at least 8 cases of measles had occurred in the present month, and 6 in March. He said that he would not have made such charges in a circular letter addressed to the city newspapers, had it not been that for the past two years he had been protesting to the Board of Health, without result. By a system of co-operation between the Board of Health and the Board of Education, the public schools daily receive a list of those in each district who are sick with contagious disease, or who have been exposed to contagion, and who, therefore, are to be excluded from school until readmitted by certificate from the former Board. While the private schools, being out of the jurisdiction of the Board of Education, do not receive notices from that source, the inspectors of the Health Department are supposed to notify these schools directly concerning every case of contagious disease coming under their notice.

PENNSYLVANIA.

DR. T. LEIDY RHODES, of Boystown, has been appointed a surgeon in the army and has gone to Manila.

TWO MEN living in Norristown, who were conducting a grocery store, were recently arrested and fined \$100 each for selling oleomargarin.

AT CHESTER, on the 23d ult., the J. Lewis Crozer Home for Incurables was formally opened. The home was erected at a cost of \$47,000, is three stories high and has 112 rooms, and accommodation for 160 patients. Dr. T. P. Maddox has been appointed chief surgeon.

Philadelphia.

DRS. JACOB AND FREDERICK DACOSTA will spend the summer months at Villanova.

BY THE will of Lambert Ware \$60,000 will eventually revert to the Germantown Hospital and Dispensary.

A BOARD composed of women has been organized by friends of the St. Joseph's Hospital, to aid in the work of that institution.

ESTABLISHMENT of a systematic instruction of physical culture in the public schools is being considered.

BY THE will of Rebecca Emslie, \$1000 has been given the Pennsylvania Hospital, and \$5000 to the Episcopal Hospital.

DR. W. T. COUNCILMAN, of Boston, delivered an address at the last meeting of the John Ashhurst, Jr., Society, on the "Pathology of Diphtheria."

AT THE last meeting of the Medicolegal Society, Dr. J. Madison Taylor gave an address on "Hypnotism and Some of its Medicolegal Aspects."

THE LATE Dr. Amy S. Barton left her medical and surgical instruments to the physicians who attended her during her last illness.

AT THE recent annual convocation of the College of Physicians, an interesting exhibit was made of microscopic specimens, and a demonstration given on photographing in colors.

A CIRCULAR has been issued by the Journeymen Plumbers' Association, to be sent to physicians, life insurance companies, etc., for the purpose of securing improved sanitary arrangements in the residences of Philadelphia. It is believed that insanitary ones have caused the spread of contagion, especially diphtheria.

A RESOLUTION was passed at the last meeting of the Philadelphia County Medical Society, in favor of giving graduates of literary colleges, who enter medical colleges, credit for the elementary work already done, and that they be admitted to advanced standing.

MORTALITY STATISTICS.

The number of deaths occurring in the city during the week just closed was 618, a decrease of 121 from that of last week and an increase of 117 over the corresponding period last year. The principal causes of death were: apoplexy, 12; cancer, 10; tuberculosis, 54; influenza, 19; measles, 31; pneumonia, 129.

ACT OF A DEMENTED PATIENT.

A physician recently had a most unfortunate experience with a demented patient who had called at his office. Some time ago he had treated a woman for an ear affection, and after a considerable period she again called at the office and, on being greeted with the words: "What can I do for you, madam?"

she said, "I'll show you what I'll do for you," whipped out a pistol and began firing at the doctor. After five shots she walked into the street, and was arrested. It is believed that she is demented. On being questioned, she said she had been prompted by Divine Providence.

MARYLAND.

DRS. CHARLES MATTFELDT and J. C. Schofield have been appointed sanitary officers of Baltimore County.

Baltimore.

AT THE commencement exercises of the University of Maryland, May 1, sixty-five received the degree of M.D.

DR. CLAUDE VAN BIBBEN has been appointed vaccin physician.

DR. F. J. KIRBY, superintendent of St. Joseph's Hospital, sailed on the 28th ult. for Europe, where he will remain till autumn.

DR. JOHN S. BILLINGS, New York City, delivered three lectures on "The History of Medicine," at the Johns Hopkins Hospital, recently.

TWO CASES of smallpox, from a hospital in the northeast section of the city, were moved to the quarantine hospital on the 27th ult. This makes 12 cases, and another suspicious one is under surveillance.

DR. OTTO GUSTAF RAMSAY, instructor in gynecology, Johns Hopkins, has been elected associate professor of gynecology in Yale, and it is said that he will accept.

FOR THE week ending April 28, the death-rate was: whites, 19.31, colored, 33.33 per 1000. Pneumonia caused 25, consumption 28, la grippe 4, and typhoid fever 3 deaths.

THE TWENTY-EIGHTH annual commencement of the College of Physicians and Surgeons was held on April 24. The Alumni Association had its annual meeting, with music and "a smoker," the evening of the 23d. Dr. W. F. Smith was elected president.

THE LIBRARY of the Maryland Medical and Chirurgical Faculty now contains 13,000 volumes. 803 being added during the year; 138 journals are taken. There were 3908 readers during the year, and the expenses were \$984.60.

ILLINOIS.

Chicago.

THE STAFF of the Maurice Porter Children's Hospital has been increased by a large number of recent appointments.

THE COMPETITIVE examinations for internships at the Presbyterian Hospital will be held May 10.

HOSPITAL APPOINTMENTS.

AS A result of the recent examination for internships in the Cook County Hospital, the following have received appointments: Drs. Loeb, Sears, Jakobowski, Kerr, Friedman, Failon, Wendstrand, Hultgen, Tyndale, Cubbins, McNeil, and Riebel. The appointees for the first, fifth and ninth places were from Rush Medical College, those for the second, third and fifth places were members of the College of Physicians and Surgeons, and the other six were from the Northwestern University Medical School. The period of internship is eighteen months.

NEW JERSEY.

AT THE hospital fair held at Paterson, April 22, \$7000 was raised.

DR. A. ARLING HEAD, of Mulford, has been appointed physician of Holland and Alexandria townships.

PROF. JOHN J. MULVANEY, president of the Jersey City Board of Education, in his recent report recommends that a corps of physicians be appointed to look after the health of school children.

DISTRICT OF COLUMBIA.

THE HOUSE committee on interstate and foreign commerce has authorized a favorable report on House bill 9677, known as the Brocius pure food bill.

THE REPORT of the health officer for the past week shows the total number of deaths to have been 137, 81 of white and 56 of colored persons. At the close of the week there were 64 cases of diphtheria, 68 of scarlet fever, and 7 of smallpox under treatment.

OHIO.

THE GRADUATING class of the Toledo Medical College numbered 18, the commencement exercises being held the 26th ult.

THE ANNUAL meeting of the Alumni Association of the Ohio Medical University, Columbus, was held April 24. Dr. C. S. Means was elected president for the ensuing year. The commencement exercises of this school were the same date.

DR. ERNEST SCOTT has been appointed to succeed Dr. H. S. Cozad, at the state hospital, Columbus. Dr. Cozad has gone to Europe for a year of special study.

MICHIGAN.

THE GRADUATING exercises of the Michigan College of Medicine and Surgery, Detroit, were held the 24th ult. There were 25 degrees conferred.

THE APPLICATION of "Dr." Richard Metcalfe of Benton Harbor, for a mandamus to compel the new State Medical Board to register him under the law of 1899, has been denied by the supreme court. This rules out all graduates of medical schools which issued diplomas without requiring attendance.

TENNESSEE.

THE ALUMNI association of the Chattanooga Medical College held a meeting April 24. The graduating class, at the commencement exercises of this institution, numbered fifty-nine. Dr. G. M. Ellis delivered the faculty address.

COLORADO.

AT THE commencement exercises of Gross Medical College, Denver, held April 26, the degree of M.D. was conferred on 22 persons.

IOWA.

THE COMMENCEMENT exercises of the Keokuk Medical College and College of Physicians and Surgeons were held recently. Diplomas were awarded to 42 students.

KANSAS.

A NEW HOSPITAL, costing \$60,000, is to be erected at Fort Leavenworth.

Topeka.

THERE WERE six cases of smallpox in the Topeka pest-house on April 23, with five due to arrive the next day.

DR. L. H. MCKINNEY has filed a claim of \$150 with the city council for damages alleged as a result of the improper fumigation of a residence by the city health officers. He moved into the house after it had been fumigated, and his whole family contracted smallpox soon after.

GOVERNOR STANLEY, in outlining his future policy, has said that the State Board of Health is an unnecessary adjunct of the state, and that the work now done by the Board, consisting of fifteen members, could be done just as well by the secretary alone, who should have all the authority and power now conferred on the Board.

CALIFORNIA.**Alameda.**

The Board of Education has adopted a rule forbidding the employment, as teachers in the public schools, of any persons afflicted with tuberculosis.

San Francisco.

THE CITY'S Board of Health has acted favorably on the recommendation of the Los Angeles Board and will do all in its power to secure the necessary legislation for deportation of all lepers who may be found in this country.

A NEW PLAGUE CASE.

(Special Telegraph to THE JOURNAL, May 1.)

ANOTHER case of plague has been found in San Francisco, in a Chinaman whose body was found April 25 in the Chinese quarter, with a large bubo in the left side, near Poupart's ligament, and with the other inguinal glands swollen. The news was successfully kept from the press by the Board of Health, and smear preparations made. These disclosed the bacillus pestis. Two guinea-pigs were inoculated from gland tissue and one died fifty-eight and the other sixty-one hours after. Both pigs presented the characteristic lesions of the

plague. Extraneous organisms seen in the glands were also present, but in small numbers, while the plague bacillus was present in enormous numbers. The identity of the latter has also been demonstrated by culture methods, by Drs. Ophuls, Montgomery and Kinyoun, all agreeing in the diagnosis made. The Chinaman has lived in San Francisco thirty years and was 56 years of age. No clinical history could be obtained.

AUSTRALIA.

IN VICTORIA the crusade against rats has extended even to the remote country districts, and a sanatorium for plague patients, to be erected by the government, is proposed.

THE GOVERNMENT has decided to establish depots at all the centers of Auckland for the free distribution of phosphorus and other poisons used in exterminating the rats.

SYDNEY'S PLAGUE.

THE plague cases up to the date of this letter (March 19) number twenty-three, with eight deaths. The first case was reported in January. Up to March 17, more than one thousand persons had been inoculated with Haffkine's prophylactic serum, most of these being engaged in waterside occupations. A few hours following the inoculation slight headache and feverishness have been noted, but no illness of any note followed injection. Dr. Ashburton Thompson says that as the plague has gained a foothold in the colony it will not be entirely eradicated for many years. He does not mean that the epidemic will be continually maintained at a high average of cases, but that it will recur at certain seasons. The average duration of each visitation will probably be about eight months. He says that the absolute annihilation of all rats would be followed by entire removal of all infection, but as it is not possible to rid the land of the rodents the disease must remain. The department of health is planning the production of the remedial serum in the colony, but it will be some months before the first results can be obtained. The proposition to erect a special plague hospital for the metropolitan districts has been given up for the present. The dirt and refuse of the city is collected by the city and carried daily, by punt, as far out to sea as the weather will permit, and the government has agreed to bear a large share of the cost of cleaning the city. The opinion of Dr. Thompson is that the only reparation that can be made for long neglect is the obliteration of all existing wharf structures and the erection of solid wharf frontages which will be not only impervious to water but proof against invasion by rats. The campaign against rats was begun late in February. All of the men engaged in the work of extermination being first required to subject themselves to inoculation with prophylactic serum. Posters were also placed in the portions of the city most likely to be invaded by the disease, and a house-to-house distribution of hand-bills carried out.

HAWAIIAN ISLANDS.

THE HILO Board of Health has been considering quarantine against Honolulu goods, in spite of the fact that Honolulu's plague is practically a thing of the past.

ACTION has been taken by the minister of foreign affairs which places Sydney, N. S. W., from now on in much the same quarantine relations relative to the Hawaiian Islands as exists between Honolulu and the mainland ports.

PROPOSED HOSPITAL FOR JAPANESE.

A plea has been made to the public for donations for the purpose of building a hospital for Japanese subjects on the Islands. The proposed cost of the institution is \$6500. Early last year the Japanese Benevolent Society considered building a permanent charity hospital, but the matter was given up and a private one erected by a Japanese physician, this being closed at the time of the plague epidemic.

LOSSES FROM THE PLAGUE.

THE Council of State recently passed a resolution to the effect that the Hawaiian Government should pay all just claims for losses caused by the action taken by the Board of Health in connection with the suppression of the plague, i. e., those caused by the burning of houses, furniture and goods by direct order of the Board, as well as losses caused by the acci-

dental spread of the fire, and those caused by the fencing up of land on which houses have been burned. The Council also advised the appointment of a new Court of Claims (see last week's JOURNAL, p. 1081) to consist of five members, three of whom shall be business men.

HONOLULU'S PLAGUE.

Up to the date of this communication, April 19, there have been no cases of bubonic plague since March 31, and with no cases to May 1, on that date the quarantine by the local board of health will be raised. The plague, which first appeared about four months ago, may therefore be said to have been practically stamped out, there having been only one death per week therefrom during the past six weeks and none during the past twelve days, while the deaths from consumption and pneumonia have averaged fifteen or twenty a month. The cases to date number 71, with 62 deaths. Of these, 17 were cared for in the pest-house, with 9 recoveries. The shipping business of the port has been seriously interfered with by the epidemic, and no communication is yet permitted with the sections of the city in which the deaths occurred. The buildings occupied by Asiatics and others as dwellings and shops, burned on account of the plague raging there, numbered about fifty. Fortunately the sugar plantations are from ten to seventy miles from the city, and no communication has been allowed with them except by telephone. They have therefore remained strictly free from contact with the disease, and the sugar has been shipped direct from the mills to the vessels, the latter not being allowed to go within certain limits. Examinations from the soil, etc., reveal bacteria present, but none of bubonic plague. Other examinations of foodstuffs preserved in acidulated liquids show them to be free from bacilli. Too much credit can not be given Dr. Wood, of the Board of Health, for the work done in stamping out the disease.

CANADA.

SMALLPOX IN WINNIPEG.

Smallpox of a very virulent character has broken out in the General Hospital, Winnipeg. Five cases have so far developed, but it is impossible as yet to foretell the extent of the exposure. The man who brought the disease to Winnipeg was taken to the hospital in a hack and, after his death, the body was handled by the undertakers, who did not know the nature of the death. Subsequently his effects were handled by several people in and about the hospital, and the first thing the medical health officer of the city, Dr. Inglis, knew, he had five cases of smallpox to deal with of a very malignant type. These have been removed to the quarantine station, and this as well as the hospital is now being guarded by special constables. Vigilance will be the motto of the authorities for the next few weeks.

AMALGAMATION OF TORONTO AND TRINITY.

The controversy between these two rival institutions has assumed a new phase. In the April issue of the *Canada Lancet*, a journal markedly in touch with Trinity Medical College, the editor and one of the associate editors come out squarely for the amalgamation of the two schools. Their cue has no doubt been taken from an interview appearing in the daily press, accorded by Dr. Adam H. Wright, professor of obstetrics at Toronto University, who has placed himself on record as being in favor of closer relations between Toronto and Trinity. Then there is the fact also that Trinity University is about to seek federation with Toronto University—the provincial university, and when such federation is accomplished, and Trinity University relinquishes her degree-conferring power, Trinity Medical College will have to look elsewhere for her M.D. degrees. The editorial in the *Lancet* does not deny that Trinity's cause is a righteous one; but expresses the opinion or rather belief that the amalgamation of the two institutions would be "the best solution of the existing difficulty," that it would do away with jealousies stated to exist between practitioners who are connected with these institutions, which also is at times evidenced in the societies as well as in general practice, and further, that medical education would be placed on a more permanent and lasting basis than it is at present in Ontario. Another reason

advanced for the proposal of amalgamation is that this city could then proceed to do post-graduate work; that the men who now go abroad would be accorded advantages at their doors which would induce them to stay at home. There is no doubt that the present time is an important one in the history of medical education in this province; and as the legislature has prorogued without taking up the McKay bill again, the intermission will probably see the discussion of the whole question in all its bearings, and the outcome will be awaited with considerable interest, not unmingled with some anxiety for the proper adjustment of the whole question.

PECULIAR HOSPITAL METHODS.

A private hospital, said to be located in the State of Michigan, whose commercial instincts have no limitation so far as distance in "miles" is concerned, has been endeavoring within the past week or two to entrap some Toronto physicians, ostensibly to secure their appointment on their "staff," but really for the purpose of fattening their own revenues. The plan of campaign was for the surgeon or physician here to act as agent for the concern in Michigan, to whom patients were to be suggested; these would then be written to and, if secured, the surgeon here was to participate in the profits to the extent of one-half. The following is a copy of a letter sent to a "patient" here:

"Dear Sir or Madam: We beg respectfully to call your personal attention to the fact that we have just recently elected and appointed Dr. — of your place to be a visiting and consulting physician and surgeon on the medical staff of our hospital, on account of his excellent medical qualifications and professional standing. We have no hesitation in recommending him to you, and should you, any member of your family, friends or acquaintances become sick and desire medical treatment, we wish to highly endorse the Doctor and recommend you to patronize him. Should you at any time desire the services of our hospital for yourself, friends or acquaintances, the Doctor will make arrangements with you so that you can come here for treatment. We have a first-class up-to-date surgical hospital, with every home comfort and a medical staff of eminent physicians and surgeons, and our charges are less than anywhere else you may go. Trusting you will bear these facts in mind, believe us to remain."

A further additional inducement to the Doctor to seek appointment on this "wonderful" institution was the presentation of a lithographed certificate of membership to the physician himself, 17x22 inches, rated in price according to the quality of paper and the beauty and design of the scroll, at \$5, \$7.50, or \$10. The income from this source was to go into funds which "are devoted to the maintenance of the hospital for the benefit of us all." We do not think that this "up-to-date" institution has been able to land any "suckers" in Toronto.

Montreal.

DR. JAMES BARCLAY, lecturer and demonstrator in obstetrics at McGill University, has entered on his duties there.

TWO CASES of smallpox have appeared within the past week. The first arrived from Rossland, B. C.

DR. A. LAFTHORN SMITH has retired from the Montreal Dispensary, after a service of twenty years. He will continue as surgeon-in-chief of the Samaritan Hospital, surgeon of the Western Hospital, consulting gynecologist of the Women's Hospital, and professor of clinical gynecology at Bishop's College.

A LITTLE NONSENSE NOW AND THEN, ETC.

Generations of graduates of medical McGill, scattered over Canada and the United States, have not forgotten the boys' factotum, Mr. James Cook, or "Cookie," as he is affectionately called by those whose letters, caps and telephone messages he looks after. It is now an annual affair amongst the medicos of McGill, just prior to taking their departure for the summer holidays, to make a presentation to Mr. Cook, in the way of coin and an elaborate illuminated address, in which superabundant flattery and adulation predominate. This year "Cookie" was presented with \$30 in five-cent pieces, all snugly stowed away in a big box of ashes, supplemented with an address, which was headed as follows: To Sir James Rip Van

Winkle Cook, Knight Commander of the Vats, First Lord of the Treasury, President of the Ancient and Illustrious Order of Prevaricators, Lord Warden of the Vault, and Premier of the Dominion of Aesculapius. Mr. Cook, who was dressed in a grand military outfit for the occasion, responded at considerable length in a poem. Afterward a procession was formed and the devoted attendant was shouldered up and down and around the College grounds.

Correspondence.

Medicine in the Far East.

March 30, 1900.

A CEYLON HOSPITAL.

To the Editor: During my stay at Colombo, on the Island of Ceylon, I frequently visited the civil hospital of that place and saw considerable of the medical work done there. This institution has accommodations for 350 patients. The buildings are situated in a beautifully shaded grove of cocoanut palms, and are disconnected pavilions, flanked on each side by open verandas, and to which large windows, for their perfect ventilation, open. There is a medical school connected with this hospital, where seventy-five young men are being educated. The faculty is composed of English, Dutch half-breed and pure Ceylonese natives, and represent all shades of complexion, from the fair-skinned Anglo-Saxon to the Singalese as black as the Congo negro. The color line seems not to disturb the harmony of this mixed body of teachers in the least, but the Dutchman's hatred of the Englishman, since the outbreak of the South African war, I saw manifested on more than one occasion. The students, however, were all dark-skinned natives of the island, and on the whole impressed me as a set of men superior to those I met studying medicine in India.

Before beginning their studies, these men have to pass a preliminary examination that is equivalent to that required to enter the freshman class at Oxford. They have a five years' graded course, and after completing this many of them go to London or Edinburgh to pursue advanced studies.

NO BERI-BERI IN CEYLON.

It is a strange fact that, while the climate here in Colombo is so like that of southern China, I never saw a single case of beri-beri on the island of Ceylon.

ANCHYLOSTOMIASIS.

I saw in the above mentioned hospital my first case of ancylostomiasis, a parasitic disease affecting the intestinal tract, especially the duodenum. The patients all had an aspect as if far gone with Bright's disease, added to which there was a decided jaundice appearance to the skin. The drinking of dirty water from marshes and stagnant pools is the source from which the disease originates. The treatment consists of the internal administration of thymol and iron. The mortality is from 40 to 60 per cent.

TETANUS IN CEYLON.

During my frequent visits to this hospital, I never failed to find a case of tetanus in its wards. A large percentage of these unfortunate patients were hostlers. Dr. Thomas, one of the surgeons, told me that they had found the soil about the horse barns, in Colombo, full of tetanus germs, and that when a man who attends horses gets an abrasion of the skin on any part of his body infection often follows. They treat from 25 to 50 cases of this disease annually, in this institution, which I believe is a larger number than is treated in any hospital of its size in the world. Patients of the acute class all die, while a few of those in whom the disease assumes a mild form at the outset and runs a chronic course, recover. They treat it here with the bromid of potassium, cannabis Indica and opium. It is, however, on the latter remedy that they place main reliance, and they give it to an extent that keeps the patient in a condition of deep narcosis.

NO DIPHTHERIA NOR SCARLET FEVER IN CEYLON.

Professor Sinnetawby tells me that he does not believe that there has ever been a case of either diphtheria or scarlatina on the Island of Ceylon. Here in the Far East I find that where one of these diseases is absent the other never prevails, which

would seem to be an argument in favor of their common origin.

DIABETES MELLITUS.

I saw here a large number of cases of diabetes mellitus. The physicians tell me that in some sections of the island among certain classes of the population, one-half of the inhabitants suffer from glycosuria. Even the small land-holders in Ceylon lead a life of perfect idleness. If the proprietor owns a cocoanut grove of only four or five acres, and a rice field of the same size, he can live the kind of a life that he does without ever doing a single stroke of manual labor. His dwelling is an unfurnished, mud hut, to which he resorts only when it rains. He spends his days basking in the shade of a tropical grove, and hires, for a pittance, a coolie who runs at his bidding and attends to his every want. This man's diet is composed largely of rice, and to this class belong those who suffer so often from diabetes mellitus. On the contrary, the coolie, who serves this land-holder, and the jiriksha man, who plays the rôle of a horse, under the hot rays of a tropical sun, though they may both live on the same diet as the man who pursues a sedentary course in life, scarcely ever have this disease. The physicians in the hospital tell me that if early in the course of the complaint you can induce the sufferer to take an abundance of active exercise, you can in this way often arrest the disease. They treat the patient by eliminating rice and bread from his diet, but allowing the free use of meat, beans and vegetables that contain little or no starchy elements. As for medication, they rely entirely on nitric acid and opium.

INTESTINAL DISEASES.

Bowel complaints, consisting of diarrheas, dysenteries and the like, I found here as everywhere in the Far East, extremely prevalent. Dysenteric troubles often assume a chronic form and, despite all manner of treatment, run on unchecked for months or years. Here they treat the acute form of this trouble by first giving a free dose of castor-oil, and follow this by the administration of opium and ipecacuanha. The latter drug they give in large doses, often administering as much as 30 grains twice in the twenty-four hours. They claim that patients thus treated are less liable to hepatic abscesses and other sequelæ than those treated without this remedy. The chronic form of the disease they treat by keeping the patient on a milk diet, freely irrigating the lower bowel with a boric acid solution, and following this by a rectal injection of a rather strong solution of nitrate of silver.

The craze for opening the peritoneal cavity does not yet seem to have invaded the Island of Ceylon. I saw a myomectomy done for the removal of a subserous uterine fibroid as large as my fist. From the sensation produced among the hospital staff by this operation I concluded that operations of this kind were very rare here. In fact, the doctor who did the operation told me that there had never been a complete hysterectomy done on the island. Cases that require expert surgery, in this line, are sent to Madras to be operated on.

MEDICAL TEACHING IN CALCUTTA.

Calcutta is the medical center for all the vast empire of India. There are, however, medical schools at Madras, Bombay and Lahore; but by far the largest and most important of them all is the one located at the capital of British India. The medical class here numbers about 600 students. Before beginning the study of medicine, they have to pass a preliminary examination and the requirements are the same as at Colombo. I attended several clinics here, where I came in contact with these students, and while a few of them seemed bright and intelligent, the majority were a sorry-looking set out of which to attempt to make doctors. Their course of study is a graded one of five years, and as only about fifty are graduated annually their examination must be a quite rigid one. The teaching is all done in English, which I found many of the students with whom I conversed, did not understand perfectly. A professor told me that they were trying hard to cut the class down as they now had more students than they could properly teach. I asked him what fees these men would be able to command when they had finished their studies and began practice in a purely native community. He said that after furnishing their own drugs they would not get more than ten cents a visit on an average. The whole subject of medical education

in the British possessions in India is under one general law, and is therefore uniform. The professors in the medical colleges, as well as the surgeons to the various hospitals, all over the country, are officers in the English service, and receive no pay from the students they teach, or the hospital patients they attend. These men have, however, the right to carry on private practice when that does not interfere with their official duties, and in this way many of them earn large salaries. In India, though medical teaching and the granting of a diploma are under strict legal surveillance, there is no law preventing any one who chooses from practicing medicine. In fact, there are not qualified men enough in all this great empire to attend to the wants of the sick. Besides, associated with the healing of the sick, among the great mass of Indians there is a certain amount of religious ceremony with which, since the last mutiny, the British government seems little inclined to interfere.

CALCUTTA'S MEDICAL COLLEGE HOSPITAL.

To this institution, which contains 300 beds, only natives are admitted, and the sick are freely utilized as material for teaching. Diseases of the skin and gastrointestinal disorders were the prevailing complaints that I saw in the wards. Patients suffering from dysentery and hepatic troubles as sequele filled at least one-half of all the beds in this institution. Operations for hepatic abscesses are probably as frequent here in India as those for appendicitis in America. The frequency of this disease very often leads men, I suspect, to a too hasty diagnosis, as well as carelessness in the examination of their patients. I saw a case operated on here for what was diagnosed as a hepatic abscess, but which turned out to be an encapsulated empyema of the right side of the chest. The doctor saw his mistake, which was a pardonable one, but I did not pardon him for trying to make me believe that his first diagnosis had been a correct one.

IMMUNITY OF NATIVES TO TYPHOID.

Croupous pneumonia and acute rheumatism are extremely rare diseases in Calcutta, if they ever prevail at all. I saw illustrated the fact that the native Indian is practically immune from the infection of typhoid fever, for in this native hospital, I am told, there has never been a single case of the disease, while at the civil hospital, where foreigners only are treated, I saw at least a dozen patients suffering from this complaint.

SURGERY AND ENVIRONMENTS.

How a surgeon—as one in this hospital—in these last days of the nineteenth century, can see no impropriety in making his visits to his wards, dressing filthy wounds, opening abscesses and then going directly to his operating-room and performing operations that require the most scrupulous cleanliness is something that I can not comprehend. The doctor apologized to me for some of his loose habits in his asepsis by saying that the men he taught, when they went out to practice on their own account, would not be able to practice perfectly clean surgery, and therefore he thought it best to teach them only such modes as they would be able to copy in after life.

This puts me in mind of an occurrence, that, though it may have nothing to do with medicine in the Far East, I feel inclined to relate: Some time back in the eighties, a professor from Chicago, myself, and a recent graduate from Harvard, were seated at a table in a café in Vienna. The former was a man of great natural ability, and was endowed with an energy that enabled him to surmount every difficulty he met in life. He had a commanding appearance, a huge frame, and a heart to match. He had been appointed professor of obstetrics in a new medical college, and had come on to Vienna to post up on the branch he was to teach. Our young companion took him to task for being a party to the organization of a medical school that was not needed and the requirements of which, for the graduation of its students at that time, were not very high. The professor defended himself by an argument something like this: He said that in the agricultural sections of the Far West the life of the doctor was so rough, and his labors so hard, that men who were highly educated, like our companion, would not occupy these fields. Therefore a class of men must be taken with less education and taught the more practical branches of the profession, and sent out to occupy these

territories that would otherwise be occupied by men who had had no medical instruction whatever.

HYDROCELE IN INDIA.

Everywhere in India this is extremely prevalent, and I have seen an operation for its relief in nearly every hospital I have visited in the Far East. Dr. Murphy, of Calcutta, operates by opening up the sac freely, cutting away about one-half of its serous surface, then stitching this to the skin, swabbing the remaining portion of the sac with a concentrated solution of carbolic acid, approximating the edges of the wound by a few disconnected sutures, and then packing the whole wound with iodoform gauze. He claims to never fail of a perfect cure after this mode of operating. I saw him remove an elephantiasis of the scrotum that weighed twenty-five pounds. When I expressed my astonishment at the size of the growth, he assured me that this was a small affair, and that he had lately, successfully, removed one that weighed 100 pounds. The civil hospital in Calcutta is devoted to the care of the sick of all nationalities except the native Indian. I saw more patients suffering from gonorrhœa in this institution than I ever saw before in a hospital of its size in my life. The treatment used for the relief of these patients is extremely antiquated, consisting of urethral injections without any relation as to what part of the urethra is involved, and the administration of balsam of copaiba. Of this last remedy Nothnagel says: "While it disgusts the palate, nauseates the stomach, and irritates the kidneys, it has no influence upon the course of the gonorrhœa for which it is given."

I saw here a number of cases of typhoid fever, and amid the different shades of complexion of the patients was impressed by the fact that the disease has a most decided preference for the man with a white skin. They treat the cases in this institution by the administration of chlorin water and the regulation of the bowels by the use of copious injections of warm water.

W. S. CALDWELL, M.D.

Medicine as an Art.

PHILADELPHIA, April 9, 1900.

To the Editor: If we take from the medicine of to-day that which is art, we will leave, surely, not more than one-half to the scientists pure and simple—a class that would perhaps be more aptly designated as materialists. When the old-time writers styled their works on physics, "The Art and Science of Medicine," they gave unmistakable evidence of their appreciation of this quality in medicine. With them healing was more than a science to be learned from books. Indeed, it comprehended so much more that was not to be found anywhere in books that great minds in medicine were earnestly sought after as preceptors. The relations between master and pupil were very like those that bound together master and pupil in all the other realms of art. With the passing of the preceptor there has gone out from among us a something that our present-day system seems not yet to have made good. Have we gained or lost? Who shall say?

Every art contains within itself known or unknown elements of one or more sciences. Drawing rests on the laws of perspective; painting on the laws of color harmony and contrast; sculpture on the science of anatomy; music on the laws of sound harmony and contrast; photography on the laws of optics and chemistry; and so on. Even good literature—as Herbert Spencer has shown—must conform in greater or lesser degree to the philosophy (i. e., laws) of style. There seems an indissoluble relation. Medicine has by some been placed among the useful rather than the fine arts; and yet healing has to do with nothing less than living and the life principle itself. Professor Griggs has said that of all the fine arts the art of living is the finest. Viewed from this standpoint healing rises above the level of the purely useful arts. Too, medicine is no mean art in its embrace of the major and minor sciences, most of which pay daily tribute to the thinking men of our guild. Other things being equal, the fullest measure of professional success is most likely to attend him who brings the various 'ologies to wait upon Nature in her allwise healing. At some point in almost every severe illness Nature craves a mo-

mentary lift from some one of the sciences, ready then to work out alone her hidden processes; and so unconscious has become our impressment of these aids into the healing art that we take little thought of it. Thus it appears that all art is, at bottom, science—that is to say, has its nucleus of classified facts or knowledge. But he who would attain to the art must first grasp well the science, and then resublime it with his own personality. Then, and then only, does it become art. It would be difficult to say just what the materialist lacks as he essays a canvas, a bust, a bas-relief, a sonata, a sonnet. It would be unfair to say that he is wanting in color sense or perspective in the fundamentals of modeling, of the laws of harmony or of the construction of verse. Without these he is nothing. They are the cardinals of his work. What he does seem to lack is the Divine spark that, fusing all these needed things, rises above them and imprisons Nature's secrets, even the most elusive. With some—indeed, with many—this height will be attained only by the fiercest, the most intensive industry. But the man is none the less an artist, neither a genius because of that fact.

Equally difficult is it to criticise the medical man who brings nothing but pure science to his patient's bedside. He certainly does not lack book or laboratory knowledge of physics, chemistry, bacteriology, biology, physiology or pathology; neither is the work of his brethren in foreign fields unknown to him. These are the very tenets of his faith. Of things material he is easily master. But that is only half the proposition. This materialism reveals itself in the tendency to look on patients as so much flesh and blood; to treat the outer casement rather than the individual within; to forget that "we are such stuff as dreams are made of"; to take little thought of hereditary impress, prenatal influence, temperament, domestic and commercial status and a host of other nonmaterial factors. Any or all of these may produce all manner of perversions of nerve function. The insufficiency of such methods has been shown by none more clearly than by Weir Mitchell. Mind and matter sustain a practically complete relation to each other in the healthy human body, and the correlative of this quality in the body is the dual nature of medicine.

So, if the ultrascientist would realize the full measure of his possibilities, he must possess more or less intuition. He must have a genius for affinity—what Goethe called *Weltverwandtschaft* and Griggs "humanism". It is really a species of telepathy. Discreetly used, it is the best and safest short-cut into the patient's confidence, without which we are powerless in most cases. This faculty of insight—of seeing the unseen—is what distinguishes the *artist* physician from the materialist. It removes him infinitely from the monger of patients who plies his profession for revenue only. It is difficult to believe there are many of these inside the guild. Moreover, if such there be, they are "punished, not for their sins, but by them." Innate, instinctive appreciation of the myriad outworkings of human nature makes of the clinical worker at the bedside, the artist physician. Of the well-rounded man of science it makes a mental giant, a savant—the very flower of our cult.

It should be the aim of the body medical of to-day to cultivate this spirit of affinity in every way, and to multiply its present great usefulness by evolving its members into the artist physician with wide-angled mental vision. This is the man who, while ministering to the physical sufferings of his patient, will never lose sight of the psychic element—which is no small matter in this day of exceeding heteropathy (mental healers, "osteos" quacks and fortune-tellers included!).

We to-day hear much of the *science* of medicine. It is not amiss to reiterate that, classify our knowledge as we will, there remains an outlying, an unaccountable factor in successful healing, the presence or absence of which marks the true physician from the medicine giver pure and simple. This is the *art* factor. The true physician is no less a genius in striving for perfection in healing than is the painter, the sculptor, the orator, the musician, the literateur, in trying to attain their highest ideals. The passion for perfection is the hall-mark of the true artist in medicine as in all things pertaining to the higher life. All art is one, and not least among its votaries are the priests of Hygeia.

WENDELL REBER, M.D.

The Journal's Advertising Policy.

TOLEDO, OHIO, April 17, 1900.

To the Editor: When THE JOURNAL'S recently announced policy concerning advertising is in full force, the enjoyment I have heretofore gotten out of its perusal will be heightened, because there will be lopped off from it the only disquieting feature which has ever manifested itself. I have always had an antipathy for unethical medical advertisements, possibly from pharisaical inclinations, but then, the antipathy exists nevertheless.

My thoughts on the subject of medical advertising have been the same for so long that grooves have been worn so deeply in my gray matter that now I can not change my views. I am in fact a crank on that subject. In consequence of this life-long habit, whenever I come across a quack advertisement in a religious newspaper, or in any paper which claims to be respectable, I make a note of it, and when I have spare time I write to the one who is responsible for its appearance. I have written to judges, reverends, D.D.S.'s, mayors, in fact, to all sorts of people, who have given testimonials, and to editors and publishers of all kinds of periodicals. I have had more enjoyment and entertainment than would pay me for the trouble of writing the letters, out of nearly all of my correspondence. The exceptions have been when some publisher told me that he was advertising the same secret preparations to his subscribers that the best medical journals were advertising to physicians, and that their readers know as much regarding the composition of the medicines as do the physicians. Not all of them would see that point, but whenever I have received a letter like that, I have written my next rainy day letter to some one else; because, while I like argument, and have never been known to stop arguing as long as the other man would talk, still, when I can get out of so doing, I never go up against a stone wall. The carrying out of THE JOURNAL'S policy will remove what has been to me a thorn in the flesh.

I tell the publishers of religious newspapers that if they would get out and hustle for business the same as other men do, they could get advertisements and not be obliged to sell their columns to quacks. I know that many physicians differ with me, but I can see no harm in publishing in THE JOURNAL advertisements of every good thing which people buy.

It is our business to oppose everything of a medical character which is not in accord with the best teaching of scientific medicine. That we may do so successfully and consistently, THE JOURNAL must not only be as clean as the best, but absolutely above reproach. It ought not to be a question with us whether THE JOURNAL is a financial success, so much as whether it represents only the principles of scientific medicine. We surely should never think of blaming the Trustees or the Editor if THE JOURNAL met with a financial loss on account of the rejection of bad and questionable advertisements. Scores of times publishers of religious and other papers have sought to justify the appearance of quack advertisements in their columns, by telling the money value of those they had rejected. THE JOURNAL should be, and is, governed by a higher standard. Success to it!

JAMES L. TRACY, M.D.

Deaths and Obituaries.

GEO. E. FROTHINGHAM, M.D., Detroit, Mich., died April 24, aged 64 years. He was born in Boston, in 1836. He attended St. Phillip's Academy, in Andover, Mass., then went to Ann Arbor, Mich., where he was graduated from the medical department of the University of Michigan, in 1864, and in 1867 was made demonstrator of anatomy there. In 1870 the chair of ophthalmology was created, and he was appointed to fill it. In 1889 he resigned and went to Detroit.

WILLIAM F. ROBINSON, M.D., editor of the *Hatborough Free Spirit*, died in Philadelphia, April 15, aged 63 years. He was born in Boston, and was a graduate of the medical department of the University of Pennsylvania, and practiced for ten years in Hatborough, where, in 1873, he established the journal which he edited until his death. He was for six years a

state quarantine physician, and for eight years connected with the health bureau. During the Civil War he served four years as surgeon of the 104th Regiment of Pennsylvania Volunteer Infantry.

J. N. O'BRIEN, M.D., Milwaukee, Wis., died April 22, aged 62 years. He was a native of Pennsylvania, and received his early education there, in the state university; he also studied at the University of Notre Dame, after which he was graduated from Rush Medical College, Chicago. He was a member of the AMERICAN MEDICAL ASSOCIATION and of the Wisconsin State Medical Association.

WILLIAM G. COOPER, M.D., died at the Toledo State Hospital, Toledo, Ohio, April 19, aged 34 years. He was graduated from Findlay College in 1891, and from the Baltimore (Md.) Medical College in 1895. He had been assistant physician in the hospital for five years, and resigned April 1, with the intention of beginning the practice of medicine in Findlay.

HARVEY C. JOHNS, M.D., Jefferson Medical College, Philadelphia, died at his home in Decatur, Ill., April 22, aged 81 years. He was surgeon of the 129th Illinois Volunteer Infantry.

ERASMUS DARWIN HILLIS, M.D., died at his home in Montour Falls, N. Y., April 19, aged 61 years. He was a captain of the 189th Regiment, New York volunteers.

J. C. MORGAN, M.D., died at Sioux Falls, S. D., April 19, of pneumonia. He was a veteran of the Civil War and had been prominent in state medical circles.

EDWIN O. BAKER, M.D., Spokane, Wash., died April 18, aged 70 years. He formerly practiced medicine at Lake City, Minn., and Menomonee, Wis.

RIPLEY CLARK, M.D., Windsor, Vt., died April 23, aged 83 years. He had been medical director at the state prison for twenty years.

CONRAD SPENS, M.D., born in Stockholm, Sweden, in 1844, died in Joliet, Ill., April 27.

S. G. TUTT, M.D., died April 25, in Kirkwood, Mo., of bronchial pneumonia, aged 81 years.

S. S. PITTMAN, M.D., Chipley, Ga., died April 21. He was 41 years old.

A. M. BEACH, M.D., Niles, Ohio, died April 20, of pneumonia, aged 52 years.

P. C. WOOTEN, M.D., died at Lafayette, Ky., April 23, of la grippe. He was 75 years old.

W. P. SMITH, M.D., Salina, Kan., died April 23, after a lingering illness.

A. M. DENT, M.D., Coshocton, Ohio, died April 5. He was graduated from the Columbus Medical College in 1882.

W. G. COOPER M.D., formerly assistant superintendent, Toledo State Hospital, died at his home in Van Buren, Ohio, April 20.

FRANK F. MYERS, M.D., University of Pennsylvania, 1890, died in Allegheny, Pa., March 29, aged 33.

DEATHS ABROAD.

O. LEICHTENSTERN, M.D., Cologne, Germany, an indefatigable scientific investigator and writer on internal medicine died recently.

JOSEPH GRUBER, M.D., died recently at his home in Vienna. He was a recognized authority on laryngology and otology.

Association News.

Annual Announcement.

The fifty-first annual session (53d year) of the AMERICAN MEDICAL ASSOCIATION will be held in Atlantic City, N. J., on Tuesday, Wednesday, Thursday and Friday, June 5, 6, 7 and 8, commencing on Tuesday at 11 a. m.

REGARDING REPRESENTATION.

The delegates shall receive their appointment from permanently organized state medical societies, and such county and district medical societies as are recognized by their respective state societies, and from the medical departments of the Army and Navy and the Marine-Hospital Service of the United States.

Each state, county and district medical society entitled to

representation shall have the privilege of sending to the ASSOCIATION one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number; *Provided*, however, that the number of delegates from any particular state, territory, county, city or town shall not exceed the ratio of one in ten of the resident physicians who are entitled to membership.

PERMANENT MEMBERS.

The permanent members shall consist of all those who have served in the capacity of delegates, and of such other members as may receive the appointment by unanimous vote, and shall continue such so long as they remain in good standing in the body from which they were sent as delegates, and comply with the requirements of the By-Laws of the ASSOCIATION, so long as they shall continue to conform to its regulations, but without the right of voting; and, when not in attendance, they shall be authorized to grant letters of introduction to reputable practitioners of medicine residing in their vicinity, who may wish to participate in the business of the meeting, as provided for members by invitation.

MEMBERS BY APPLICATION.

Members by application shall consist of such members of the state, county and district medical societies entitled to representation in this ASSOCIATION as shall make application in writing to the Treasurer, and accompanying said application with a certificate of good standing, signed by the president and secretary of the society of which they are members, and the amount of the annual subscription fee, \$5. They shall have their names upon the roll, and have all the rights and privileges accorded to permanent members, and shall retain their membership upon the same terms.

A distinctive badge will be provided for delegates.

Secretaries of societies are requested to forward names of delegates as soon as possible, as a list of these will be prepared before the meeting.

GEORGE H. SIMMONS, M.D., Secretary.

61 Market Street, Chicago.

Railroad Rates for Atlantic City Meeting.—As announced in these columns last week, the Trunk Lines Association has granted one and one-third fare rate on the certificate plan for the Atlantic City meeting. Tickets will be on sale in the territory of this Association from May 30 to June 7, and good to return to June 23. Action has also been taken by the Central Passenger Association, and the same rate announced from all points in the territory of the latter Association, tickets also to be sold on the certificate plan, the dates of sale and the return limit being the same as above. The certificates will be signed at Atlantic City by Dr. W. Blair Stewart, N. E. Cor. Pacific and North Carolina Avenues, and a special agent will be present on June 6, 7 and 8. Up to date no advices have been received from other passenger associations. The territory covered by the two first named includes practically everything north of the Ohio River and east of the Mississippi from Cairo to St. Louis, thence east of a line drawn from St. Louis to Chicago, through Jacksonville, Decatur, Gibson, etc.

Section Headquarters at Atlantic City.—Following is a correct list of the hotels selected as headquarters for the different Sections. These hotels, with two exceptions, are all located on the board walk, directly fronting the ocean, and are considered the best hotels. Every effort will be made by the proprietors and their managers to furnish proper and pleasant accommodations to all who elect to stop with them. Each Section has been located separately, with a view of avoiding the crowding and general annoyance that has characterized a number of the previous meetings. The hotels are all well located and are comparatively near the place of registration and the general meetings in the assembly hall, as well as the meeting places of the different Sections, hence no member need hesitate to arrange his accommodations at the one selected as the headquarters for his Section. The names and addresses of the presidents and secretaries of the different Sections have been placed in the hands of the managers of the respective hotels,

and the latter have been requested to correspond with the former, asking for a list of the Sections' membership, that they may address each member and ascertain early about how many will be in attendance, and acquaint themselves as near as possible with the desired accommodation expected by each individual. Every member of the AMERICAN MEDICAL ASSOCIATION and all other physicians who expect to be in attendance should arrange for their quarters as soon as possible, as this will assure to them satisfactory accommodation and avoid disappointment at the last moment.

AMERICAN MEDICAL ASSOCIATION, Hotel Dennis.

American Academy of Medicine, Hotel Shelburne.

SECTION HEADQUARTERS.

Section on Practice of Medicine, Hotel Traymore.

Section on Surgery and Anatomy, Hotel Windsor.

Section on Obstetrics and Diseases of Women, Hotel Garden.

Section on Materia Medica and Therapeutics, Hotel Luray.

Section on Neurology and Medical Jurisprudence, Hotel Brighton.

Section on Ophthalmology, Hotel Haddon Hall.

Section on Laryngology and Otology, Hotel Seaside.

Section on Physiology and Dietsics, Hotel Islesworth.

Section on Diseases of Children, Hotel St. Charles.

Section on Cutaneous Diseases, Hotel Rudolph.

Section on Stomatology, Hotel Senate.

Section on State Medicine, Hotel Pennhurst.

The Official Program.—In order to avoid misunderstandings and to protect the interests of advertisers, attention is called to the fact that there is but one official program. This program is copyrighted by the Board of Trustees and contains no advertising matter.

Miscellany.

Vomiting Coffee-Ground Masses After Gynecologic and Obstetric Operations.—Bentner has described (*Corr. f. Schweizer Aerzte*, 1899, 18) seven patients in whom a coffee-ground substance was vomited during or soon after the operation, with subsequent severe anemia. There was no stomach nor heart disease in any case, and the technique could not be incriminated. One came to the autopsy and numerous hemorrhagic erosions were found in the stomach. He suggests that the coffee-ground substance may have been produced by the venous congestion caused by the narcosis, and the action of an exceptional amount of hydrochloric acid in the stomach.

Deprivation of Salt in Treatment of Epilepsy.—THE JOURNAL has called attention to Richet's recent announcement that the bromids can be rendered doubly effective by depriving the patients of salt in their food. Roux confirms this statement and asserts that the simplest manner of depriving the food of salt is to place subjects on a milk diet. He found very small amounts of bromids effective in arresting and preventing seizures when combined with a milk diet, while if salt were added to the milk the seizures appeared in one of his four patients.

Sectional Limits of Cutaneous Anesthesia on the Head.—F. V. Soelder found cutaneous anesthesia limited to certain regions on the head, identical and constant in six cases of syringomyelia. They were not found in any of the cases of hysteria he examined, and consequently can assist in the differentiation, as he announces in *Jahrb. f. Psych.*, xviii, 3. The sectional limits on the trunk and extremities are the same with lesions of either spinal cord or roots, but this coincidence does not occur in the localizations on the head.

Vital Statistics of Havana, Cuba, March, 1900.—The report of the chief sanitary officer, Major W. C. Gorgas, surgeon, U. S. A., shows 605 deaths in an estimated population of 220,000. In the list of deaths are 96 from tuberculosis; 48 from pneumonia, 45 from bronchitis, and 23 from la grippe; 40 from enteritis and 4 from typhoid fever; 23 from meningitis; 24 from malaria, 9 from pernicious malarial fever and 12 from cirrhosis of the liver; 45 from arterial sclerosis; 16 from tetanus; 2 from leprosy; 2 from beri-beri and 4 from

yellow fever. Eleven new cases of the last mentioned disease occurred during the month. The births number 553, of which 225 were illegitimate; marriages 142. The average number of gallons of electrozone applied daily for the disinfection of catch basins, sewers, streets, urinals and houses was 9715. Nothing is said as to the efficiency of the electrozone.

Boards of Health in Porto Rico and Cuba.—The past week has brought to the U. S. War Department information of an order for the establishment of a board of health in every municipality of the island of Porto Rico and of a board for the city of Santiago, Cuba. General Orders No. 66, Headquarters, Department of Porto Rico, March 29, 1900, publishes the requirements called for by the Porto Rico Department Commander, General George W. Davis, U. S. Volunteers, on the recommendation of the Superior Board of Health of the island, of which Major J. Van R. Hoff, chief surgeon of the department is president. The order provides for a board of health in each municipality, to be constituted as follows: The alcalde, a municipal physician, the president of the school board and the president of the board of charities, all of whom must be residents of the municipality in which they are to serve. Where there is more than one municipal physician, the other members will elect one of these to membership on the health board. The alcalde will be president, the municipal physician health officer and the board will elect a secretary from its other members. One regular meeting will be held each month and special ones on the call of the president or any two members. At special meetings only the business designated in the call will be transacted. Three members will constitute a quorum. An estimate will be placed on the municipal budget each year to cover the expenses of the board. The municipal judge, on or before the fifth day of each month, will furnish the board of health with a report of the vital statistics of the municipality for the month immediately preceding. On the same day General Orders No. 67 gave further information on matters relating to public health. These require each municipality in Porto Rico to provide in its annual budget for the payment of municipal physicians and practicians, for medical attendance on the poor and for medicines for the same class, and money appropriated for medical attendance and for medicines is to be used for no other purpose. Each municipality shall have at least one municipal physician. If the population exceeds 10,000, there shall be not less than two municipal physicians, and for every 6000 or major fraction thereof above this number there shall be an additional municipal physician. When there is more than one municipal physician the territory will be divided among them as equally as possible, taking into consideration both population and accessibility. Remote and inaccessible barrios must be provided with resident physicians or practicians. Whenever a barrio is not so provided it will petition the municipal council, and if without result, then the Superior Board of Health, stating in the petition the population of the barrio, the time required for the nearest physician to reach the central and remote portions of the barrio and the number of poor who can not pay for medical aid. The board will, if it deems it necessary, appoint a physician or practicante who will be paid from the municipal treasury. These physicians or practicians must attend all calls made by the sick poor in their respective districts. All physicians, practicians, dentists, pharmacists or nurses holding public positions must be licentiates of the Superior Board of Health.

The commanding officer of the Department of Santiago and Porto Principe, Cuba, on March 30, provided for a board of health for the city and district of Santiago, to consist of the chief surgeon, president ex-officio; the director of the civil hospital, vice-president ex-officio; the sanitary inspector; the surgeon of the Marine-Hospital Service and five resident physicians. The Board will elect one of its members as secretary, who will receive \$75 a month, the other members serving without pay. The duties of the Board are to advise in all sanitary matters in the city and district, to recommend all measures deemed necessary for the public health and to collect and publish complete vital statistics. All cases of contagious or infectious diseases or diseases suspected to be such are to be reported to the president of the Board, who will immediately notify at least three of the members to examine and decide the

nature of each case so reported. The opinion of the examining members will be expressed in writing over their signatures and handed to the president of the Board. All measures of isolation and disinfection deemed necessary by the Board will be carried out through the Sanitary Department.

Peculiar Sites for Epitheliomas.—A curious bit of medical geography is reported in the *Indian Medical Gazette* for March. Dr. Neve, of the Kashmir Mission Hospital, finds that in Kashmir, epithelioma, instead of affecting the neighborhood of mucous surfaces, has its usual seat on the skin of the abdomen and thighs. It is so common that the name Kangri-burn has been given to the lesion, which is a squamous-celled epithelioma of the skin. The cause of it is evident: instead of dressing for warmth every Kashmir man, woman and child carries, during the severe winter and indeed for a great part of the year, a sort of portable stove or charcoal brazier under the single garment next the skin. Slight burns from this source frequently occur and there must be a more or less constant irritation, actually producing a peculiar mottled appearance in many. The frequency of the disease may be estimated when he reports operating on 20 patients in two months, not counting several inoperable ones. This condition is of interest as a medical curiosity, especially when its peculiar cause is taken into account.

Diagnosis and Treatment of Hepatic Abscess.—It must be admitted that at the present day the diagnosis of hepatic abscess remains in a quite unsettled condition. According to Loomis, with a correct history of the case the diagnosis is easy, while DuCosta, on the other hand, regards the symptoms as being obscure, and in many cases the diagnosis a difficult matter. The diseases with which hepatic abscess has most frequently been confused are: malarial fever, typhoid fever, cancer, impacted gall-stone, hydatid cyst and actinomycosis. The etiologic factors which have heretofore been regarded as most conducive in the production of abscess of the liver are: history of amebic dysentery, traumatism, embolism from pyemic foci, malarial fever, gall-stone, rectal abscess, bone disease, and excessive use of alcohol in warm countries. One of the most frequent causes seems to have been overlooked, namely appendicitis. The disease is rare in children. The symptoms vary, according to different writers on the subject. Osler states that in the tropics the disease may remain latent for long periods of time. The most common symptoms and physical signs set aside as being characteristic of this condition are: intermittent fever, night sweats, irregular chills, slight icteroid—muddy—condition of the skin, diarrhea, vomiting, throbbing in the right lobe of the liver referred to the shoulder, pain, and a dragging sensation over the right hypochondriac region. Vierordt states that when the abscess is parietal and involves the peritoneum, there is great tenderness, but when deeply seated there is none. As to the physical signs there appears to be a diversity of opinion. The following have been recognized: enlargement of the liver, mostly in an upward direction, especially noted in the dorsal region of the chest, pain on palpation over the hypochondrium, bulging of the right hypochondrium, with fluctuation or edema, pulsation of the liver, a peritoneal friction, and lastly presence of pus as told by the aspirating needle. All writers agree that the enlargement of liver extends upward and posteriorly. Jackson, after a study of 17 cases of hepatic abscess, regarded the following as the most frequent signs and symptoms: presence of a tumor, fever, chills, leucocytosis, and slow pulse. The latter sign he regards as being quite characteristic. The less important symptoms he considers as pain, tenderness, vomiting, jaundice, and enlarged spleen. Johnston and Pontain enumerate the principal signs and symptoms as follows: pain, indigestion, nausea, intestinal disturbances, irregular fever, jaundice and enlargement of the liver. Malbot, whose experience has been great (*Archives Gén. de Méd.*, August, September and October, 1899), regards pain as the most important symptom. Cyr endeavors to bring order out of chaos by describing the symptoms and signs with reference to the position of the abscess, and this seems the most logical. He believes that when the abscess is on the convex surface of the liver, there is pain radiating toward the shoulder, but no jaundice. When it is large and deeply situated, jaundice is present. If the abscess occupies the under surface of the liver,

thoracic symptoms will be absent, but gastric ones, especially uncontrollable vomiting, will occur and the pain will radiate toward the right groin. Loomis had previously recognized this phase of the question and stated that when the abscess occupied the posterior portion of the right lobe of the liver the organ would be pushed downward and could be felt below the free margin of the ribs. Jaundice is said to occur when there are multiple abscesses present. Osler describes the liver dullness as being normal in the sternal and parasternal line, but in the mid-axillary region it may reach as high as the fifth rib, and posteriorly as high as the angle of the scapula. Malbot (*The Lancet*, February 24) has seen 222 cases of hepatic suppuration, and regards pain as the most important symptom. This pain was said to be sharp in character, as if something was being torn, and was always brought on by muscular effort, or by succussion, and radiated toward the right shoulder, pit of the stomach, lower part of the abdomen or right iliac fossa, according to the location of the abscess. He has never met with the peritoneal friction, nor has he seen a case complicated with jaundice. The pus in abscess of the liver is usually chocolate in color. The following micro-organisms have been found: ameba coli—most common—colon bacillus, staphylococcus and streptococcus. The diplococcus of Fränkel was found in a case reported by Hermes. Flexner found ameba coli in the sputum as well as crystals supposed to be bilirubin. Loison found a mixture of the colon bacillus and a diplococcus in one case. Reviewing the recent cases of hepatic abscess reported, together with the etiologic factors, the following are noted: Slaughter (1896) collected the history of 27 cases of hepatic abscess occurring in children, and Gassicourt, in 1899, reported an additional one. Rouis (1896) of Algiers collected 250 cases, only 1 in a child. In these cases 9 were supposed to have resulted from injury. Hermes (1896) reported 4 cases of hepatic abscess, one of which resulted from appendicitis, a condition said to be prone to produce suppuration in the right lobe of the liver; one resulted from gall-stone and another from perityphlitis. Of two reported by Flexner (1897), no lesion of the bowel could be found in one instance, while in the other the lesion of the bowel probably followed the disease of the liver. Rendu (1898) reported 2 cases following dysentery, and in the same year Wilson reported 3 due to the same cause. In 1899 Dielafay reported the case of a man, 34 years of age, who suffered from slight jaundice, and in whom hepatic abscess was found. Deaver (1899) reported a case which occurred in a woman 24 years of age, which had produced a large tumor but without marked symptoms; there was no history of dysentery nor malaria. In 1899 Jackson analyzed 17 cases of hepatic abscess: in 10 instances the disease probably originated from appendicitis, 2 were from amebic dysentery, 2 accidental, and 3 of unknown origin. Marshall, in 1899, reported a case due to amebic dysentery. He points out the danger of recurrence of those cases should the person reside in a tropical country. In 5 cases reported by Grant (1899), 1 probably arose from disease of the small intestines or colon, 1 from typhoid fever, in 1 the infection could not be traced, and 2 were from appendicitis. In the same year Eisendrath reported a case probably having its seat in the large intestine. In this instance the disease was multiple, affected the left lobe and produced no clinical symptoms.

In the treatment, the following named believe in incision and drainage: Rendu, Roger, Loison, Dielafay, Jackson, Marshall, Grant, Deaver and Cadet de Gassicourt. Hadra advises costotomy. Grant advises aspiration followed by incision, flushing and drainage. He believes that more than 60 per cent. of abscesses of this region are accessible through the diaphragm, by excising a part of the eighth and ninth ribs, and if possible stitching the liver wound to the diaphragmatic wound to prevent reinfection. He believes that the prognosis will be favorable in 75 per cent. of such cases. Hadra advises that the abscess cavity be not flushed, owing to the danger of reinfection. Fonan states that in cases of migrating abscess of the liver the pus shows a tendency to follow the anterior abdominal wall, and that the incision should be made so that it will hug the lower limit of the thorax, to promote drainage. In one case reported by Jackson, three attempts were made to aspirate, but proved ineffectual.

Queries and Minor Notes.

PRACTICE IN NEW MEXICO.

To the Editor.—Please advise me as to the laws governing medical practice in New Mexico. J. O. P.

ANSWER:—If the terms and regulations for practice in New Mexico are still those cited in the Illinois State Board of Health Report for 1898, they are simply the presentation of a satisfactory diploma, or examination by a non-graduate. The diploma must be from a school that requires a sufficient preliminary examination and has a four years' course. One from another school would not be sufficient and examination would be required.

PRACTICE IN TEXAS.

To the Editor.—Will you inform me regarding the medical laws of Texas? I am a graduate of Vanderbilt University, and wish to know whether it will be necessary for me to take a state examination. R. L. G.

ANSWER:—The medical laws of Texas, we understand, are rather lax. We are informed by the *Texas Medical Journal* (November, 1899) that a diploma from an accredited medical college chartered in the state where located will make the holder a legally qualified physician, provided the diploma is registered in the court records of the district in which the holder is practicing.

CONCERNING SODIUM CHLORID.

To the Editor.—It has lately come to my notice, through a patient, that sodium chlorid is an "antifat" agent, if taken in teaspoonful doses before meals. I would like to know whether sodium chlorid is recognized as possessing this power of reducing tissue. How does it do it? Is it harmful to the human economy? R. S. B.

ANSWER:—We are not informed as to the specific effect of sodium chlorid as an antifat agent, though its use has been recommended to increase metabolism, and carry off waste products. Certain saline waters, like Kissingen and Hamburg, are recommended as good treatment for obesity. The action of the sodium chlorid should be favoring tissue change and elimination.

ADDRESSES OF SECRETARIES, ETC.

To the Editor.—Will you kindly give me the names and addresses of the secretaries of the state boards of medical examination in the following: Kentucky, Rhode Island, Ohio, Louisiana, Maryland, Massachusetts, District of Columbia, Idaho, Minnesota, South Dakota, Wyoming, etc. W. H. D.

ANSWER:—The names and addresses desired are, or were: Kentucky, J. N. McCormac, Bowling Green, secretary of the State Board of Health; Rhode Island, J. T. Swartz, Providence, secretary of the State Board of Health; Louisiana, T. S. Kennedy, New Orleans, president of the State Board of Medical Examiners; Maryland, J. McP. Scott, Hagerstown; Massachusetts, Edward Harvey, Boston, secretary of the State Board of Registration; District of Columbia, Geo. C. Ober, Washington; Idaho, C. L. Sweet, Boise, Idaho; Minnesota, J. B. Prinnhall, St. Paul; South Dakota, F. H. Files, Sioux Falls; Wyoming (data not at hand). These addresses are taken from the Report of the Illinois State Board of Health and there may have been some changes. Ohio has just passed a new law and we are not informed as to the appointments under it.

PRACTICE IN RHODE ISLAND.

To the Editor.—Will you inform me regarding the medical laws of Rhode Island? F. A. B.

ANSWER:—Rhode Island requires a diploma from a reputable medical college requiring a four years' course, endorsed by the State Board of Health, or an examination.

BOOKS AND PAMPHLETS RECEIVED.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review as dictated by their merits, or in the interests of our readers.

BOOKS.

INJURIES TO THE EYE IN THEIR MEDICO-LEGAL ASPECT. By S. Baudy, M. D. Professor in the Faculty of Medicine, University of Lille, France, etc. Translated from the Original by Alfred James Ostheimer, M. D., Philadelphia. Revised and Edited by Charles A. Oliver, A.M. M.D. Attending Surgeon to the Wills Eye Hospital; Ophthalmic Surgeon to the Philadelphia Hospital; Member of the American and French Ophthalmological Societies, etc. With an Adaptation of the Medico-Legal Chapter to the Courts of the United States of America, by Charles Stuker, Esq., Member of the Philadelphia Bar. 5 1/2 by 7 1/2 inches. Pp. 161. Extra Cloth, \$1 net. Philadelphia: The F. A. Davis Co.

OPERATIVE SURGERY OF MALIGNANT DISEASE. By Henry T. Britton, F.R.C.S., D.C.L. Surgeon to St. Bartholomew's Hospital. With the Co-operation of James Berry (The Typhoid), W. Bruce Clark (The Kidney), Alban Doran (The Ovary and Uterus), Percy Furnival (The Stomach, Intestine and Rectum), Walter Jessop (The Eye), H. J. Waring (The Liver and Gall-Bladder). Second Edition. Cloth. Pp. 422. Price, \$4.50. Philadelphia: P. Blakiston's Son & Co. 1900.

ULCER OF THE STOMACH AND DUODENUM AND ITS CONSEQUENCES. By Samuel Fenwick, M.D., F.R.C.P., Consulting Physician to the London Hospital and W. Soltau Fenwick, M.D., M.R.C.P., Senior Physician to the London Temperance Hospital. Cloth. Pp. 392. Price, \$2.50. Philadelphia: P. Blakiston's Son & Co. 1900.

STUDENT'S HANDBOOK OF SURGERY OF ALIMENTARY CANAL. An Abridged and Amended Edition of the Author's Treatise on the

Same Subject. By A. Ernest Mayland, M.B., B.S., Surgeon to the Victoria Infirmary, Glasgow. Cloth. Pp. 510. Price \$3. Philadelphia: P. Blakiston's Son & Co. 1900.

ANATOMY OF THE BRAIN. A Text-Book for Medical Students. By Richard H. Whitehead, M.D. Professor of Anatomy in the University of North Carolina. Illustrated with Forty-one Engravings. 6 1/2 by 9 1/2 inches. Pp. 90. Extra Vellum Cloth, \$1 net. Philadelphia: The F. A. Davis Co.

PARALYTIC DEFORMITIES OF LOWER EXTREMITIES. The principles of their Surgical Treatment. By E. Noble Smith, F.R.C.S., L.R.C.P., etc., Senior Surgeon to the City Orthopedic Hospital, and Illustrations. Cloth. Pp. 99. Price, \$5. London: Smith, Elder & Co. 1900.

PUBLIC HEALTH PAPERS AND REPORTS. Volume 23 Presented at the Twenty-Seventh Annual Meeting of the American Public Health Association, Minneapolis, Minn., October 31 and November 1, 2 and 3, 1899. Columbus, Ohio. Berling Printing Co. 1900.

TRANSACTIONS OF MICHIGAN STATE MEDICAL SOCIETY. For the Year 1899, Vol. 23. Cloth. Pp. 481. Grand Rapids, Mich.: Published by the Society, 1899.

TRANSACTIONS OF MEDICAL ASSOCIATION OF STATE OF MISSOURI. Forty-second Annual Session, May 16, 17, 18, 1899. Cloth. Pp. 387. Kansas City, Mo.: Burd and Fletcher Printing Co. 1899.

TRANSACTIONS OF STATE MEDICAL SOCIETY. Vol. 17. Forty-eighth Annual Session, 1899. Cloth. Pp. 420. Waterloo, Iowa: H. G. Middlechild. 1899.

TRANSACTIONS OF NEW HAMPSHIRE MEDICAL SOCIETY. One Hundred and Ninety Anniversary, May 25 and 26, 1899. Cloth. Pp. 308. Concord, N. H.: Evans, C. 1899.

TRANSACTIONS OF COLORADO STATE MEDICAL SOCIETY. Twenty-eighth and Twenty-ninth Annual Conventions. By-laws and List of Members. Cloth. Pp. 513. Denver: Published for the Society, 1899.

TRANSACTIONS OF SIXTY-SIXTH ANNUAL SESSION OF THE MEDICAL SOCIETY OF STATE OF TENNESSEE. 1899. Cloth. Pp. 325. Nashville: John Ruddle & Sons, 1899.

TRANSACTIONS OF MEDICAL ASSOCIATION OF GEORGIA. Fiftieth Annual Session, 1899. Cloth. Pp. 575. Atlanta, Ga.: Published by the Association, 1899.

PROCEEDINGS OF KANSAS MEDICAL SOCIETY. Thirty-third Annual Meeting. Topeka, Kans., May 3, 4, and 5, 1899. Cloth. Pp. 192. Topeka: A. D. Bauer Printing Co. 1899.

ANNUAL REPORT OF FRANK J. IVEY, Surgeon U. S. Volunteers, Chief Surgeon, Department of Matanzas and Santa Clara. Paper. Pp. 30, 1899.

CONTRIBUTION TO HISTOGENESIS OF MELANOSARCOMA OF THE SKIN. By Alfred Schalek, Chicago. Reprinted from *Jour. of Cut. and Genito-Urinary Dis.*

GYNECOLOGICAL COMPLICATIONS OF NEURASTHENIA FROM A NEUROLOGIC STANDPOINT. By John Funton, Kansas City, Mo. Reprinted from *Western Medical Review.*

A MEDICO-RELIGIOUS CHARITY—THE GUILD OF MERCY. By W. Thornton Parker, Westboro, Mass. Reprinted from *Atlanta Jour. Record of Medicine.*

REPORT OF COMMISSION ON CHICAGO RIVER. Submitted December 11, 1899.

SOME POINTS IN DIAGNOSIS OF TRAUMATIC INJURIES OF CENTRAL NERVOUS SYSTEM. By J. T. Eskridge, M.D., Denver, Colo. Reprinted from *THE JOURNAL.*

STRUCTURE OF ESOPHAGUS AND ELECTROLYSIS BY NEW ESOPHAGEAL ELECTRODE. By Charles D. Aaron, Detroit, Mich. Reprinted from *Phys. and Surg.*

TENTH ANNUAL REPORT OF ST. MARY'S HOSPITAL, Rochester, Minn. Conducted by Sisters of St. Francis. Rochester, Minn.: Daily Bulletin Press.

TRANSACTIONS OF PHILADELPHIA COUNTY MEDICAL SOCIETY for January, February, March, April, May, September, October, November, and December, 1899. Philadelphia.

TWENTY-SECOND ANNUAL REPORT OF THE PRESBYTERIAN EYE, EAR AND THROAT AND NERVOUS HOSPITAL OF BALTIMORE. Baltimore: J. S. Bridges & Co. 1900.

The Public Service.

ARMY CHANGES.

Movements of Army Medical Officers under orders from the Adjutant General's Office, Washington, D. C., April 21 to 27, 1900, inclusive.

Calvin DeWitt, lieutenant colonel, deputy surgeon-general, U. S. Army, leave of absence on account of sickness.

William W. Quinton, captain and asst. surgeon, U. S. Army, relieved from further duty in the Division of Cuba to proceed to New York City, N. Y., and report by telegraph to the adjutant-general of the Army for further orders.

Najeeb M. Saleeby, acting asst. surgeon, leave of absence granted.

Charles F. Sanborn, acting asst. surgeon, previous orders, directing him to proceed from Willard, N. Y., to the Department of California, revoked.

Alfred A. Woodhull, lieutenant-colonel and deputy surgeon-general, U. S. Army, to report to the surgeon-general of the Army for duty in his office.

NAVY CHANGES.

Changes in the Medical Corps of the U. S. Navy for the week ending April 21, 1900.

Medicinal Inspector G. E. H. Harmon, detached from the *Baltimore* and ordered to the *Oregon*.

Surgeon F. B. Stephenson, detached from the *Oregon* and ordered to the *Baltimore*.

Passed Assistant Surgeon L. Morris to the *Baltimore*.

Passed Assistant Surgeon S. G. Evans, orders of April 13 modified; ordered to proceed home, when detached from the *Marblehead*, and to be ready for sea duty.

MARINE-HOSPITAL CHANGES.

Official list of changes of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital Service for the seven days ending April 19, 1900.

Surgeon A. H. Glennan, to rejoin station at New Orleans, La., April 18, 1900.

Surgeon W. P. McIntosh, detailed to represent the Service at the meeting of the Medical Association of the State of Alabama, to be held at Montgomery, Ala., April 17-21. To proceed to Tarpon Springs, Fla., for special temporary duty.

P. A. Surgeon G. M. Gutieras, bureau order of March 5, 1900, relieving P. A. Surgeon Gutieras from duty at Matanzas, Cuba, revoked.

Asst.-Surgeon V. G. Heiser, detailed as delegate to the Congress "for the struggle against Tuberculosis" to be held at Naples, Italy, April 23-25, 1900.

Asst.-Surgeon D. E. Trotter, Bureau order of March 5, 1900, detailing Asst.-Surgeon Trotter for duty as quarantine officer at Matanzas, Cuba, revoked and directed to proceed to Cienfuegos, Cuba, as quarantine officer.

Acting Asst.-Surgeon J. C. Ballard, granted leave of absence for 31 days from May 1, 1900.

Acting Asst.-Surgeon W. Havelburg, granted leave of absence for thirty days from May 10, 1900.

Hospital Steward G. C. Allen, granted leave of absence for 27 days from April 19, 1900.

Hospital Steward G. W. Iltis, to proceed to Cleveland, Ohio, and report to medical officer in command for duty and assignment to quarters.

BOARD CONVENEED.

Board convened to meet at Washington, D. C., April 19, 1900, for the physical examination of candidates for appointment as Second Assistant Engineer in the U. S. Revenue Cutter Service.

Detailed for the Board.—Surgeon, P. M. Carrington, Chairman; Asst.-Surgeon L. D. Fricks and Asst.-Surgeon W. C. Billings, Recorder.

APPOINTMENT.

George W. Iltis, of Minnesota, appointed Junior Hospital Steward.

HEALTH REPORTS.

The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine-Hospital Service, during the week ended April 28, 1900.

SMALLPOX—UNITED STATES.

Alabama: Mobile, April 14-21, 12 cases.

District of Columbia: Washington, April 14-21, 2 cases.

Florida: Jacksonville, April 14-21, 1 case.

Illinois: Ancona, April 1-7, 1 case; Chicago, April 14-21, 4 cases.

Indiana: Evansville, April 14-21, 5 cases; Indianapolis, April 1-21, 8 cases.

Kansas: Wichita, April 14-21, 11 cases; Thirty-three towns and counties, March 1-31, 456 cases, 5 deaths.

Kentucky: Covington, April 14-21, 7 cases; Lexington, April 14-21, 2 cases.

Louisiana: New Orleans, April 14-21, 75 cases, 19 deaths.

Maine: Portland, April 14-21, 1 death.

Michigan: Detroit, April 14-21, 1 case.

Nebraska: Omaha, April 14-21, 2 cases.

Ohio: Cleveland, April 14-21, 15 cases.

Pennsylvania: Philadelphia, April 21, 1 case; Pittsburg, April 14-21, 2 cases.

South Carolina: Greenville, April 13-20, 3 cases.

Utah: Salt Lake City, April 14-21, 3 cases.

Washington: Spokane, April 14-21, 3 cases.

Wisconsin: April 14, 1 case.

SMALLPOX—FOREIGN.

Austria: Prague, March 24-31, 5 cases.

Belgium: Ghent, April 1-7, 2 deaths.

Egypt: Cairo, March 18 to April 3, 16 deaths.

England: Liverpool, April 1-7, 8 cases, 2 deaths; London, April 1-7, 2 cases; Southampton, April 1-7, 1 case.

France: Paris, April 1-7, 2 deaths; Gibraltar, April 1-8, 4 cases, 1 death.

Greece: Athens, April 1-7, 4 cases, 2 deaths.

India: Bombay, March 13-20, 163 deaths; Bombay, March 20-27, 133 deaths; Calcutta, Feb. 4 to March 3, 21 deaths; Kurrachee, March 11-25, 24 cases, 12 deaths.

Mexico: Chihuahua, April 1-14, 2 deaths; Vera Cruz, April 7-14, 6 deaths.

Russia: Odessa, March 24 to April 7, 9 cases, 3 deaths; St. Petersburg, March 18-24, 30 cases, 3 deaths; Warsaw, March 18-31, 2 deaths.

Spain: Madrid, March 24-31, 8 deaths.

Strait Settlements: Singapore, March 3-10, 3 deaths.

YELLOW FEVER.

Costa Rica: Limon, April 20, 1 case.

Mexico: Vera Cruz, April 7-14, 2 deaths.

CHOLERA.

India: Bombay, March 13-27, 11 deaths; Calcutta, Feb. 24 to March 3, 70 deaths.

PLAQUE—INSULAR POSSESSIONS, U. S.

Hawaii: Honolulu, March 26 to April 2, 3 cases, 3 deaths; April 9, 1 case.

PLAQUE—FOREIGN.

Brazil: Rio de Janeiro, April 20, 6 cases, 6 deaths.

India: Bombay, March 13-27, 1428 deaths; Calcutta, Feb. 24 to March 3, 411 deaths; Kurrachee, March 11-31, 292 cases, 223 deaths.

Anderson, R. L., from Charleston to Fort Mill, S. C.

Appleton, H. L., from Cedar Bluff to Custer, Ala.

Arnutt, J. H., from Kansas City, Mo., to El Paso, Texas.

Arnold, J. P., from Philadelphia, Pa., to Clinton and Monmouth Streets, Trenton, N. J.

Bennett, P. R., from Daytona, Fla., to Urbana, Ohio.

Brown, Leroy, from St Paul Park, to Endicott Arcade, St Paul, Minn.

Bell, J. R., from Charleston to Due West, S. C.

Benepe, J. L., from Imperial Hotel to Willoughby Building, Indianapolis, Ind.

Boyd, S. J., to 413 Washington Boul., Chicago, Ill.

Bowser, O. B. H., from Washington, D. C., to 513 N. Adams Street, Richmond, Va.

Colson, A. C., from Manassas to Quince, Ga.

Corry, F. M., from Milwaukee to Fenimore, Wis.

Crockett, E. N., from Lone Creek to 348 Main St., Portland, Oregon.

Cooper, A. R., from 3121 Dearborn Street to 2970 State Street, Chicago, Ill.

Cannon, J. J., from Des Moines, Iowa, to 407 Security Building, Chicago, Ill.

Cozard, Henry Irving, from Columbus, to 633 W. Market Street, to Akron, Ohio.

Corasan, J. C., from Iowa City to Doryville, Iowa.

Cady, C. C., from Des Moines to Truro, Iowa.

Coulter, W. J., from Toledo, Ohio, to Milverton, Ontario, Canada.

Clement C. A., from Danville to Rover, Ark.

Chambers, G. P., from Atlanta, Ga., to Fort Mitchell, Ala.

Dickinson, F., from 70 State to 169 S Clark Street, Chicago, Ill.

Dowdall, W. T., from 3316 Rhodes Avenue, to Rand McNally Building, Chicago, Ill.

Davis R. B., from Henderson to Henderson, Tenn.

Deters, W. A., from Iowa City, Iowa, to Woodatock, Minn.

Elrod, J. O., from Atlanta to Adairville, Ga.

Evans, H. C., from Cleveland to Superintendent of State Hospital, Massillon, Ohio.

Estopinal, J. A., from St. Bernard to Estopinal, La.

Edwards, J. M., from Chicago, Ill., to West End Hotel, St. Louis, Mo.

Elarbee, G. W., from Atlanta, Ga., to Macon, Fla.

Frank, I., from 1929 Deming Place to Michael Reese Hospital, Chicago, Ill.

Fuller, J. L., from Oblon to Gadsden, Tenn.

Pife, J. D., from Proctor, Ind., to Glad, W. Va.

Findley, P. A., from Des Moines, Iowa, to Ozark, Mo.

Fleisher, Rubeca, from 621 No. 16, to 1505 Locust Street, Philadelphia, Pa.

Francis, J. H., from Milwaukee to Medford, Wis.

Grinnell, W. B., from Chicago, Ill., to Wykoff, Minn.

Goggel, R. J., from Suring to Oconto Falls, Wis.

Henrich, H. C., from 2228 Euclid Avenue to 2531 Euclid Avenue, Cleveland, Ohio.

Homer, H. C., from Horton, Iowa, to 2301 Indiana Avenue, Chicago, Ill.

Hummel, E. P., from Chicago, Ill., to La Porte City, Iowa.

Hines, C., from 543 3d Street to 692 Front Street, Portland, Ore.

Hartley, H. H., from Prairie City, Ore., to Centerville, Wash.

Hinde, J. R., from Chicago to Lewiston, Ill.

Hirschman, L. J., Harper Hospital Detroit, to 420 Underwood ave., Detroit, Mich.

Jones, D. W., from New Orleans, La., to Port Gibson, Miss.

Johnson, J. C., from Walsfield, to Mary Fletcher Hospital, Burlington, Vt.

Kirk, A. B., from Chicago, Ill., to Hibbing, Minn.

Kincald, G. E., from 2920 Pine to 4533 Labadie, St. Louis, Mo.

Kinsinger, J. B., from St. Joseph, to Mound City, Mo.

Kuehler, V., from Kansas City, Kan., to Yukon, O. T.

Krebs, L., from Springfield, to Ha-Ha-Touka, Mo.

Little, W. H., from Kansas City, Mo., to Buhler, Kan.

Lymao, T. P., from 2124 to 2070 Wilcox ave., Chicago, Ill.

Lewis, Le Roy, from Auburn, N. Y., to 90 Warren ave., Chicago, Ill.

Law, S. P., from Bryn Maur, Pa., to H. L. Law, 100 Washington Street, Hartford, Conn.

Lukens, A., from Pelham to 1068 Lexington Avenue, New York City, N. Y.

Lindsey, R. C., from Atlanta, to Irvington, Ga.

Lyon, E. A., from 4658 State street to 534 E. 47th Street, Chicago, Ill.

Morris, J. L., from Chicago, Ill., to Columbus, Ind.

Mels, E. W., from Dyersville to Zwingle, Ia.

McCormick, Olin, from Chicago to Sanneim, Ill.

McClure, C. F., from 1256 to 1106 Lawndale Avenue, Chicago, Ill.

McClure, C. P., from City Hospital to 1822 Market Street, St. Louis, Mo.

McGahan, C. F., from Aiken, S. C., to Bethlehem, N. H.

McKelway, G. I., from 255 S 17th to 114 S. 18th Street, Philadelphia, Pa.

Neid, D. W., from Box 294 to 3222 Spencer Terrace, Philadelphia, Pa.

Perry, J. C., from Port Townsend, Wash., to Mailla, P. I.

Pinkerton, R. G., from St. Louis, Mo., to Care British Post Office, Reynout, Syria.

Painter, F. W., from Bloomfield to Pilot Point, Tex.

Runyon, C., from Chicago, Ill., to 901 W. South A. Elwood, Ind.

Sweet, A., from 4839 to 4785 N. Clark Street, Chicago, Ill.

Savre, L., from Indianapolis, Ind., to Lake Mills, Ia.

Sholars, A. R., from New Orleans, La., to Orange, Tex.

Sale, H. M., from Washington to Levert, Ga.

Sassaman, F. W., from Boone Grove, to Valparaiso, Ind.

Spring, C. K., from 46 Fowler to 1451 Dakin Street, Chicago, Ill.

Stevenson, A. F. Jr., from Presbyterian Hospital to 378 La Salle Avenue, Chicago, Ill.

Scholtes, T. W., from Chicago, Ill., to Reads Landing, Minn.

St. John, H. II., from St. Louis to La Belle, Mo.

Sheppard, J. E., from 135 Clinton to 108 Pierpont Street, Brooklyn, N. Y.

Strow, R. M., from 422 Sherman to 1519 Cherry Street, Toledo, Ohio.

Sicker, A. W., from Chicago, Ill., to Franklin, Wis.

Thornton, J. W., from Lansing to Agreshire, Ia.

Twitty, W. S., from Charleston to Kershaw, S. C.

Warrell, J. B., from Strimboyn, to Coc, Ga.

Weston, F. R., from Okawala to La Crosse, Wis.

Wood, G., from 903 W. Monroe to 348 E. 55th Street, Chicago, Ill.

Winnington, F. L., from Ritchey, Mo., to Miami, J. T.

Wilkins, A. E., from Kansas City, Mo., to Cerea, O. T.

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Original Articles.

THE TENEMENTS AND TUBERCULOSIS.

BY S. A. KNOPP, M.D.

NEW YORK CITY.

If I should be asked what conditions are most conducive to the propagation of tuberculosis, and especially pulmonary consumption, I would have to reply: the conditions that prevail in the old-fashioned tenement houses as they still exist by the thousand in this and other large cities. In these tenements there are not only a far greater number of consumptives than in the same area elsewhere, but the proportion is actually greater per number of inhabitants. Thus they not only contain countless centers of infection for old and young, and multiple foci of reinfection for those already afflicted, but these dwellings, with their bad air, darkness and filth, make a cure of the disease impossible, and a lingering death for all those infected by the germ of tuberculosis a certainty. If any one thinks me an alarmist, let him glance at the charts exhibited in this building. There he will see that there are houses in which can be counted as many as twenty consecutive cases of tuberculosis during the last four years. This number represents, however, only the cases reported to the Board of Health. Now, you must not think for a moment that these represent the actual number of cases of tuberculosis existing in that particular tenement. They are only the ones where the disease had so far advanced that medical aid became imperative, a physician had to be called in, and the case was reported. But how many of the moderately advanced cases are made known to either physician or board of health? I venture to say those not reported are more numerous than the reported ones. They constitute that class of pulmonary invalids who are still able to work, and who imagine themselves to be suffering only from chronic bronchitis, and the equally large number of children suffering from tuberculous manifestations other than pulmonary. To the uninitiated it may sound like a paradox when I say that the tuberculous invalid who is still up and about, perhaps supporting his family, is often the greatest danger to the community, to his friends, his neighbors, and to those who may succeed him in the tenement in which he lives. It is this class of consumptives who, either from ignorance or carelessness, spread their disease broadcast by depositing their infectious sputum everywhere without any regard to the danger.

In the many discussions which were raised during the past few months previous to the framing of the bill to establish a state sanatorium for the treatment of incipient cases of pulmonary tuberculosis, it was repeatedly argued that we should rather isolate first the advanced

and hopeless cases. I appreciate the necessity of public care for this class of patients very much indeed, but the advanced and hopeless poor consumptive is usually confined to one or two rooms, and while ten to one he will infect these thoroughly, he can not do as much harm as he used to when he was still up and about and could spit in dark hall-ways of the tenement, on the floor of his workshop, in the street-car, or wherever his calling may have led him. Thus the advantage of curing an incipient case of pulmonary tuberculosis is inestimable. Leaving aside the direct benefit to the commonwealth by making a breadwinner and useful citizen of this pulmonary invalid, who himself and also perhaps those depending on him, might have become otherwise a burden to the community, it is beyond calculation to say how many lives may have been saved by curing that one man before he had a chance to disseminate his disease among his fellowmen in the manner described. To what extent he may do this you can perhaps perceive if I recall to you the fact that the average number of bacilli which the up-and-about consumptive expectorates daily is estimated to be seven billions.

But let us return to our main subject and try to find some explanation for the fearful condition which makes pulmonary tuberculosis an endemic disease of the tenement house. I pointed out to you that there were houses where an unusual number of consumptives have lived and died during the past few years. Now, let us pay a visit to one of them. We pass the throng in the narrow street, make our way through the crowds of children playing on the sidewalk, and enter the dark hallway. The first thing that greets us is the odor peculiar to badly housed humanity. You can not define it, but I know many of you who labor among poor know it only too well. Have you ever thought what this odor really means? It represents the exhalation of a multitude of people, the toxic products expelled during the process of expiration, which settle on the walls, ceiling, and stairs of these hallways. Chemistry has not yet been able to fix its composition: we know it exists and we know its deleterious influence on the individual who is obliged to live constantly in such a house. Some very prosaic people call this smell the smell of humanity, or the smell of poverty. I do not quite like these names for I do not think them either appropriate or just. There can be humanity without smell, and amidst poverty there can be the sweet atmosphere of cleanliness and purity. If the bad odor we perceive in our wanderings through those dark halls must have a name, let us call it the smell of ignorance and greed. It is the result of ignorance on the part of the poor housed there, who do not know the value of fresh air, sunlight, and the cleansing property of water—the trinity which is the best antitoxin against those poisonous products. It is the result of greed on the part of the owner, for only a heartless man could tolerate such a condition of filth, foul air, and darkness as is characteristic of these tenement halls.

*Delivered before a conference held under the auspices of the Tenement House Committee, of the Charly Organization Society, New York City, Feb. 20, 1900.

We ascend one more flight of stairs, in the rear or front, it makes little difference, since there is probably a consumptive on each floor. Owing to the expense of artificial lighting the halls are very dim, and though we can not see the dirt on the balustrades we feel that it is there and only reluctantly take hold of them in order not to fall. We arrive at the rooms we are seeking. A knock at the door, a feeble invitation to come in, and we are in the midst of tuberculosis. There are two or three small rooms, but only one receives direct air and light. In a small, dark bedroom lies the patient; there is a different odor in this room, a distinct smell of disease mingled with the odor of cooking. We ask to have the window open, but the patient fears the draft. He is a husband and the father of six children of whom two have died within the last year. The youngest of the remaining children is a few months old; the eldest, a girl of 10, attends to the household duties while the mother goes out to work. We greet our consumptive friend lying there, bid him cheer, and tell him we came to investigate his case. He faintly smiles, and we ask him to tell his story. In a feeble voice, interrupted by fits of coughing, he tells us that up to two years ago he was a strong and vigorous man, he had a good position as a mechanic, lived in a better tenement than now, and drank only occasionally, when life at home became too dull. Once he caught a severe cold. He went to a doctor. A few weeks of rest followed, some medicine, and he got well. After some months he had another cold, the same treatment, the same result. And then again a cold, and so on, until the periods between the times when he could labor and earn became longer and longer. The savings from better times gradually disappeared; a cheaper tenement was sought; the visits to the doctor were given up, and the patient finally ceased to work. To go to the dispensary was too much of an exertion. The faithful wife nursed him tenderly, but soon all the savings were gone. The burial of the two little ones—one having died of bowel complaint and the other of brain trouble—had cost so much that the mother decided to go out to work in order to support the family. While listening to the pitiful story we look around the scantily furnished rooms. The babies are playing on the dirty floor, touching everything with their little hands, putting their fingers in their mouths, and inhaling the dust laden with disease germs. When we consider that this case has only been reported a few weeks ago, and that until then the patient had hardly taken any care with his expectorations, can we wonder that two of the children died within a few months, one from bowel-complaint—which probably was nothing else than intestinal tuberculosis—and the other from brain trouble, which is only another name for tuberculous meningitis. The remaining little ones look pale and underfed. The little mother preparing the evening meal has seemingly a better appearance. She has to do much running out in the street to buy the provisions for the family that she gets more air, and if the father does not feel too badly she wheels out the baby sometimes. Yet to the experienced eye there are already traces of overwork in this delicate child organism. The precautions the patient takes now with his expectoration consist in having placed before him on the floor a cuspidor partially filled with some antiseptic fluid. Owing to his weakness he does not always succeed in depositing his sputum exactly in the center, and sometimes he even fails to hit the vessel at all. We call his attention to this lack of precaution and advise him to use a light mug which he can bring near to him, or moist rags which he should have burned in the evening on his wife's return.

We bid adieu to this interesting family to visit another case which had been reported two flights higher up. But on the next floor we pass a door wide open and hear the rattling of sewing machines, suddenly interrupted by a terrible cough. We halt and listen for a moment—another cough of different pitch, coming evidently from another person. We enter—again a different picture. The air is filled with dust and steam, the odor indescribable. The room is filled with people: an elderly man with dark features, a velvet cap on his head, a wife, a son, a daughter-in-law, two young girls and a number of children, all in one room, the growing persons working over their machines or pressing garments with heavy flat-irons, the little ones playing on piles of cloth or unfinished clothing. These latter with the children playing about them are the mysterious agents which, as newly-made garments, are not only capable of spreading tuberculosis, but are frequently the very medium whereby acutely contagious diseases, such as smallpox, diphtheria, scarlatina, and measles, are carried into the homes of the well-to-do. The description of the home we are visiting has already told you that we have before us a small sweat-shop. Without questioning we recognize in the young mother and in her unmarried sister the two coughers. We venture to ask them as to their condition, but they tell us that they are well. One says she coughs only because she is going to become a mother again; the other assures us she coughs only when she bends too intently over the machine or when the little ones raise too much dust. Both women are plainly in a state of evolution of pulmonary tuberculosis. Both expectorate freely and, alas, indiscriminately, spreading their disease among their own kin and others. They have not yet consulted a physician; they did not feel the need of one, and besides this, it takes time and money. They occasionally get some patent cough-mixture in the nearby drug store. As a matter of course, these cases belong to the class of unreported ones. Should these people ever move before their cases become known to the Board of Health they would leave the germs of tuberculosis in every portion of the rooms, and the new occupants would have all possible chances to contract the disease, for you must know that tuberculosis sputum often retains its virulence in the dried state for a long period of time, but especially so in places where fresh air and sunlight have little access.

Ducor, quoted by Dr. Park of the New York Health Department, in his recent book,¹ relates an instance of a healthy family having been infected with tuberculosis from living in a room which had been occupied by a consumptive two years before, and on examining the sputum-stained wall-paper not only were tubercle bacilli found in it, but on guinea-pigs being inoculated with scrapings from the walls they died of tuberculosis.

We advise the two young women to call in a physician or to go to a dispensary, and urge them not to expectorate except into a vessel partially filled with water, and if this is impossible, owing to the crowded condition of their workshop, to use a small pocket flask for that purpose.

We have one more family on our list, which we desire to visit. Again a cough re-echoing in the hallway would guide us even did we not know where to go. This cough, which is heard on nearly every floor, recalls to one's mind a hospital ward of consumptives. Our third visit leaves a less painful impression, for the rooms we enter are clean. The sufferer is a widowed mother. Thanks to

¹ Wm. H. Park: *Bacteriology in Medicine and Surgery*. Philadelphia: Lea Bros. & Co.

the conscientious advice of the physician the disease seems here to be under control and confined to one member of the family. There is little hope for her recovery, and her total helplessness makes it necessary for her only maiden daughter, otherwise a regular breadwinner, to remain at home and consecrate her entire time to the nursing of her mother. In the home and the faces of both of these women one can still see the traces of refinement and culture. What calamity has brought them into these surroundings must remain their secret, but we know that only with reluctance do they accept the much needed help which comes to them regularly through the medium of the charity organization.

Such and sadder pictures you can see daily in visiting the tenement homes of our city. To many of you the thought may have come: why are these people not in a hospital? I must answer you by saying that there is no room for them.

But what can we do to stop this plague if there is no room for the advanced cases in the hospital and no sanatorium for the care of the incipient cases? I believe I may modestly claim that I am an ardent advocate of the establishment of sanatoria and special hospitals maintained by the authorities and private philanthropy, and other public measures to stop the spread of tuberculosis, such as better sanitary laws, more public baths, parks, and playgrounds, especially in the crowded tenement districts, proper physical and hygienic education in our schools, etc.

While the realization of these institutions and proposed improvements will do a great deal toward the decrease of tuberculosis, the greatest factor in solving the tuberculosis problem will, however, be the proper housing of the poor. As long as the law will permit tenements to exist, or to be constructed anew, which, owing to the lack of air and light and want of cleanliness constitute veritable hot-beds of tuberculosis, so long will sanatoria and special hospitals serve only as recipients of the supply of tuberculous patients daily created anew.

Tuberculosis is a preventable and curable disease. Let us emphasize these important points in our crusade against it. In spite of all the opposition which we have encountered I do not fear but that ere long we will have a state sanatorium for the treatment of incipient cases and a special hospital in the vicinity of the city, which will be followed by the establishment of numerous institutions by private philanthropy. My faith in the wisdom of our statesmen and city fathers, and in the generous hearts of the American philanthropists, is too great for me to falter in my hopes. Such institutions—sanatoria and special hospitals—will serve to cure those already afflicted with the disease; but the model tenement house and the model tenement house management will be the greatest factors in preventing the development of the disease. Though, when we consider that we have in this city alone more than ten thousand poor consumptives, those new and model tenements will probably have to at times harbor a few tuberculosis patients; but how much brighter prospect they have of being cured in these new houses with plenty of light and air, perfect ventilation in all rooms, complete sanitary arrangements, and the absence of filth, dirt, and sickening odors.

Since consumption can be successfully treated in nearly all climes, and the essentials of the modern treatment of tuberculosis are plenty of fresh air and light, good food, and judicious medical supervision, the probability of treating an intelligent consumptive patient successfully, even at his home, must certainly be an assurance to us all, since we know that there will not be room

enough for all these patients in the institutions. The danger of infection from such a patient in a model tenement house can be reduced to a minimum, and the same might be said in regard to other contagious diseases.

In Germany it has been proposed that in order to control and combat tuberculosis successfully, every person should submit himself to a periodical examination for the possibility of a tuberculous disease, and that this examination should be compulsory, like vaccination.

As to the advisability of inaugurating such a movement in our own country I prefer to suspend judgment; but if I should be the fortunate owner of a model tenement house, I certainly would make the medical examination obligatory for all those who desired to become my tenants. Should there be one, two, or even more among them, with incipient tuberculosis, I would not refuse to these the blessings of a sanitary home, which, as long as we have so few special institutions, will certainly be an addition to their chances of getting cured. But I would have every one of these prospective pulmonary invalids instructed individually as to the precaution he has to take concerning his infectious sputum, and urge him to place himself under medical treatment. I would warn him that though the hospitality of this model tenement house had been extended to him, if he ever wilfully violated the given instructions and regulations concerning the disposal of his expectorations he could no longer remain in the house. Let me remark here, incidentally, that the application of this injunction constitutes the essential part of the discipline in sanatoria and special hospitals in our own country and abroad. Any wilful violation means immediate dismissal. It is this precaution whereby the healthy individual is more protected from contracting the disease in these very homes for consumptives, than probably anywhere else outside of them. I could verify this statement by statistics which I have published before² in connection with this subject, but I will refer here only to one of our home institutions, the Adirondack Cottage Sanatorium, under the direction of my esteemed friend, Dr. E. L. Trudeau. During the fifteen years of its existence not one of the medical attendants and nurses, who have lived and labored there in close contact with hundreds of consumptive patients, has ever contracted pulmonary tuberculosis. Thus, I believe, the model tenement house could also be made a place safer from the danger of contracting pulmonary tuberculosis than any other. But I would go even a little further in my precautions to avoid a repetition of such sights as we observed in our wanderings through the tenements of the city. I would see to it that all the tenants should get a sufficient knowledge of what to do in case there is a patient suffering from a communicable or contagious disease in their midst. Leaflets such as the Pennsylvania Society for the Prevention of Tuberculosis issues for distribution should be placed at regular intervals in the hands of the tenants. The titles of some of these leaflets are as follows: "How to Avoid Contracting Tuberculosis," "How Persons Suffering from Tuberculosis Can Avoid Giving the Disease to Others," "Predisposing Causes of Tuberculosis and How to Avoid and Overcome Them." In short, I would found a local society for the prevention of tuberculosis, composed of my tenants and those of other model tenement houses. I would institute reunions and invite physicians and sanitarians to address them, not only on the prevention of tuberculosis, but also on the prevention of other diseases. If I could besides this succeed in procuring one of those

² S. A. Knopf: *Prophylaxis and Treatment of Pulmonary Tuberculosis* P. Blakiston's Son & Co., Philadelphia.

noble women who could teach to the women tenants the art of good and economical cooking and careful house-keeping, and procure for all men, women, and children alike, such educational and social features as would make their home life happier and brighter, I would think that the ideal of housing the poor was attained.

After the description of all that you have heard and seen since this splendid exhibition has been opened, there is no need for me to tell you of the urgent necessity of better laws concerning the building of tenement houses, and you will realize that it becomes our duty as men and citizens to no longer tolerate existing conditions. But in the meantime we should combine our individual efforts to further all such enterprises as, independent of legislative help, will attain the same end. Though we may not reap what we sow, as our worthy chairman, Mr. Frederick W. Holls, at the opening of this exhibition so beautifully suggested, let us sow our grains nevertheless, and let us sow them well and diligently. In the proper housing of the laboring classes lies the welfare of the community and the sanitary, social and intellectual prosperity of every citizen.

Think of the difference between the old tenement, which we desire to abolish, and the new one we desire to erect, and you will need no further incentive. The one is a beehive of humanity living in filth and dirt, well-nigh without light and air, but with a multitude of sickening odors; with no attractions to foster home life, virtue and temperance; disease breeding in every room; a hot-bed of tuberculosis and other contagious diseases from which are spread the foci of infection throughout the city among old and young, poor and rich alike. The other is a well-regulated city within a city, its citizens living in airy, sunny rooms, in modest but attractive homes, which make the longing for the rum shop less, and create a love for temperance and purity; a home where infectious diseases can be controlled and from which the most bitter foe of mankind, "the great white plague"—consumption—can be ultimately and lastingly banished.

16 West Ninety-fifth Street.

NOTIFICATION AND STATE SUPERVISION OF THE TUBERCULOUS.*

BY JOSEPH MATTESON, M.D.
CHICAGO.

The general acceptance of the bacillus discovered by Koch as the exciting cause of tuberculosis in man and the food animals is based on the most careful experimental observations. Without the bacillus there can be no tuberculosis. Therefore, if we should destroy all these bacilli there would be an end to tuberculosis. This appears to some logical, simple and, to a degree, possible of attainment. It is a sequence of cause, effect and prevention which has produced a revolution in medical thought and action.

Whereas formerly an occasional instance of apparent communication of the disease from one individual to another excited some speculation as to its possible contagiousness, or was explained by heredity or coincidence, now all is changed—infection or communication from another is almost universally recognized as the essential factor.

Tuberculosis then being an infectious disease affecting a larger number of individuals than any other, it naturally falls into the jurisdiction of state medicine.

Since 1882 there has been an increasing and extending

agitation for the suppression of tuberculosis by special state supervision and control of the tuberculous.

We encounter here enthusiasts and extremists on the one hand and doubters on the other, just as in any other imperfectly understood problem in social economics. To quote one of the former, here is a widely circulated statement by Dr. Biggs, of the New York City Board of Health, whose earnest work for the suppression of tuberculosis in that city has commanded general approval. He says (*Forum*): "With our present knowledge we have in our power to completely wipe out pulmonary consumption in a single generation." Again, Dr. Geo. M. Gould, says: "Phthisis, the most fatal of diseases, causing one death in eight, is now proved to be contagious. Its inception depends upon the passage of the living bacilli from one organism to another. When this is prevented the dread affection will no longer mow down its victims. Its prevention seems easy and by two feasible, simple means—the devaluation of the sputum of consumptives, the inspection of dairies and the slaughtering of animals." Dr. Schonock asserts that "Tuberculosis is a preventable disease and one of the unnecessary afflictions of humanity."

Admitting fully that the essential factor in the spread of tuberculosis is the bacillus, that its definite life history, its food, growth, and decay and manner of transmission have become known, let us consider whether the extermination of phthisis is in sight: whether it has become a simple problem—a bacillary premise and a legislative conclusion—the observation and experience of years as to the numerous contributing factors in the production of tuberculosis nullified, or only temporarily lost to sight.

While the dried sputum of consumptives and the milk of tuberculous cows are known to be the common distributors of infection there are other minor ones which may be noted. Spano demonstrated that seminal fluid may infect even when the genital tract is not involved in the disease. Of eight cases he demonstrated the presence of tubercle bacilli in the seminal fluid of three.

They have been found unharmed in the interior of large underdone joints exposed to the ordinary roasting point. Schugard demonstrated their presence in chancres and soft sores and gonorrhoeal pus. Successful inoculations are reported with the tissues of tuberculous infants, and the amniotic fluid of a tuberculous woman. Hirschfeld recently found the bacilli in the placenta and in the capillary vessels of the fetal liver. It is estimated that from 6 to 20 per cent. of cattle and 5 per cent. of milk cows are infected, and the bacilli may rest in the discharge from the mouth, nose and bowels, drying upon hay and grass. Hogs and domestic pets are not infrequently infected. Jensen reported 44 cases in dogs and 33 in cats. In Berlin an examination of a large number of parrots showed that 25 per cent. were tuberculous. Lortet demonstrated that earthworms are capable of ingesting and ejecting tubercle bacilli without the microorganisms losing their virulence, and that the bacillus has retained its virulence after being buried for one year. Experiments in the laboratory of Professor Flügge proved that it is possible to carry particles of infected sputum in the act of speaking, to a distance of four feet.

Besides the direct inhalation of bacilli from desiccated sputum we must note their deposit on bakers' goods and all articles of food consumed in the raw state. Schnirer rinsed the dust from grapes bought at a street stand and developed tuberculosis in two guinea-pigs out of three. Hoffman found that flies may carry the germs in their intestines and deposit them in their droppings.

*Read before the Chicago Medico-Legal Society, Dec. 2, 1899.

It has been estimated that a consumptive may expectorate several billion tubercle bacilli in twenty-four hours, and that there are at least 500,000 living individuals in this country with pulmonary tuberculosis.

What innumerable foci for the spread of the disease are thus provided in houses, railroad cars and public halls. We should expect an epidemic of a clearly communicable disease under such opportunities. At least tuberculosis should be increasing in frequency, but the opposite seems to be true: it has been decreasing for many years.

Heretofore no measures to isolate or disinfect consumptives have been in force, yet the disease is less prevalent than formerly.

The death-rate from consumption in England, from 1838 to 1852, decreased 26 per cent.; from 1852 to 1892, 50 per cent., all ascribable to general sanitary improvements, such as the extension of main sewers and house drainage. Sandberg made a critical inspection of vital statistics in England from 1850 to 1886, and proved that phthisis has steadily decreased in the agricultural districts; the decrease was 50 per cent. in females. Billings shows a decrease of 10 per cent. in the phthisis mortality of the United States between 1880 and 1890. Dr. E. F. Wells, of this city, has personally collected the death returns of the seventeen principal cities of the United States for such periods as they were matter of record, showing a marked decrease of the phthisis mortality in nearly every instance. And yet the centers of infection, though decreasing in numbers, must have been increasing in volume of expired bacilli if it be true, as Theodore Williams, supported by Pollock, claims, that the average duration of phthisis is now four times as long as in the time of Laennec and Louis.

In the extension of tuberculosis we should expect physicians and nurses who are in most frequent and close contact with consumptives and inferentially their bacilli to be unusually liable to infection. Making all due allowance for the errors, inconsistencies, and contradictions assignable to such collections we have considerable evidence on the negative side.

Haupt investigated the history of 275 female nurses who had been in habitual attendance on consumptives; only two became tuberculous. The collective investigation committee of the British Medical Association, in 1883 instituted an inquiry into the communicability of phthisis. Out of 1078 who returned answers less than one-quarter had seen cases which they believed had originated by communication from one person to another.

Da Costa says that in the Vienna General Hospital—before disinfectants were used—there were in three years nearly 3000 deaths from phthisis and not one medical officer or nurse became affected. In the Pennsylvania Hospital there never had been a time when there were not many consumptives in the medical wards. Of 147 resident physicians whose history he had followed but one died of tuberculosis. Of 93 male and female nurses employed in the last twenty-five years, only one showed signs of tuberculous disease.

Williams and Humphrey state that at the Brompton Hospital, during thirty-six years; not one clearly authenticated case of pulmonary consumption originated among all its staff and employees.

The statistics of Friedrichshain Hospital in Berlin, as given by Fürbinger, show that during sixteen years, out of 887 physicians and nurses there were only 9 who became consumptive and 3 of these were tuberculous before entering. Out of 108 Victoria nurses in the hospital 2 to 5½ years each, only 1 become tuberculous.

It will not do to attempt to attribute this immunity to disinfection of sputum, as much of the period covered was before the recognition of this source of danger.

There should be plenty of evidence also of the frequent communication of tuberculosis by married persons to their partners in the closest association of life. Dr. Cooper reported, on the other hand, that he had personally known and followed the history of 55 cases of phthisis in married persons; 40 of them had died of it, the surviving partners all living and free from the disease after six to thirty years. Flint, in 670 cases of death from tuberculosis of married persons, found but five cases in which the partners became similarly diseased. Dr. Schnyder observed 844 cases in married people. In only 32 were both husband and wife affected, or one in thirty.

Longstaff has made the calculation from averages that for every 148,000 men who die during the age of married life there would be 4358 of their wives who would have consumption without reference to contagion from their husbands, that is, 1 in about 33.

There is also experimental evidence on the negative side of easy infection from supposedly infected places. Praussnitz unsuccessfully tried to inoculate animals with dust from the floors of railway compartments carrying consumptives for many hours. Kusterman also failed to develop tuberculosis from the dust from the walls and floors of the Munich prison. Herne and Chaplin report, in the London *Lancet*, that they made inoculations of 100 guinea-pigs with dust from various, probably infected, parts of the City of London Hospital—and note that there must have been dry tuberculous sputum in the pathologic workroom. They met with evidence of tuberculosis in only two of the guinea-pigs.

Gardiner has recently inoculated with dust obtained from different rooms in the largest hotel in Colorado Springs, Colo., occupied by consumptives, with negative results in eight cases.

It is frequently asserted, in an offhand way, that certain resorts have become dangerously infected by the concourse of consumptives. Among others, Mentone is cited as a place where tuberculosis has become common among the resident population. But when we read the report of Dr. Bennett, the resident physician, which appears to be the foundation for this opinion, we find that what he actually notes is an increase among the women of the town who formerly worked in the fields with their male relatives, but who subsequent to the incursion of numerous consumptives became laundresses and domestic servants, and he asks if the increase of consumption which he notes only among these workers be not due to change from outdoor life to work in damp, close and ill-ventilated rooms.

Recent statistics of Falkenstein show that the village mortality from phthisis has been reduced 40 per cent. since the establishment there of the sanatorium for consumptives—an odd revelation of the death table, however, is the fact that the mortality from phthisis has increased from 5 per cent. to 15 per cent. in 1892-94, under the antiseptic régime, though still remaining lower than before the establishment of the sanatorium. So also at Göerbersdorf, the site of the largest sanatorium of the kind in the world, many thousand consumptives have deposited their expectation in the streets of the village, so that the inhabitants continuously respired air potentially more or less laden with tubercle bacilli, with the result that the absolute number of deaths among them from phthisis is about half as many as before the estab-

lishment of the sanatorium, and the population has doubled.

It is rumored that Colorado resorts have become infected by the numerous consumptives who have sought the benefit of its climate, that there has been a great increase in the cases of tuberculosis originating there, and that the State Board of Health had under consideration the advisability of quarantine against more consumptives. Dr. S. G. Bonney, of Denver, has made a careful investigation and proves these statements to be untrue. The death-rate from indigenous cases was less in 1896 than in 1895—one-third of the patients were under 15 years of age—some the children of tubercular parents. Dr. Solly, of Colorado Springs, says that living for sixteen years among a people of whom many came to the country with tuberculosis, and not a few of whom live in crowded lodgings where free expectoration is commonly practiced, he knows of only four cases which could fairly be assumed to have originated in Colorado.

Dr. Gardiner reports that as a result of a circular letter of inquiry to many physicians of Colorado he could learn from them of only ten cases in fifteen years.

It certainly is a fairly reasonable conclusion from these facts that the spread of tuberculosis is not in accord with the degree of exposure to the bacillus.

The wide diffusion of the bacillus tuberculosis makes inevitable contact with it on the part of every individual in thickly-settled communities—the marvel then is not that one-sixth become fatally infected, but that more than half entirely escape. The evidence presented as to the escape of those in contact with the tuberculous is not offered in abatement of the claim of the bacillus as the essential factor. It is evidence, however, of the fact that one in fair health, living a regular and hygienic life, has little to fear from contact with the bacillus. We must assume, moreover, for those who do become infected, a weakness of resistance to the lodgment and multiplication of the bacilli, inherited or acquired. Hereditary predisposition, however explained, remains practically a factor to be dealt with in the genesis of tuberculosis. There is no time to even suggest all those circumstances of external environment, bodily formation, habits and degenerations which favor acquired predisposition.

A quotation from Jaccoud, recently cited and endorsed by one of our oldest and most eminent teachers, summarizes the interdependence of the bacillus and the predisposition most aptly in these words: "With this class of organisms pathogenesis by changes in the organism is the rule, and its traditional etiology based on heredity, congeniality, predisposition, temperament, somatic or cosmic influences retains all its force." That the natural history of infection, depicted as an active bacillus on the one hand and a comparatively passive resistance of the organism on the other, has been overdrawn, is confirmed also by recent bacteriologic development. H. P. Loomis made inoculations with the bronchial glands of persons dead from accident or acute disease apparently free from tuberculosis. One-fourth of the rabbits developed tuberculosis. Pizzini made observations on the lymph glands of thirty individuals who had died without any clinical evidence of tuberculosis—in twelve instances he developed tuberculosis by inoculation of guinea-pigs.

The recent bacteriologic work of Dr. Adami¹ of Montreal, so graphically presented to our local medical society recently has added new and convincing evidence of the not occasional, but constant, presence of noxious bacteria in the organism, and the equally constant bactericidal activity of the leucocytes and the disintegration and

elimination of the bacilli in the glands, the liver and kidneys. His observations point also to the etiology of cirrhosis of the liver by overwhelming invasion of the bacillus coli through coincident breach of the natural line of defense produced by catarrhal disease of the intestinal tract. These additions to our knowledge emphasize the belief that we are to rely for immunity from infection, not solely on an artificial absence of bacteria, but at least in equal degree on the maintenance of the inherent germicidal activity and vigor of the organism.

Until recently public preventive measures against tuberculosis have been directed only to the abatement of the predisposing conditions. The reduction in phthisis mortality as a result of these sanitary measures has been general and in many cases remarkable.

Acquainted now with the exciting as well as the predisposing cause of tuberculosis we are no longer restricted to defensive measures of increased vital resistance, but may undertake offensive action to destroy or limit the bacillus. The ubiquity of the bacillus suggests the magnitude of the task and assigns its accomplishment to that happy period when all men are honest, all women virtuous and the poor no longer with us.

We have it in our power, however, to greatly lessen the dissemination of the bacilli by practicable methods and thus decrease the chances of new infection. While there are many who do not share in optimistic enthusiasm as to the results to be anticipated, few will question the desirability of the attempt by unobjectionable methods.

The measures to be taken for the prevention of tuberculosis naturally divide into those directed against its dissemination by infected food animals on the one hand and those directed against infected man on the other. In regard to the former it may be briefly said that the conditions of success are comparatively simple. Rigid inspection of herds and dairies and the destruction of the infected animal solve the problem, requiring only the necessary law and its efficient execution.

Knopf, in 1897, reported that twenty-three states of the Union provided for official distribution of circulars of instruction as to the dangers of communication of human tuberculosis and the precautions to be observed as safeguards against infection. In Michigan and Pennsylvania resolutions had been adopted to include consumption in the official list of diseases dangerous to public health. In New York notification of all cases is compulsory. It is evident then that action against human tuberculosis has been confined, with few exceptions, to a commendable effort of education of the people, but that there is a growing tendency to more radical action. The statement was recently made in a medical journal that not long ago, in Detroit, Dr. E. A. Shurly was prosecuted by the local board of health because he refused to report his cases of phthisis; that in the defense Dr. Gibbes took the ground that there was no proof that consumption is contagious. Judgment was rendered against the physician and appeal taken to the supreme court. The report of the Department of Health of New York City, 1897, laments the difficulties of effective preventive measures because of the lack of special sanatoria, that is to say segregation, and incidentally intimates that "the work of restriction of tuberculosis has just begun."

On Sept. 15, 1899, the following preliminary resolution was passed by the State Board of Health of California: "Resolved, That the State Board of Health consider the propriety of quarantining against human beings and domestic animals with tuberculosis entering the state."

¹ THE JOURNAL, Dec. 16 and 25, 1899

In its present form the New York City compulsory registry law stands as a compromise measure: the result of attrition between the enthusiastic contagionists of the Department of Health and the opposition of the local practitioners. It may serve as a model of the most advanced action which will at present meet general approval. With the copy of the act requiring registration of all cases public or private coming under the observation of the physician within one week, is mailed a circular of information for physicians, which says that there will be no sanitary inspection or interference by the Health Department in private cases unless requested by the reporting physician, nor in those in lodging-houses or tenements where the reporter specially asks for non-interference. The law further provides for inspection of the premises occupied by the tuberculous, and the instruction of the family in preventive measures, and the disinfection of premises vacated by the affected, which must not be reoccupied until orders of the Health Department are complied with.

Preventive measures against infectious diseases self-limited, of brief duration, meet common approval, and are enforced with little inconvenience or difficulty. Tuberculosis, on the contrary, affects the individual for a number of years. During this period, instead of being confined to bed by the severity of his illness, the consumptive is little incapacitated for movement: he engages in the ordinary occupations and diversions of life, and frequents stores, factories, public halls and conveyances. During all this time he is hypothetically an ambulant source of infection. If these patients be put on the infectious list by compulsory registration, the first step is to instruct them in the danger of infection from their expectoration, and direct the means by which they shall dispose of this source of infection. If there be no further procedure it would seem as if registration were but a means of obtaining statistics as to the location, age and occupation of the tuberculous not worth the consequential interference in private affairs: for it is evident that the carrying out of the preventive measures must be left to the care and conscience of the individual: any practical degree of surveillance of the careless and indifferent while at large, by the authorities, being of course impossible.

To be more than of instructive benefit there must be, for the careless or incapable, penalties, or means of enforcement of the preventive measures. Segregation offers itself as the only reliable protection. The state must then provide places where these people may be separated from the community with favorable conditions for recovery. Needless to say these places do not yet exist.

The next step in preventive measures against tuberculosis easily suggests itself as a sequence to segregation. If it were well to isolate the tuberculous already in the community, it were better still to prohibit the entrance of more from the outside. So we have quarantine as the legitimate outcome of compulsory registration. The California Board of Health, with characteristic western disregard for precedent, jumped the intervening steps and landed at the top.

While I share in the general recognition of the value of instruction of the people in the danger of the dissemination of tuberculosis by the sputum of the consumptive, and in the method of disposal or disinfection by which this danger may be minimized, I believe that in spite of the agitation for state preventive measures there exists in the mass of the medical profession a strong, if quiet, opposition to any radical steps in state interfer-

ence with the tuberculous, and that it is based on: 1. An underlying belief that there is a variance between the infectiousness of tuberculosis, predicated on scientific experiment and deduction and the actual everyday facts of common observation. 2. On the instinctive recoil of reason and humanity at the difficulties and hardships of the progressive measures which are the logical sequences of the first step. 3. On the evidence we have that tuberculosis in man is to be decreased by increasing vital resistance, discouraging tuberculous marriages, and improving general and individual sanitary environment and living.

70 State Street.

DISCUSSION.

DR. E. FLETCHER INGALS, Chicago.—The control of tuberculosis is one of the most important problems that confront the science of medicine at this time, and this very fact has led to a vast amount of visionary talk by some members of the profession, and to some vicious legislation, in an attempt to accomplish something toward the diminution of tuberculosis. This problem, in its effects on the human mind, excites action similar to that called forth by the financial problem, which is always paramount with the majority of mankind.

A considerable percentage of men will at once accept the most visionary schemes if they promise speedy riches, and a much larger percentage will place implicit confidence in other schemes, right in part, but lacking in one or more of the essential elements of success; so some physicians and laymen adopt, with more or less enthusiasm, absurd, or more or less visionary propositions for stamping out tuberculosis, while they ignore some of the essential facts that must be considered if anything of value is to be accomplished.

Pulmonary tuberculosis is in many respects analogous to croupous pneumonia: both are very frequent and both are frightfully fatal; both are recognized as of microbial origin, and consequently both are considered by some to be contagious; however, it is only in very rare instances that we can find any evidence of contagion in pneumonia, and it is in a very small percentage of cases only that we are able to find anything like proof of tuberculosis having been contracted by one person from association with another suffering from the disease. The diplococcus pneumoniae is thought to be present in all or nearly all cases of croupous pneumonia and the Koch bacillus may be found in practically all cases of pulmonary tuberculosis; but the diplococcus pneumoniae is also present in the secretions of the mouth in a large percentage of healthy people, and the tubercle bacillus is also present in some of the tissues of the body in a very large percentage of perfectly healthy subjects, facts which prove beyond doubt that there are other elements entering into the etiology of these diseases. These two diseases present so many points of similarity that we can no more hope to stamp out one of them than the other. A well-known pathologist said to me recently, that before we were able to stamp out pulmonary tuberculosis the human family would, in the natural course of events, have become immune to the influence of the Koch bacillus.

We must do all in our power to control both of these fatal maladies, but we can not accomplish much by attacking any one of their several etiologic factors. We should work for that which is possible, and not waste our time crying out and striving for what is far beyond our reach. Before making up our minds what should be done toward requiring physicians and friends to report all tuberculous cases to the Board of Health, we should carefully consider some facts that are often ignored.

Although it is recognized that the tubercle of Koch bacillus is the essential cause of tuberculosis, yet no one has thus far been able to determine why certain individuals are attacked by the disease and why others escape. The knowledge that these bacteria cause tuberculosis under certain conditions, has led many to believe that nearly all persons affected by the disease are infected through some other individual. All told, a considerable number of cases have been reported that can be fairly charged to contagion, but as against this there are hundreds of thousands in which there is not the slightest evidence to justi-

fy such a conclusion. Out of about 1600 of my carefully kept records of private patients suffering from pulmonary tuberculosis, I have taken at random 100 records which may be supposed to give a fairly good idea of how the rest would run. Of these 100, only 1 or 2 per cent. show any evidence of contagion. There were just two cases of this sort, in one of which there was no evidence of heredity, but a history of having been associated with a friend who had phthisis. In the other, a widow free from hereditary taint developed tuberculosis 2½ years after the death of her husband from consumption. These may both have been contagious, but either or both may have resulted from some of the other causes of the disease and the association may have been merely a coincidence. In 27 per cent. of these cases, however, it is found that some other member of the family had had tuberculosis. Some of these may have resulted from contagion, however, in many instances of this kind, as, for example, when the person had grown and left home the patient may never have been at all intimately associated with the other member of the family who had tuberculosis, and there is certainly no proof when we consider the influence of heredity. A summary of these cases shows that in 1 instance the father only had died of pulmonary tuberculosis; in 12 the mother only; in 2, both father and mother; in 5, a brother only; in 5, a sister only; in 1, a son only, and in 1, a daughter only had died of pulmonary tuberculosis. All of these may have been the result of inheritance, and certainly they could not be taken as even circumstantial evidence of contagion. That only one should have inherited or acquired pulmonary tuberculosis from the father, but that twelve did from the mother affords an opportunity for interesting speculation. Was it because the young child was so much more with the mother than with the father? The answer would have to allow for the fact that after a father had become seriously sick with consumption he would be quite as likely to be with the children as the mother. Was it because the mother's milk contained the bacilli or because her depraved condition prevented the furnishing of adequate nutrition to the nursing infant? As these were all patients from 20 to 36 years of age, neither of these suggestions would seem to account for the condition. In studying this subject we must take into consideration the very great prevalence of tuberculosis, a fact which of itself would explain the occurrence of the disease in a considerable percentage of the patients in whom it has been attributed to contagion. I believe that by the most liberal estimate less than 2 per cent. of all cases of the disease result from contagion by association with another person having consumption.

Surgeons claim that 80 per cent. of the human family have tuberculosis in some form. Vital statistics show that 12 per cent. of the human family die of pulmonary tuberculosis, and the records from the dead-house show that 25 per cent. of those dying from other than pulmonary diseases have previously had and recovered from pulmonary tuberculosis, which has left distinct scars, therefore, there must be at least 37 per cent. of the human family who at one time or another suffer from pulmonary tuberculosis, and it is probable that the percentage is much larger. Tubercle bacilli have been demonstrated in the bronchial glands in about 40 per cent. of a series of cases of persons dying from acute injury who had never presented any evidence whatever of pulmonary tuberculosis. If this 40 per cent. be added to the 37 per cent. already found we find that 77 per cent. of the human family, at one time or another, harbor the tubercle bacillus either in the lungs or the bronchial glands. If careful examinations were made of all the mesenteric glands and other tissues of the body, it is probable that these bacilli would be found in nearly all; even from the evidence we now have it appears that practically every member of the human family, at least in civilized countries, harbors the tubercle bacillus in some part of his body at some time. Personally I doubt very much whether there is a person in this room who is not at this moment carrying about a greater or less number of tubercle bacilli.

For the sake of the argument let us admit that not more than 75 or 80 per cent. of the human family ever suffer from tuberculosis. An important thing to be considered in our efforts to prevent tuberculosis is that it also affects many of

the lower animals, as cows, chickens, birds, monkeys, fish, etc., and also plants. The facts just presented indicate some of the difficulties which will be met in the outset of this undertaking. Notwithstanding the very great prevalence of the disease, as I have already shown, only a very small number can reasonably be supposed to have contracted it from other persons. It is commonly believed, though we must admit upon very insufficient evidence, that tuberculosis is nearly always caused by the inhalation of bacilli which have been taken up in the air from dry sputum; yet it is a well-known fact that these germs are usually destroyed by a short exposure to the air and sunshine. I am inclined to the popular belief, but we must admit that no one knows the origin of the bacillus. Pathologists have recently shown that these bacilli are often branching like the ray fungus of actinomycosis, and that their passage through cold-blooded animals produces bacteria morphologically very different from the Koch bacillus. Miller has succeeded in obtaining bacilli from grasses that are morphologically identical with the bacillus of tuberculosis. Much valuable information concerning the branching forms of the tubercle bacillus will be found in an article by Friedrich and Nöske (*Beiträge zur Pathologischen Anatomie und zur allgemeinen Pathologie*, Jena, 1899), and in the articles by Schulze and Mubarsch; the two latter will be found in *Zeitschrift für Hygiene und Infektionskrankheiten*. Among others who have worked with these actinomycelial forms of the bacilli are Coppen Jones, E. Klein, Babes, Dixon and H. Bruns. Lydia Rubenovitch has succeeded in obtaining the bacilli from butter, and the experiments of Strauss with cooked meat show that the bacilli may retain their virulence for a long time under most adverse circumstances and be introduced with the food.

When the state labels a person as a consumptive it places on him a brand like that of Cain, which can never be effaced. I have seen many patients who believed they had consumption, who insisted on not being told of it even though they came to me for a diagnosis. In the majority of cases that I see the friends request me not to let the patient know that he has consumption, believing as they do that it would work great injury to the sufferer. From my experience it is my impression that at least 75 per cent. of those having this disease do not wish to be told of it even by their physician, and it is my uniform practice not to tell a patient that he has it unless he requests the information, while it is comparatively rarely that one of these unfortunates asks me what is really the matter.

I am confident that a law requiring physicians to report to the state all cases of tuberculosis that come under their observation would cause patients and friends, from fear of being reported, in a large percentage of cases to avoid the physician as long as possible, thereby losing the most important, and in many cases the only, chance for successful treatment. Bringing the matter directly home, I would ask how many of you physicians would report to the state a case of consumption in your own household. I have no doubt that some would do so from conscientious motives, but I am quite as confident that the majority of physicians would feel that their duty to the patient required them to protect him from this stigma. Two results of such a law would be that many patients would not consult the physician until it was too late and that the majority of physicians would consider themselves in duty bound to protect their patients rather than to turn them over to the tender care of the state.

The branding of consumptives could not fail to be detrimental in many cases. To many a person the mere knowledge that he had consumption would be like a warrant dooming him to slow death, and of the 60 or 70 per cent. of those having pulmonary tuberculosis who now recover, many would die from the depression caused by the mortification, disgrace or despair of being thus pointed out. So true is this that I firmly believe that in many cases it would be much more humane for the state to give such persons an overdose of morphin or chloroform.

Our duty as physicians is not only to heal the sick but to comfort them and their friends, and I can hardly conceive of a more cruel thing, in some instances, than it would be to inform on them to the public officers, especially as there is

little reason to think that these officers could do any good to the patient or in protecting others. As not only friends but physicians would probably conceal the majority of tubercular patients as long as possible, if we had such a law, it could not be thoroughly enforced and it would be worse than useless. It will be urged that the good of the many must be considered, as in the case of diphtheria, scarlet fever and other markedly contagious diseases, but when we recollect that 80 per cent. of the human family have tuberculosis, the impracticability of such a law seems self-evident, and it appears clear that it would be much better to banish the 20 per cent. who can not be proved to have the disease, in order that they may be removed from its dangers. They certainly would be better able than consumptives to fight the battles of life alone. Even if the application of the law were confined to the 12 or 20 per cent. of the consumptives who can not be recognized even by the laity, we would have to reckon with very many hostile to the law because each of these consumptives has friends who would not tolerate his banishment. There are not a few who would object even to killing off cows and other domestic animals that might possibly be harboring the bacilli. With the tuberculin test tuberculosis in the lower animals can be readily detected, in most cases at an early stage, but it is not infallible; therefore, in order to be sure that we are getting rid of all of those infected it would be necessary to destroy a great number that were simply suspected, although a positive reaction may be accepted as practically a sure sign that the disease is present somewhere in the animal. If we could destroy all suspected animals and the 80 per cent. of the human family who have tuberculosis, it is a question whether the 20 per cent. that were left would be free from infection. As I have already stated, no one can tell whence the tubercle bacillus comes, and no one can be certain that he is not already tuberculous or that he is not at least harboring this omnipresent microbe. It does not appear to me practicable to quarantine or sequester those suffering from consumption.

From what I have said many may think me pessimistic and hopeless about the management of these unfortunate cases. This is not the case, but I have no sympathy with the extravagant views entertained by those who believe that the prevention of tuberculosis is to be carried out on the same lines as that of yellow fever, and who believe that if this be done the disease would be stamped out within a few years. Although libeling and quarantining tuberculous patients can not be satisfactorily carried out, and although it would be of doubtful utility if it could, I think there is much that may be done to check the spread of the disease, or to cure it in individual cases, in its early stages. Although we do not know where the tubercle bacilli come from, it is believed by most physicians that most patients acquire tuberculosis through the atmosphere from the dried sputum of tuberculous human beings, the only animals so far as I know that have the disgusting habit of spitting; therefore, everything practicable should be done to prevent expectoration on the streets or in other places where the sputum may become dried. This should apply not only to those who are recognized as tuberculous but by every one else, for it is probable that the majority of persons suffering from consumption recover before the disease is detected.

Friends and physicians should do all in their power to dissuade consumptives from marrying.

Children predisposed to consumption should be carefully watched to prevent deterioration in the general health and they should as far as possible be placed in good environment.

The most important thing in the prevention of consumption is attention to the general health, especially of children and young people, so that in case the bacilli find entrance into the system the local power of resistance may be sufficient to prevent harm. The person affected with consumption should, if possible, be immediately removed from a damp or otherwise deleterious atmosphere; the pale, feeble child should be kept in the open air as much as practicable and his diet should be carefully watched to secure proper nutrition. Such persons should be carefully clothed, sleep in well-ventilated rooms, and should not be overworked. The young man or young woman predisposed to consumption, if in school, should be carefully

guarded to prevent excessive application to books and undue confinement. They should be induced to take an abundance of vigorous exercise, and they must be supplied with good food; if away from home they should be especially cautioned to shun poor boarding-houses.

Those having the responsibility for the young should attend at once to the first evidences of impaired nutrition or strength, and should not wait for the development of cough or other suspicious symptoms before they adopt proper methods for the prevention of disease. With the first evidences of the approach of tuberculosis, such as pallor, weakness, malaise, acceleration of the pulse and daily rise in temperature, symptoms often attributed to malaria, the best methods for detecting the disease should be at once adopted, and the measures most calculated to abort or cure the individual case should be instituted at once. Physicians and enlightened laymen should join forces in disseminating among the people a knowledge of the predisposing causes of this disease and of the methods best calculated to prevent or abort it.

In conclusion I would ask, should we have laws requiring all physicians to notify the state authorities whenever they find a patient suffering from consumption? To this I would answer emphatically, No! not only because of the injustice and inhumanity of such a law, but because it could not be enforced.

Shall consumptives be proscribed, sequestered or quarantined? To this I would also answer, No! because at best only a limited number of those so affected could be thus treated, because of the deleterious effects on the patients themselves, because these patients are sick and need sympathy and care rather than banishment, and because it would be cheaper and more humane to banish those who have never been infected by the tubercle bacillus.

DR. H. N. MOYER.—In discussing the subject of the control of tuberculosis, there has been not a little narrow reasoning based on the idea that it was only necessary to catch and kill the germ of tuberculosis in order to stamp out the disease. This conception of the public health duties is reflected in the laws which it is urged should be adopted in the prevention of this malady. They include quarantine, notification, and other equally drastic measures. The essayist, and Dr. Ingals, in the discussion, both point out that such laws are foredoomed to failure. It is not practicable to try to stamp out the disease in this way. All that such laws can possibly do is to educate the people to the view that tuberculosis is to a moderate extent contagious, and that care should be exercised in the disposal of the sputum of these individuals, and that such a patient may be dangerous to those about him. The failure of attempting to stamp out tuberculosis by quarantine and segregation is shown by the efforts which have been made in Hawaii for the past twenty-five years, to banish leprosy. During all this period the Sandwich Islands have tried to enforce a law compelling lepers to live upon an island separate from their friends. Every effort is made to detect cases of leprosy, and, as soon as found, they are sent to the island. Most of those who have studied leprosy on the islands agree that all of these efforts have failed—that leprosy is now quite as common as it ever has been. This is due to the fact that people have no fear of the leprosy; that cases are concealed as long as possible, and that in this class of infections quarantine is of but little value. In diseases in which duration is short and the period of danger of infecting others is comparatively brief, then segregation may be useful. Such is not the case with tuberculosis. The histories of leprosy and tuberculosis are quite parallel.

Control of tuberculosis is to be effected by general hygienic methods which look to improvement of dwellings and food of consumptive patients. Much is to be hoped from the establishment of sanatoria, to which cases may be sent in their incipient stage. It is just as important that hospitals should be located for the care of this trouble as that we have hospitals for the care of those attacked by the acute infections. An individual should not be compelled to work in confined and ill-ventilated quarters until his lungs are so diseased that he can no longer follow his employment. He should be given a chance early in the history of the disease. This, however, should not

be compulsory. Medical men should not be compelled to inform on their patients, but the state should co-operate with them in securing early treatment for tuberculosis.

Legislation must always be behind and not in advance of public opinion. Public health laws which seriously interfere with personal liberty can only be enforced when an active public sentiment is behind them.

DR. A. R. KLEBS—I quite agree with Dr. Moyer that we must have public sanatoria, but how many? In Chicago alone we would require 20,000 beds. It is not possible to seclude all these patients—to take them away from their families, or the workshops or from the schools, but we must look to reducing this danger as much as possible. We must have physicians appointed to inspect schools; if a school inspector finds a child that expectorates an enormous quantity of tubercle bacilli each day, that child must be excluded from the school. The dissemination of tuberculosis in the workshop is another source; there should be an inspection of these people. If they can not be excluded, there must be means furnished by which the expectoration may be sterilized or destroyed. In tuberculosis, the state has very great duties to perform, and it is a matter for careful consideration; radical measures, however, should not be resorted to.

DR. A. R. REYNOLDS—I have never been able to make myself believe that good could be accomplished by insisting on exclusion of tuberculosis. I am of opinion that we already have law enough in the state to insist on tuberculosis being a notifiable disease, but I believe, with the essayist, that it would be a difficult matter to segregate patients. If a patient knows how to take care of himself, he need not be excluded. It is along this line that the laws must be shaped; the state can only help in disseminating this information. I think the public is well informed on these matters at the present time, considering that it is only a few years since the discovery was made; and understand that this is an infectious disease and are eager for information regarding protection against it.

I do not quite agree with Dr. Ingals in his assumption that patients do not wish to be told of their ailment, especially when I consider that 70 per cent. of his patients are consumptives. Although I have no reason to doubt his word, I can scarcely conceive that so large a percentage would shrink from a knowledge of their trouble. It is for this reason that they consult physicians, and if it were not for the skill that physicians have in diagnosing disease, the calling would not be so much sought as it is. In the treatment of consumption they are not altogether successful. This subject can not be discussed too often nor published too widely.

DR. JOS. MATTHEW—I did not suppose that this was the popular side of this subject at the present time, judging from the extended discussion it is receiving and the number who seem to be in favor of excluding tuberculous patients. I have been gratified by the substantial concurrence of opinion expressed by the gentlemen who have discussed the paper this evening.

TRAUMATIC PERFORATIONS OF THE MEMBRANA TYMPANI.*

BY FRANCIS R. PACKARD, M.D.

Aurist to the Out-Patient Department of the Pennsylvania Hospital; Instructor in Laryngology in the University of Pennsylvania; Dean of the Philadelphia Polyclinic, Etc.
PHILADELPHIA.

In 1500 consecutive cases taken from the out-patient record books of the Pennsylvania Hospital there were eleven in which the membrana tympani was ruptured by traumatism. The cases were as follows:

CASE 1.—An Irishman, aged 46 years, a longshoreman, was struck on the head by a hammer weighing 3 pounds, which had fallen forty feet. He sustained a severe lacerated wound of the scalp and was rendered unconscious for some minutes. On recovering consciousness, he was deaf in the left ear and suffered from much roaring noise in it. The left auditory canal con-

tained considerable blood. There was a large laceration in the anterior lower segment of the left membrana tympani. At the end of three weeks' treatment his hearing was normal and he had no tinnitus.

CASE 2.—A longshoreman, five days previous to presenting himself at the dispensary, had fallen thirty feet, sustaining severe contusions of the head and shoulders. Ever since the accident there had been considerable bloody discharge from his left auditory meatus, and he had had much tinnitus in that ear and been totally deaf in it. Examination showed that while sound conduction through the external auditory canal was lost, bone conduction remained normal. There was a large perforation in the central portion of the left membrana tympani. This case pursued a very tedious course. Three months after the patient's first visit the discharge had ceased, but hearing was impaired and there was considerable tinnitus.

CASE 3.—A telegraph operator, aged 39 years, who one week before coming to the dispensary was poking in his left ear with a penholder, suddenly felt something give way and suffered a sharp pain and heard a roaring noise in his left ear, which at once became deaf. Next morning there was much bloody discharge. Examination showed his left external auditory canal full of bloody pus, and after careful cleaning a large ragged perforation was found in the lower posterior portion of the left membrana tympani. The handle of the malleus was fractured, the two fragments being bent on one another at an angle of 45 degrees. This man recovered perfectly in six weeks, the discharge ceasing, tinnitus disappearing and his hearing becoming as sharp as ever. His right membrana tympani was perfectly normal.

CASE 4.—An Italian musician, three weeks before presenting himself at the dispensary, had been struck by a very high sea-wave, while bathing in the surf. It knocked him down and when he arose and got out of the water, he found he was deaf in his left ear, and had much roaring and pain in it. The next day a bloody discharge made its appearance at the left external auditory meatus. Examination revealed a small amount of purulent discharge in the external auditory canal, and a linear, vertical perforation in the lower posterior segment of the membrana tympani. He remained under treatment for some weeks, and when last seen his discharge had stopped, but his hearing remained somewhat impaired, and he still had a slight amount of tinnitus.

CASE 5.—An Italian artist, who had received a blow on the left ear two days before coming to the dispensary, presented himself, complaining of deafness and roaring in the left ear. Examination revealed a considerable bloody muco-purulent discharge in the left external auditory meatus. On removing it, a large tear was visible across the center of the left membrana tympani. This man's discharge ceased in a few weeks, and his hearing was restored and the tinnitus checked.

CASE 6.—A married woman, aged 36 years, presented herself at the dispensary with a history of having received a blow on the left ear one week before. Since then she had been deaf in the left ear, and had had much tinnitus in it, and considerable bloody discharge. The left membrana tympani showed a large perforation, the definite location of which was not obtained at the first examination, and subsequently, through neglect, no note was made of it. This woman pursued a good course to complete restoration of function and cessation of symptoms.

CASE 7.—A laborer presented himself complaining of

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pain, deafness and tinnitus in the left ear, from which there was considerable bloody discharge. He said that three days before, while working in a caisson these symptoms had suddenly presented themselves. Being a very unintelligent man, no more definite history could be obtained. There was a large perforation in the center of the membrana tympani. He recovered perfectly in a few weeks, except that when last seen he complained that he still had a sensation of fulness in his left ear.

CASE 8.—A Russian carpenter had been struck on the head eight days before coming to the hospital. No history was obtained as to how or with what he had been struck. He complained of pain and deafness. The right external auditory meatus was full of bloody pus, and there was a large ragged perforation in the right membrana tympani, the exact location of which, however, was not noted. The man did well and was discharged as cured in a few weeks.

CASE 9.—An Italian laborer was struck on the left side of his head with the handle of a pitchfork, one week before coming to the hospital. From that time he complained of pain, deafness and roaring in his left ear. There was a small amount of bloody discharge and a round perforation just posterior to the central portion of the left membrana tympani. Within ten days the discharge had ceased and function was restored.

CASE 10.—An errand boy, sent to the out-patient department from the wards of the hospital, had one week before fallen down an elevator shaft and sustained many lacerated and contused wounds of the scalp. From this time he had pain in the left ear and some deafness and tinnitus. Some bloody purulent discharge was removed from his left external auditory meatus; after this a perforation in the anterior lower segment of the left membrana tympani became visible. Within ten days the discharge and other symptoms had ceased.

CASE 11.—A laborer came to the out-patient department with a history that a heavy bag of corn had dropped on his head four days previously. Since that time his right ear had been the seat of continuous roaring noises, much pain, and considerable discharge. He suffered much from vertigo. After cleansing a considerable quantity of dried blood from the right external auditory canal, a large ragged perforation was revealed in the anterior lower segment of the right membrana tympani. His left membrana tympani was very opaque and considerably retracted. After treatment for about six weeks he was discharged cured, with complete restoration of function.

As to the relative frequency of such lesions compared with other pathologic conditions of the ear, it will be readily seen, by reference to the figures I furnish, and to those given in many statistical articles on the subject, that their number is not very great; this in spite of the fact that the injury is such as to produce symptoms which stand in such immediate relation as to cause and effect, and possess such an alarming significance in the patient's mind as to prompt his early recourse to a physician for relief.

Randall,¹ in a tabulation of 5412 cases of ear disease, found but five traumatic perforations of the ear drum.

Treitel² in 831 cases occurring in thirteen months in Professor Gottslein's clinic, found 18 of traumatic perforation.

Politzer³ says that traumatic lesions of the drum may be produced: 1. by direct penetration of a foreign body into the membrana tympani; 2. by the extension of a fracture of the cranial bones to the membrane; 3. by a sudden condensation of air in the external meatus or in

the tympanic cavity, more rarely by a rapid rarefaction of the external air. He gives the statistics compiled by Brigade Surgeon Chimani, from 5041 cases of ear trouble. Of these 54 were cases of traumatic perforation of the drum. They were caused in 38 cases by falls on the head, in 3 cases by a kick from a horse on the head, in 2 cases by strokes upon the head with wooden clubs, in 2 cases by the playing of brass instruments (signal trumpet and helicon), in 2 cases by the report of a loaded gun in the immediate neighborhood of the ear, and in 1 case by a fall into the water from a considerable height."

G. P. Field⁴ analyzed 400 perforations of the membrana tympani and found that eighty of them could be attributed to traumatism. In a number of instances the perforations were double, so that the number of cases does not correspond to the number of perforations.

As to the causes producing these traumatic perforations, he found them to be: Falls on the head, 11 perforations; other injuries to head, 30; boxing ears, 8; from other blows on head, 16; penholder in ear, 1; hair-pin in ear, 1; foreign bodies in ear, 4; kick of a horse, 1; blows from cricket balls, 2; injury from football, 1; fall of flower pot on head, 1; violent sneezing, 2; pouring turpentine in ears, 2; pouring urine in ear, 1; syringing by a doctor, 1; scald of ear, 1; silver nitrate used by patient in ear, 1.

The causes of the traumatic perforations in the cases I report were as follows: Struck by weight falling from a height, 2; fall upon head, 2; the result of introducing a foreign body, 1; struck by wave while bathing, 1; blow on ear—fist—2; working in caisson, 1; struck with weapon, 1; blow on head, but from what not ascertainable, 1.

But one of the cases which I report was the result of direct penetration of the membrana tympani by the introduction of a foreign body. This was Case 2 who penetrated his drum with a penholder with which he was scratching his ear.

Sajous⁵ reports two cases from Turnbull's clinic, in which the perforation resulted from this cause. In one there was a fracture of the malleus similar to the one seen in mine, and appended to the article are references to cases of the same nature accompanied by a like fracture reported by Meniere,⁶ Politzer,⁷ R. F. Weir,⁸ and Hinton,⁹ with mention of a short notice of such a case with specimen in Toyne's collection, now in the Hunterian Museum of the College of Surgeons of London.

Gorham Bacon¹⁰ reports a case of perforation of the membrana tympani by the twig of a tree, which occurred in a man who was walking through some woods. He also¹¹ reports two other cases, one due to puncture with a piece of stick, the other occurred whilst scratching the ear with a pin.

A. H. Nott¹² reports the case of a man whose left membrana tympani was ruptured by the penetration through it of an umbrella rib. The injury resulted in the entire loss of the sense of taste on the left side of his tongue.

A most interesting case from a medicolegal point of view is reported by A. S. Barling.¹³ A man, while in a brawl, was stabbed in the right ear with a knife. The knife blade was so very thin that it caused no external wound, but produced an incised one of the membrana tympani, one-fifth of an inch long, just posterior to the handle of the malleus; this wound was only found after careful examination. There was considerable hemorrhage. At first a defense was made that no stabbing

had been done, although the victim insisted that his assailant had a knife in his hand. Finally, after some interval of time, the knife was found near the scene of the assault, where it had been thrown away by the aggressor as soon as he had done the stabbing.

Urbautschitsch¹⁴ reports a case in which a man attempted suicide by shooting himself in the right temple. The bullet could be detected through the external auditory meatus in the tympanic cavity. It was extracted by chiseling away the surrounding bony structures.

A. M. Shield¹⁵ saw an interesting case in which molten lead had been splashed over the side of the patient's head and some had run into his right external auditory meatus, almost entirely filling his tympanic cavity, some even entering the Eustachian tube. The lead was removed by filling the ear with liquid mercury and allowing it to remain in the ear for sixteen hours, when the softened mass was easily syringed out.

Among other interesting cases of penetration of the membrana tympani by foreign bodies introduced through the external auditory canal may be mentioned those reported by Mandelstamm,¹⁶ Treitel,¹⁷ F. L. Jack,¹⁸ Barr,¹⁹ Tangeman,²⁰ Braislen,²¹ L. S. Somers²² and A. H. R. Stewart.²³

Oftentimes the drum is perforated during clumsy efforts at extraction, as in one of Bacon's cases, and not by the unaided impact of the foreign body.

Cases of rupture of the membrana tympani due to syringing the ear are not rare. Such cases are reported by S. Latimer Phillips²⁴ and Sexton.²⁵

In all the above-mentioned the foreign body causing the perforation was introduced through the external auditory canal. Cases have been reported, however, in which the membrana tympani was perforated by a foreign body entering the tympanum through the Eustachian tube. P. Hoover²⁶ reports such a case in a child 2 years old, who swallowed a pin, which subsequently emerged point first, through the membrana tympani. The child had been given an emetic, and it was probably forced into the Eustachian tube by the effort of vomiting. L. W. Reynolds²⁷ reports a curious case occurring in a woman who was suffering from the vomiting of pregnancy, and in her expulsive efforts ejected a number of round worms from her mouth, nostrils and both ears. The drums were torn and free bleeding from both external auditory meati occurred.

None of the cases in the series I report were due to extension of a fracture of the cranial bones. Cases of this nature are reported by J. M. Ray,²⁸ Gorham Bacon,²⁹ Cornelius Williams,³⁰ J. D. Rushmore,³¹ Scheibe,³² A. Alt³³ and R. Barclay.³⁴

In the 11 cases which I report there were 4 patients with perforation of the membrana tympani due to the sudden condensation or rarefaction of air in the external auditory meatus, beyond a doubt. Three more could be with probability assigned to this cause. One of the latter had been struck on the side of the head by a bag of corn falling some distance, another had been struck in a quarrel, most likely by his opponent's fist, the third had received a blow directly over the ear from the blunt handle of a pitchfork. Of the 4 undoubted cases, 1 was the result of the impact of water, 1 resulted from working in a caisson, and 2 were the results of blows with the fist.

Probably the latter is the commonest cause of perforation due to sudden condensation of air in the external auditory meatus. In the cases which result from it the lesion is usually unilateral and found in the left membrana tympani, because the person who strikes does so

with his right hand as a rule. In former days, when boxing the ears was a popular manner of administering reproof in school, the number of cases of perforation resulting from this form of punishment is said to have been very large. One recalls the method of punishing school boys by boxing both sides of the head simultaneously with two books, referred to by Thackeray in his *Roundabout Paper* entitled "De Juvenile." In Chimani's 38 cases of rupture of the ear drum due to blows with the fist, 36 were in the left ear, only two in the right.

Dalby³⁵ says that the injuries resulting from boxing ears are of three kinds: 1. The hearing may be immediately damaged without injury to the membrana tympani, the loss of hearing being due to injury of nervous structures. 2. The membrana tympani may be ruptured, the perforations usually assuming the form of a vertical slit which, if left alone, heals in a few days, though occasionally suppuration is seen. 3. Without rupturing the membrana tympani an acute otitis media may occur, with possible ultimate perforation of the membrana tympani and loss of hearing.

Cases resulting from blows with the fist upon the ear are reported by C. R. Agnew,³⁶ Dills,³⁷ Core,³⁸ Gorham Bacon,³⁹ Treitel,⁴⁰ H. Richards,⁴¹ W. H. R. Stewart,⁴² A. A. Hubbell,⁴³ Fetterhoff,⁴⁴ Braislin⁴⁵ and R. Barclay.⁴⁶ C. R. Agnew and D. Webster⁴⁷ and A. H. Cheate⁴⁸ report cases of double perforation of the membrana tympani resulting from blows with the fist.

Cases of rupture of the tympanic membrane from the condensation of air produced by discharge of artillery or the explosion of powder are reported by Sexton,⁴⁹ Bates,⁵⁰ and C. C. Colles.⁵¹ C. H. Alden⁵² reports a case of repeated ruptures of the membrana tympani occurring in an artilleryman, finally resulting in total deafness, requiring his discharge from the service. Moos⁵³ reports one of a chemist who was working with some chlorophthalic ether which exploded. Both of his membranae tympani were ruptured as a consequence, and he developed a suppurative otitis media.

Cases of traumatic perforations of the membrana tympani as the result of working in caissons or diving bells have been reported by Moos,⁵⁴ Sexton,⁵⁵ G. E. Bellows.⁵⁶

Two interesting cases of loss of hearing due to condensation of air in the external auditory canal, by the impact of water in diving, are reported by H. Augustus Wilson.⁵⁷

Of air pressure on the inner surface of the membrana tympani causing rupture, I have gathered three cases: A. G. Welsford⁵⁸ reports a man who suffered from chronic bronchitis, and during a violent coughing spell ruptured both ear drums. S. L. Phillips⁵⁹ patient with perforation due to syringing the ear, subsequently sustained another rupture of the same drum while blowing his nose. C. R. Agnew⁶⁰ reports the case of a man who ruptured his left membrana tympani while blowing his nose. Agnew thinks there was undoubtedly pre-existing disease of the membrana tympani, but the man positively denied ever having noticed any previous trouble with his ear. E. D. Clark⁶¹ reports one in which a man was struck by lightning, sustaining burns of the left side of the head, the neck and breast. Some days after the accident the ear began discharging pus, and an examination revealed a perforation in the left membrana tympani. The auricle had not been injured in any way. The difficulty in this case lies in deciding whether concussion caused the perforation, or whether it was due to a burn produced by the lightning. The perforation

healed, but the man remained deaf and suffered much from tinnitus. Ludewig⁶² reports a case in which the drum membrane was undoubtedly ruptured by the shock of the lightning bolt.

The location of the perforation in the drum membrane varies with the cause producing it. In those cases due to penetration by a foreign body, Politzer states that it is more frequently in the posterior than in the anterior portion of the drum; when due to extension of a fracture of the cranial bones, the perforation extends fissure-like from the superior or anterior wall of the meatus, and, if resulting from sudden condensation of air in the external auditory meatus, it presents itself as a gaping orifice, more frequently in the posterior portion of the membrane. Treitel⁶³ carefully studied eighteen cases of traumatic perforation, in 11 of which the perforation was in the inferior half; of these, 8 were in the anterior inferior portion, and 3 in the posterior inferior portion, from which he concludes that the inferior and anterior portions constitutes the elected region. This statement agrees with Schwartze, but differs from Hasenstein, who considers a traumatic perforation in front of the malleus as very rare. Treitel makes the statement, which is now acceded to by most authorities, that rupture of the drum from sudden condensation of air can occur in the perfectly healthy drum and with a free Eustachian tube, but that it is more apt to occur in persons whose Eustachian tube is not perfectly patulous or who have ear drums which have been the site of previous pathologic changes. In Chimani's 38 cases of rupture due to boxes on the ear, 27 were in the posterior inferior quadrant, 9 in front of and below the malleus, 2 in the posterior superior portion of the membrane.

As to the ultimate termination of such injuries, if the perforation is uncomplicated with injury to the ossicles or labyrinth, the prognosis is good, the perforation usually healing. In Nott's case, which was followed by loss of taste on the injured side, there was evidently accompanying injury to the chorda tympani. All authorities agree that the best possible treatment is to leave the handling of the case to Nature as far as possible. In those I report a little clean, dry cotton was kept constantly in the external auditory meatus, and no attempt made to do anything beyond the gentlest possible cleansing in cases where there was much discharge. In Chimani's 38 cases of perforation due to boxing the ears, perfect recovery without functional disturbance occurred in 34; in 4 only complete cure was effected.

Cases of traumatic perforation of the drum present several points of medicolegal importance: 1, to determine that the rupture is due to traumatism; 2, to determine the amount of permanent functional or organic damage wrought by the injury, if it exists.

In the 1500 cases from the books of the out-patient department of the Pennsylvania Hospital, there were 3 in which it was claimed that the patient's ear condition resulted from an injury. One was a man who claimed to have fallen from a trolley car. He had chronic suppurative inflammation of the ear, which, he said, had only begun to suppurate since the accident. That this was chronic was proved by the fact that the ossicles were necrosed, and, moreover, there was evidence of old mastoid trouble, notwithstanding the fact that the injury was said to have been sustained only a few days before his visit to the hospital. The other two cases in which injury was claimed were both school children, whose ears were said to have been boxed, but in whom careful examination and questioning elicited history of previous suppuration. Politzer says that the most de-

finite evidence of the traumatic origin of a perforation is its rapid cicatrization. The only way in which the amount of functional disturbance can be determined is by repeated careful tests of the hearing power by the usual methods employed for that purpose. Much care must be taken in these tests to detect simulated deafness, as in many of these cases the examination is required to determine the claims for damages of the patient. It must always be remembered that the amount of disturbance of hearing bears but little proportion to the amount of destruction of drum tissue. Patients are frequently seen in aural clinics who have suffered complete destruction of the drum and yet retain their hearing to a remarkable extent. In cases of traumatic perforation which are accompanied by labyrinthine involvement the amount of labyrinth mischief will be the chief guide as to the functional disturbance which the patient's organ of hearing has sustained.

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MANY HAVE a history of specific disease in early life, with no symptoms after the first two or three years following the initial lesion, and then are returned in late life.—*A. Nevins Hyde.*

THE USE OF ADRENAL SUBSTANCE IN THE TREATMENT OF ASTHMA.

BY SOLOMON SOLIS-COHEN, M.D.

Professor of Medicine and Therapeutics in the Philadelphia Polyclinic;
Clinical-Lecturer on Medicine, Jefferson Medical College; Physician
to the Philadelphia and Rush Hospitals; Consulting Physician
to the Jewish Hospital, etc.
PHILADELPHIA.

The experience I have to submit in the use of adrenal substance in this particular connection, is of but little importance, except as a link in a chain of studies.

The synthesis of disease—i. e., the manner in which syndrome groups are built up, and the reason of their association—is beginning to attract the attention of students who recognize that pathology is something more than morbid anatomy or bacteriology.

That wonderful system of compensations found throughout all Nature, the balanced action of contending forces producing mobile or stable equilibrium, and the motion that takes place in the direction of an inferior force, are not merely problems of physics, but also of biology, and of that special branch of biology which deals with the disturbances we call disease. The disruption of a planet, the aberration of a comet from its calculated orbit, may differ in magnitude from the destruction of an animal cell or the aberrant action of the heart and vessels, but essentially the same forces are at work. Provocatives in such disturbances are often forces of the environment, but sometimes the disturbing elements arise within the animal organism itself. Often the nature, and nearly always the order—for in Nature there is always order in disorder—of succession of these disturbances depends on the inherent properties of the organism attacked rather than on the attacking agent—be this microbial, chemical, or less tangible than either.

Within the human economy, a constant struggle of opposing activities—or perhaps it would be more accurate to say tendencies to action—results in orderly growth, development and function. The agents of these activities or tendencies are cells and their products. Deficiency or excess may lead directly to disorder or render order so unstable that it is easily overthrown by slight addition to the forces acting in some special direction.

We have not yet learned to realize the large part that the activities of the blood-vessels may take in determining symptomatology and lesions. A and B may both be exposed to the same storm, and the same incidence of pneumococci, yet A may escape and B suffer with lobar pneumonia. Why? Possibly, even probably, because B's vascular tone is more readily overthrown than A's, because the branches of his bronchial arteries are through permanent or temporary relations of vasomotor control, more readily paralyzed, permitting congestion to occur, and favorable culture conditions for the cocci to be established. But the same instability of vascular tone which, under certain conditions, leads to the development of pneumonia may, in other degrees and under other conditions of internal metabolism and of incidence of external forces, lead to other morbid phenomena, perhaps to Graves' disease; or will modify the symptomatology of visceral diseases or infectious fevers; or will be manifest in certain so-called idiosyncrasies to drugs or articles of diet. Thus a varied and apparently unrelated semeiology may be correlated with some structural, functional, or metabolic condition peculiar to the individual or, more frequently, to classes of men; and these peculiarities may be acquired or congenital.

On the other hand, a certain symptom-complex, or symptoms-complex closely similar, may arise in differ-

ent individuals, not only from different causes but even by apparently opposed mechanisms. Thus we can distinguish between two varieties of hemicrania, the one due to vascular spasm—anemic migraine—the other to vascular paresis—congestive migraine; the syndrome accordingly being relieved by nitrites and aggravated by adrenalsubstance, if spasmodic; or aggravated by nitrites and relieved by adrenal substance, if parietic.

Similarly I look on asthma, not as a definite nosologic entity, but as a morbid condition symptomatic in its nature and associated with various and varying pathologic processes and physical states. Every form of dyspnea, however, can not properly be called asthmatic, even those forms that by common consent have come to be designated as cardiac asthma and renal asthma; and while the former is sometimes susceptible of relief through the action of adrenal substance on the heart and vessels, I shall not in this paper refer to such cases.

Without restricting the term asthma, as is the tendency of most modern authors, to the typical paroxysm of dyspnea, arising suddenly and terminating with equal suddenness, it is, nevertheless, distinctly a paroxysmal disorder, arising independently of gross lesions of the circulatory, respiratory or excretory systems; although it may be associated with any or all of these, and be the more readily provoked through such association.

The disputes over its pathology are probably due to one-sided studies of one or another variety. Basing my opinion purely on clinical studies, as the question could scarcely be decided post-mortem, I have no doubt that in certain cases of asthma the immediate mechanism of the paroxysm is bronchial spasm, not only muscular but also frequently vascular; though perhaps in many cases of vascular spasm the pulmonary rather than the bronchial vessels are affected. I have equally no doubt that in other cases the immediate mechanism of the paroxysm is dependent on irregular turgescence of the bronchial mucosa; and equally no doubt that in some cases turgescence of the bronchial mucosa is preceded, accompanied or succeeded by inflammatory or subinflammatory conditions, associated with exudation into the bronchioles. Again we find, as an underlying diathesis in some patients, gout or, if that term be preferred, lithemia; in others rheumatism. In some patients, but by no means all, nasal abnormalities exist. They may be causative or merely coincident; the most intractable case I have had was in a man from whom I removed a large nasal polyp and in whom, although the relief to nasal breathing was marked, the asthma persisted. In other cases abnormalities of the upper pharynx, of the lower pharynx, of the tongue, of the thyroid gland are found. In one case, referred to me by Dr. Weir Mitchell, there was tonic spasm of one vocal band apparently due to pressure by a hardened right apex upon the recurrent laryngeal nerve. In this case several nasal polypi had been removed by the late Dr. Harrison Allen without relief to the tendency to asthmatic paroxysms. Many patients subject to asthma are highly neurotic and some have hay-fever; the asthma occurring both in association with this latter syndrome and during times of freedom from nasal and ocular symptoms. In other cases there is associated with the tendency to paroxysmal dyspnea, a paroxysmal albuminuria; the latter occurring both during the period of respiratory distress and during the intervals of freedom, although in some instances they may seem to alternate.

In this outline I have not attempted to exhaust the list of associations, but merely to indicate the great variety of the conditions under which asthma may be manifested

as one of a group of symptoms, or even as the single prominent symptom of a general disorder.

Adrenal substance is not applicable to the treatment of all asthmatic patients or to all varieties of asthma. It is applicable in the treatment of some of those in whom this affection is associated with other manifestations of what I have elsewhere termed vasomotor ataxia,¹ of the relaxing variety. Under this head I include, among others, patients who are subject to urticaria or in whom factitious urticaria may be readily produced; those who are, vascularily, extremely sensitive to slight changes in weather and climate, or who exhibit peculiar idiosyncrasies in this respect, as in their reaction to drugs; those whose cardiovascular balance is easily disturbed by emotion or by digestive disorder or other slight intoxication; some hay-fever subjects; persons subject to congestive hemicrania; and those who show signs of renal leakage, either by intermittent albuminuria, or by the occasional presence of red blood-cells in the urine, without decided hematuria and without the persistent presence of tube casts; in whom, therefore, we are dealing with what may be termed functional rather than organic renal lesion. By the apparent paradox of "functional lesion," I do not mean to imply the absence of structural change—on the contrary, to indicate that there is a distinct structural—or perhaps it would be better to say "compositional"—abnormality, not sufficiently gross to be detected by our present methods of research. But this abnormality in the great class of patients herewith included is congenital and is thus, as it were, normal to the individual.

Whether it be metabolic or of other nature in ultimate analysis is a subject too recondite for present discussion. Biochemistry and biophysics are neither sufficiently advanced to answer. Clinically, however, the fault is found in the vascular taxis.

Believing that in such cases the immediate mechanism of the obstruction to respiration, manifested by the asthmatic paroxysm, is an irregular swelling of the bronchial mucosa, allied to the condition of circumscribed edema—angioneurotic edema—or urticaria, and that by increasing the vascular tone through the administration of that substance which Nature seems to have designed for its maintenance, we might prevent such attacks, I have, during the last few years, used adrenal substance in the treatment of such patients. It has in but one dubious instance served to cut short a paroxysm, though it has occasionally mitigated distress in greater or less degree. It has, however, been useful in averting the recurrence of paroxysms and in finally bringing about a state of freedom from fear of their recurrence. I, therefore, speak of the use of adrenal substance not as "a treatment for asthma" but as a measure "applicable in the treatment of certain cases" of that affection. Physicians accustomed to exactitude in language will readily discern the difference between these methods of statement.

As illustrative both of the usefulness and of the limits of usefulness of this agent in the management of certain cases of asthma, the following case may be given in outline:

Miss X. Y. Z., aged 22 years, was first seen in consultation at Atlantic City, in June, 1897. She was then confined to bed with constant dyspnea, aggravated in paroxysms, the paroxysms occurring at night and relieved after an hour or two of orthopnea by critical expectoration of large quantities of a thin watery fluid. During the day this expectoration would continue in less degree, but would cease during sleep. Sleep would be broken in on by the asthmatic paroxysm and return with

the re-establishment of the discharge. Attacks of excessive rapidity of the heart and paroxysms of distressing sweating were also complained of. It was stated that this condition had followed an attack of influenza which occurred during the preceding February, since which time the patient had not been out of bed. She was feeble, nervous and apparently anemic, but not hysterical. The temperature ranged between 99 and 100.5 F., irregularly. Physical examination gave hyperresonance of the upper portion of the right lung; normal resonance elsewhere, and diffuse mucous, sonorous and sibilant râles in all portions of the chest. The heart was feeble and rapid, rate 96. No murmur was heard. Precordial dulness was perhaps slightly enlarged. This was during a period of comparative quiescence, the respirations being shallow and slightly accelerated to 24 to the minute, and considerable subjective distress being complained of, but no asthmatic paroxysm being manifested. Dermographism was readily produced; the nails showed typical red crescents and were of a peculiar lemon tint not due to artificial coloring. The father of the patient was said to have died of asthma and tuberculosis, following pneumonia. At that time, eight years previously, the patient had suffered similarly to the present attack but not for so long a period. Examination of the patient's sputum for tubercle bacilli had not been made during either attack. The urine was free from albumin.

Apart from diet, the treatment tentatively advised was the injection of very small doses of hyoscin hydrobromate with morphin and strychnin at night, for at most three consecutive nights, and during the day the use of a mixture containing ammonium bromid. Iron preparations and syrup of hydriodic acid had been used without much good effect. Slight relief followed. The patient was brought to Philadelphia in July, where she was placed under the care of my friend Dr. Eshner, with whom I again saw her in consultation. Examination of the urine now showed the absence of albumin; examination of the sputum showed the absence of tubercle bacilli, and examination of the blood showed reduction of red corpuscles to about 70 per cent. and hemoglobin to about 60 per cent. of normal.

The treatment proved to be most difficult. Apart from hygienic and general tonic treatment, many approved remedies were used without benefit. Some of the drugs that gave greater or less relief may be mentioned. Atropin checked sweating and expectoration temporarily, but the symptoms recurred in greater degree on its withdrawal. Picrotoxin was employed on the theory that the paroxysms were due to vasomotor paresis with turgescence of the bronchial mucosa. This gave some relief, but recovery seemed still distant. Thymus gland substance gave better results, but asthmatic paroxysms still recurred. Albumin appeared in the urine. It was then determined to use adrenal substance. Burroughs & Wellcome's tablets, 5 grains each, were prescribed once daily, then twice, then three times daily, and finally the patient for a short time took 90 grains daily. A striking improvement shortly became manifest. The constant dyspnea first disappeared, then the paroxysmal nocturnal attacks became less frequent and less severe. Recovery was not rapid but was continuous.

In October the patient was able to go out of doors, and inhalations of compressed air with exhalations into rarefied air were then added to the treatment for its effect as a method of neuromuscular gymnastics, as also for direct effect on the blood-vessels at fault. The albuminuria noted was intermittent and disappeared after ten months. Since this time the patient has had no recur-

¹ Am. Jour. Med. Sci., February, 1894.

rence of symptoms similar to those of the original attack; though being allowed to go without medicine on account of the improved condition, there is at times recurrence of albuminuria, which quickly disappears under treatment with adrenal extract; and once there was a brief attack of dyspnea with asthmatic exacerbation, which likewise yielded quickly to treatment. While it is obvious that dependence in this case was not placed alone on the adrenal substance, yet its marked effect in heightening the tone of the blood-vessels, in diminishing and finally checking the peculiar expectation, and its similar effect on the night sweats, favor the belief that it was an active agent in the control of the asthmatic symptoms. The tachycardial paroxysms had ceased before it was administered—under the influence of rest, medication, and allaying of fear.

In other patients the result has been about the same as that already narrated. Hyosein, morphin and strychnin have been given for immediate control of paroxysms, sometimes aspidospermin or other appropriate remedy for the quick relief of dyspnea, and adrenal extract for control of the underlying condition.

It would be wearisome, as well as useless, to detail histories. Apart from so-called hay-asthma—which is another story and belongs to another speaker—success has been reached only in those cases, about twelve in the course of a little more than two years, in which from the crescentic markings on the nails, from the tendency of the hands to excessive color changes, or to sweating on slight temperature variations, from the facility with which dermatographism or factitious urticaria could be produced, from the enlargement of the thyroid gland, from the tendency to cardiac palpitation, or even tachycardia, or from the occurrence of other vasomotor crises, such as migraine or angioneurotic edema or nervous vomiting, or if necessary from the *experimentum crucis* of increased distress on inhalation of amyl nitrite—one could recognize the tendency of the subject to loss of control of vascular tone on slight provocation. In one case the paroxysm of asthma—or perhaps of obstructive dyspnea—was preceded by angioneurotic swelling of the tongue, and when this was reduced by the prompt local application of suprarenal extract, the paroxysm was averted or modified in severity. It was interesting to note that in this case the swelling of the tongue was not always followed by dyspnea, but sometimes by a gastric crisis, of pain, or less frequently, vomiting of a thin, tasteless fluid. I never saw these attacks, and, therefore, rely entirely on the description of the patient and her physician. The circumscribed swelling of the tongue I saw in my office, but it was promptly reduced by suprarenal substance locally, and no other manifestation followed.

I believe that we have in this substance a decided addition to therapeutic resources; quite active when used locally, and hence to be remembered in the prompt treatment of urticaria or edema of the upper air-passages—and less active, but still definitely useful by internal administration in controlling urticaria or circumscribed edema or similar condition affecting the bronchial mucosa.

It is not a specific for asthma. It is without good influence, perhaps capable of bad influence, on cases that are really spasmodic; that is, due to contraction of the bronchial muscles. But it is of definite use in that perhaps smaller number of cases of asthma in which, as I have indicated, the paroxysm is but one other manifestation of a congenital fault of structure or of metabolism, affecting the vasomotor system and thus permitting the

cardiovascular balance, and especially the tonicity of the blood-vessels, to be readily overturned by exciting causes that would have but slight, if any, effect on other individuals. In such cases a more or less continuous administration of adrenal substance, in sufficient quantity to maintain the vascular tone, will act as a preventive, enabling the reactive forces of the individual to combat more successfully the toxins of internal and external origin, the emotional, meteorologic, thermal, and climatic influences, and other sources of disturbance that ordinarily provoke the paroxysm.

As to its dosage, the rule is that of Professor Ellerslie Wallace for bleeding in puerperal eclampsia—"Enough." There is great difference in cases and in individuals. Beginning with small doses frequently repeated, e. g., 1 grain every hour or every two hours, or with a moderate dose, say 5 grains, once or twice daily, we learn the tolerance of the individual, the tractability or intractability of the symptoms, and regulate accordingly. I have given as few as 3 and as many as 90 grains of the desiccated gland substance in the twenty-four hours. Five or 10 grains every second or third hour during waking hours is a fair dose. In some cases, however, the unnecessary animal substances retained in the preparation give rise to diarrhea with offensive discharges. If we could have the active agent alone our therapy would be much more definite.

What the active agent is and how much or how little of that active agent is absorbed, I must leave to laboratory students to determine. Clinically I have watched closely and critically enough to satisfy myself that neither the susceptibility of patients to suggestion, nor the activity of the observer's imagination are sufficient in themselves to account for the whole of the results.

ETIOLOGIC STUDIES ON NEUROSES OF PERIPHERAL ORIGIN.*

BY H. GRADLE, M.D.
CHICAGO.

Medical opinion concerning the frequency and importance of the so-called reflex neuroses has fluctuated considerably within past years. The claims made by American ophthalmologists regarding the effects of eye strain, the startling results announced by Hack and his followers concerning the cure of reflexes of intranasal origin and to some extent, too, the views of gynecologists as regards the etiologic rôle of pelvic anomalies in the production of nervous symptoms have made "reflex neuroses" a topic of the day. But criticism is beginning to show how and wherein some of the enthusiasts have erred, and perhaps an undue skepticism is beginning to prevail. One of our members has not inaptly characterized the trend of medical opinion as "the passing of the reflex." Yet by properly defining the term "neuroses of peripheral origin" it can be made to include a great deal of human suffering, which may be relieved by the knowledge of its etiology.

I do not consider the name "reflex neurosis" an appropriate one, since the definition of "reflex" in physiology implies the motor or centrifugal response of a nerve-center to an impulse coming through a sensory nerve.

Hence, most of the neuroses of peripheral origin do not come under this definition. Even when a motor phenomenon does occur, it depends on the influence which the peripheral stimulus exerts on the excitability of the nerve-center, and is generally not a mere exaggeration of a physiologic reflex.

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The peripheral origin of a neurosis in a given case may be suggested by the coexistence of a peripheral lesion or anomaly likely to cause it, especially when a clear history of aggravation can be obtained under circumstances which can intensify the peripheral stimulus, for instance, when a headache is brought on by use of the eyes or when an attack of asthma follows nasal irritation. But the absolute proof can only be furnished by the prompt cessation of the neurosis after elimination of the peripheral influence. If a relapse occurs, as it sometimes does in asthma of nasal origin, and it can be shown that the peripheral condition had returned because of its incomplete removal, the etiologic relationship is only more firmly established.

As a basis for further discussion I shall hence refer only to such instances in which this convincing proof exists, either in cases of my own observation or in well-recorded reports in literature. The following are well substantiated examples of neuroses of peripheral origin.

Errors of refraction and accommodation may lead to headache, a feeling of pressure in the head, less frequently to vertigo, and even nausea. Astigmatism may bring on periodic attacks of migraine. Suppuration of the nasal passages or accessory sinuses and also intranasal tumors—polypi—may cause headaches, either constant or periodic neuralgic pains, oppression in the head, asthmatic attacks and circulatory and cardiac disturbances.

In some instances these neuroses are started from the nasal lining even in the absence of any other lesion except enlargement and liability to turgescence of the submucous cavernous tissue. Pharyngeal disease may cause cough and laryngeal spasms. Dental disease may induce headache and neuralgia. Outside of my own sphere of observation, but scarcely subject to doubt, is the backache of pelvic disorders.

While the actuality of all these instances can not but be admitted even by skeptics on the subject of "reflex neuroses," the term "neuroses" may be objected to as improper. But we understand by that term any nervous disturbance not dependent on demonstrable lesions in the nervous system and not the normal consequence or symptom of disease of a peripheral organ, and hence the term "neurosis" is proper in the present place.

Much has been described under the head of reflex neuroses that can be severely criticised. Epileptoid convulsions have been reported as of "reflex" origin by many authors. Some of their observations are undoubtedly correct, but not all and not even many of them. After all, the number of cases of spasms permanently stopped by the excision of peripheral cicatrices is very small, although such instances have occurred. Similarly there are a few reports in which years have elapsed without the recurrence of epileptoid fits after the fitting of proper glasses or the removal of nasal polypi, but they can be counted on the fingers. Personally I have seen *petit mal* with laryngeal spasm in an infant cease promptly after a duration of many weeks, on curing a pharyngitis by nitrate of silver application. As this occurred twenty years ago, and the patient—now a young man—has never had another attack, I consider this a well-established instance of epilepsy of peripheral origin—but it is the only case I have ever observed.

Similarly we must admit the symptom-group of exophthalmic goiter as a possible but excessively rare neurosis of peripheral origin. There are five well-observed instances on record of total disappearance of all symptoms of Graves' disease after intranasal treatment, while

in one other the symptoms of this disease came on immediately after a nasal cauterization.

Chorea, too, has often been described as a neurosis of ocular origin. But I can not say that I have seen any reports which to me seem convincing proof of this assertion. I have never seen chorea influenced by the optic correction of an ocular defect, although I have given glasses for good reasons to many such patients at an early period of the affection. I suspect, however, that clonic blepharospasm, really a chorea or habit spasm of the eyelids and adjoining muscles, may be started by disease of the conjunctiva. I have seen it relatively often in connection with chronic follicular conjunctivitis, and have often found it disappearing gradually after treating the lids. But I have always advised other measures as well, and besides, neither the cure of the conjunctival lesion nor the cessation of the twitching could be obtained with sufficient promptness to permit any absolutely positive conclusion. Jacobi's statement regarding the relation of facial chorea to nasal and pharyngeal disease I am also inclined to admit as plausible, but can not consider it definitely proved either by his nor by my own confirmatory observations.

Finally, I wish to dispose of the often reiterated claim that neurasthenia in a given case was cured by spectacles or some operation, be it on the eye muscles or the perineum or uterus, and that it was hence of "reflex" origin. There can be no doubt that a neurasthenic patient may be made comfortable by removing any peripheral source of annoyance, but that is not a cure of his neurasthenia. The intrinsic weakness of the nervous system, which we consider the basis of neurasthenia, is not removed in such a case. One of its manifestations is merely suppressed, perhaps the only one at the time, and the patient is satisfied. But the nervous system is still in the same condition as it was before, ready again to break down, so to speak, under a condition which the normal subject tolerates, although the chance for an ultimate recovery, if that be possible at all, is, of course, improved by eliminating all curable pains. It will be my effort throughout the further part of this paper to show that peripheral lesions are not the cause of neurasthenia, but lead to "reflex" neuroses only in those who are in a certain sense neurasthenic for other reasons.

For the study of the various factors which contribute to the occurrence of neuroses of peripheral origin, patients with optic anomalies furnish the best material since the degree of the peripheral "cause" can be stated numerically and since spectacles furnish such a convenient method of promptly or, if desired, temporarily eliminating the peripheral starting point.

The case-book of every oculist can supply the records of the most variable amount and extent of neuroses of the most variable duration due to eye strain and promptly stopped by proper glasses. But, on the other hand, school and military statistics show how very prevalent are the same refractive errors, without causing nervous symptoms. Indeed, every individual, except a myope, will undergo eye strain when he attempts to use his eyes at short range after age has curtailed his power of accommodation. Sooner or later astigmatism, hyperopia and presbyopia cause eye strain in every individual afflicted, manifesting itself by blurring, inability to read or work and a feeling of painful fatigue in the eyes on persisting in their use. There is thus a minimum or "normal" amount of asthenopia inseparably connected with every degree of optic error. But on the other hand, among the patients who call on us many present an exaggerated amount of asthenopic discom-

fort out of proportion to the causative strain of the ciliary muscle. Observation also shows that a certain degree of hyperopia or astigmatism—.75 or even up to 1.5 D. variable with age—may exist without causing any annoyance whatsoever to vigorous subjects, while many of our patients complain bitterly in consequence of optic errors of even less degree. But of the cases of "normal" eye strain oculists see but a very small proportion; these people mostly go to the spectacle dealer and buy glasses which give them satisfaction. Hence, it seems as if some ophthalmic writers, especially those of the Philadelphia school, were familiar with only those manifestations which may be termed exaggerated asthenopia.

To an unbiased observer, it must be apparent that if one set of subjects tolerate minor optic defects without distress, or complain only of discomfort in the eye from higher degree of ametropia, while another set of patients get distressing nervous symptoms from the same peripheral disturbances, there must be other factors besides the eye strain involved in the latter case. On comparing these two classes of people as regards their general health and physical condition, it is apparent that the former represent on the whole the healthy type, while the latter are sufferers in more ways than one. The neurologist would recognize among them a large proportion of neurasthenics, or at least subjects predisposed to neurotic troubles. By closer analysis it can be learned that but very few of those who suffer to an unproportionate extent from an existing optic anomaly have not been subject to influences which reduce the stability of the nervous system.

Prominent among the pernicious influences is heredity. Whenever I had opportunity to enter into the family history I have found the neuropathic taint existing in a fair proportion of instances. This I have also found true very often in neuroses of nasal origin. It is not, however, the history of the more serious nervous diseases which we obtain, but rather the evidence of "nervousness" in its less grave manifestations. Paternal alcoholism has not appeared to any noticeable extent in my private records.

With or without the hereditary influences additional factors can be elicited in most cases. One—which has not received the attention it deserves—is the malnutrition of bottle-fed babes. Repeatedly, when a single child from an otherwise healthy family was brought to me on account of exaggerated eye strain, I learned that it had not been properly nourished during its first year. It seems that malnutrition during babyhood may sometimes leave a permanent influence on the nervous system.

During school time, as well as later in business work, want of out-door exercise plays an important rôle in predisposing to neuroses. It is striking how few are the instances, at least after school age, in which neuroses of ocular origin occur in persons of active out-door habits or those engaged in manual labor, and equally striking how often the subjects of neuroses admit close confinement, although exceptions do occur. On the strength of very extensive observation, I must insist that the breaking down of the nervous system is much less due to the amount of eye work done, than to the want of out-door employment of the muscles. It has for years been my habit to insist on proper hygiene in this respect, and many a time have I been rewarded by the recovery of the patient, i. e., his ability—after a time—to continue his eye work without glasses and without suffering.

The liability to neuroses of peripheral origin is augmented by all influences depressing the nervous system.

In many histories the coincidence of pregnancy, disturbed sleep, mental anxiety and grief, with the occurrence of nervous disturbances of peripheral origin is quite apparent. Likewise convalescence, for instance from typhoid fever, influenza or in children from measles, is not a rare factor.

An important and frequent condition in neuroses of peripheral origin is anemia. It is probably partly through the production of anemia that some of the pernicious influences just detailed act as etiologic factors. The rôle played by anemia, which its frequent co-existence suggests, can often be demonstrated tangibly by the cure of the neuroses under the use of iron or the employment of hygienic measures which remove the anemia. In suitable cases the most satisfactory proof can thus be furnished that the peripheral stimulus leads to nervous disturbances only when the nervous system has not its normal nutrition.

Toxic influences, which we can not as yet define, are probably, too, of considerable importance. The most distressing instances of exaggerated asthenopia are sometimes observed in subjects with deranged digestion. In some of them correcting glasses do really remove all manifestations of eye strain and headaches dependent thereon. But often optic correction gives but partial relief, and full comfort can only be obtained after the successful management of the stomach and intestinal disturbances. Much can be learned when cases of this type can be observed from the start. I have observed in such instances, of which I have accumulated at least twenty-five records, if not more, that asthenopic complaints, either localized in the eyes alone, or exaggerated in the form of headache, may begin suddenly during a period of intestinal derangement manifested by furred tongue—disturbed appetite and more or less constipation. Most of these patients had neither felt any eye strain nor suffered from headache previously. The dependence of the—apparently—ocular neurosis on the intestinal disturbance was definitely proved in a number of cases by total recovery after dietetic and medicinal treatment directed against the digestive trouble. As the discomfort in the eyes and head was evidently aggravated by eye-use, rest of the eyes was also ordered. The important lesson learned was that while the subjective experience of these patients suggested an ocular origin of the neurosis no optic error worth correcting could be found in many of these instances of asthenopia of acute onset. What becomes of these neuroses if they are not properly stopped by the recognition and treatment of their intestinal origin? From many observations on other patients seen during later periods I conclude that this asthenopia will generally continue as long as the stomach derangement lasts, and that occasionally it will remain even after the digestive disturbance has gradually disappeared spontaneously. Undoubtedly this persistence is due partly to psychic causes and, indeed, yields at times only to psychic or suggestive influences, if at all. I have no doubt that many of the alleged successes attributed to weak glasses—0.5 D. and less—occur in cases of this kind. Observation continued during a number of years has only confirmed my often expressed doubts regarding the direct utility of glasses of such low degree that their selection is a matter of uncertainty on account of their scarcely appreciable optic action.

A psychic factor in the production of ocular neuroses is sometimes observed, too, in another variety of cases. Some patients with medium or low degrees of optic error, formerly tolerated without discomfort, date their as-

thenopia to the time of a conjunctivitis which may or may not be still present at the time of examination. After this is cured the asthenopia still persists and does not entirely yield to appropriate glasses, if such are needed at all. Here, too, an unfortunate rôle is played by the expectant attention which has occupied itself with and intensified the discomfort experienced while the eyes were really sensitive. These cases are also rebellious and yield only to psychic influences. We must recognize that neuroses due to a temporary physical cause may persist after the cessation of the latter on account of psychic reasons. We are treading here on the borderline between the domain of "reflex" neuroses and pure hysteria—usually monosymptomatic hysteria. But, on the other hand, the pure neuroses of peripheral origin, those which are promptly stopped by the elimination of the peripheral influence, have nothing to do with hysteria, even if they should occur in a patient who happens to be hysterical.

It is well to admit that in some instances of neuroses of peripheral origin apparently no deviation from perfect health, except the peripheral anomaly, can be found. It is more logical, however, to concede that we are unable to completely analyze such an apparent exception than to conclude that a peripheral influence which does not affect the nervous system in normal subjects should do so in a given case if it were not for the concurrence of other factors which escape our analysis. Besides, it is an open question whether hypermetropia and astigmatism of more than a minimal degree are not by themselves stigmata of at least imperfect development, if not of degeneration, inasmuch as these optic anomalies have not been observed in the examination of uncivilized races.

What has been said regarding the etiology of neuroses of ocular origin applies more or less to all "reflex" neuroses. In the case of nasal neuroses I wish to emphasize, perhaps even more, the importance of intestinal disturbances. Quite commonly these patients have constipation with flatulency. It can often be learned from self-observing patients that their nasal neurosis, for instance, asthma, is intensified whenever their intestinal disturbance becomes more manifest, and that on the contrary attention to diet and to the state of the bowels relieves their nasal symptoms or any nervous disturbances produced thereby.

In the case of some of the neuroses of nasal origin we must also take into account another factor, which, by itself, may undermine health, viz.: the existence of suppuration. Some of these patients evidently suffer from systemic injury due to the pyogenic infection apart from the "reflex" influence on the nervous system. Indeed, the history sometimes suggests that the nasal irritation caused nervous symptoms only after long-continued nasal suppuration helped to create a predisposition.

The degree of intensity of the peripheral disturbance provoking the neurosis varies considerably in different patients. I need but repeat that many healthy young people can tolerate a hyperopia of perhaps 2 D. or an astigmatism of 1.5 D., without any discomfort, while most distressing nervous symptoms are sometimes relieved by glasses of the strength of .75 D. The readiness with which the nervous system reacts by morbid symptoms to such a peripheral anomaly is an index of its instability. There are all possible degrees of "nervousness" without a sharp line dividing this condition from perfect health.

It is self-evident that in a given case the occurrence of a neurosis may depend on any intensification of the peripheral cause as well as any change in the condition

of the nervous system. An optic anomaly which had hitherto produced only "normal" and local asthenopia may cause diffuse nervous symptoms when the patient taxes his eyes by continued close work. Similarly a nasal condition, which up to a given time had not led to any neurosis, may result in nervous disturbances when aggravated by an acute inflammatory condition or intensified by unfavorable climatic influences.

Due attention to the general health and general medical history of patients with neuroses of peripheral origin as well as the study of variations in the peripheral condition gives us the clue to the fluctuations of their symptoms. It is only by treating them from the standpoint of the physician and not merely through the instrumentarium of the specialist that we can fulfill our full duty toward these sufferers.

100 State Street.

HAIR AND ITS ANOMALIES.*

BY HENRY ALFRED ROBBINS, M.D.
WASHINGTON, D.C.

The poets and sculptors of Ancient Greece have left in verse and marble their admiration of long hair. The Hebrews also looked upon hair as a great ornament, and their women gloried in their luxuriant tresses, bedecked with gold and precious stones (Isaiah iii). The men usually kept their hair short, but there were notable exceptions, as with Absalom and Sampson. With the latter it was accompanied with superhuman strength, and when Delilah, during his sleep, cut off his flowing locks, his strength was gone: "Howbeit the hair of his head begun to grow again, after he was shaven." "But the Philistines took him and put out his eyes and brought him down to Gaza, and bound him with fetters of brass, and he did grind in the prison house" (Judges xvi). When his hair had grown again his enemies sent for him that "he may make us sport." "And Samson took hold of the two middle pillars upon which the house stood, and on which it was borne up, of the one with his right hand, and of the other with his left." "And Samson said, 'Let me die with the Philistines.' And he bowed himself with all his might, and the house fell upon the lords, and upon all the people that were therein. So the dead which he slew at his death were more than they which he slew in his life." Thus Samson added greatly to the death-rate of the Philistines, but he was crushed to death himself.

The Hebrews of the Old Testament particularly deprecated the loss of long hair, but on one occasion, their mocking of a prophet resulted in their being eaten up by she-bears, when they cried out to Elisha, "Go up thou bald head." Fortunately, as civilization has advanced, bears have been almost exterminated.

The priests of ancient times wore long hair, until Pope Anicetus (A. D. 155) compelled them to wear it short. Long and flowing hair was so universally esteemed that the tonsure was regarded as an act of mortification. They declaimed against the long hair of the laity most bitterly. Anselm, Archbishop of Canterbury, pronounced a sentence of excommunication against all who wore long hair. Serlo, a Norman bishop, acquired great honor by a sermon which he preached before Henry I (A. D. 1104) against wearing long and curled hair, by which the king and all his courtiers were so deeply affected that they consented to resign

*Read before the Society of Microscopists of the District of Columbia, Jan. 9, 1900.

their flowing ringlets, of which they had been so vain. The prudent prelate gave them no time to change their minds, but immediately pulled a pair of shears out of his sleeve, and performed the ablation with his own hands. (Encyclopedia Britannica.)

Chemically, according to Mulder and Donders, hair is composed of: carbon, 50.65; hydrogen, 6.36; nitrogen, 17.14; oxygen, 20.85; sulphur, 5. The same products are found in the nails and epidermis, and in the hoof of a horse, the horn of a cow, and in whalebone and tortoise shell. They differ slightly in the quantity of organic matter they contain, but the difference does not vary much beyond 1 per cent. Hair yields from 54 to 1.85 per cent. of ash, containing among other ingredients peroxid of iron and a little silica. Professor Frey of Zurich speaks of hair as being the highest variety of epidermoidal tissue: "An extreme complication of structure welcomes us here all at once."

With the exception of the palms of the hands and the soles of the feet, hair is found on every part of the surface of the body. Being appendages of the skin, a description of hair necessitates a study of all the tissues therein contained.

The hair follicle, according to Tilbury Fox, may be regarded as a depression of the skin, the papilla at its blind end representing one of the ordinary papillæ of the skin; as Frey expresses it, an involution of the corium, and frequently of the subcutaneous cellular tissue. This involution shows externally, longitudinally, then transversely arranged connective tissue, and internally, a hyaline boundary layer. At the bottom it puts forward as a vascular papilla. It is the formative and nutritive organ of the whole. Hair, being modifications of the epidermis, receives the same vascular and nervous supply, and owes its glossy appearance to the sebaceous glands which open near its free extremity.

Dr. L. Duncan Bulkley⁴ says: "At the deepest portion of the hair follicle, or cavity in which the hair rests, there is a certain anatomical structure which is of the greatest importance in reference to the growth and vitality of the hair, namely, the *hair papilla*. This is, of course, quite distinct from the papilla which we have seen to cover the surface of the corium of true skin; it is situated deep in the tissues, at the bottom of each hair follicle, and projects into a small cavity at the lower end of the hair. This little hair papilla, which is only 1-15 of a line, or one hundred and eightieth of an inch long, is of vital importance to the growth of the hair, there being a minute blood-vessel in its interior, and it is believed that the reproduction of the hair, after it is lost from any reason, takes place from this papilla. Conversely, is it also true that as long as this papilla is intact, and in a healthy state, the hair will be reproduced, even though extracted artificially. Thus, 'plucking the hair out by the root' does not destroy the life of the follicle; only the hair is removed, the papilla from which it regrows remains."

As a rule, only the hair of the scalp, and certain other parts of the body, is coarse and long. The soft downy hairs called *lanugo*, on the cheeks of an attractive girl of 16 years have been likened to the down of a peach.

It appears to be the main object in life for men to hold on to the hair they have, but occasionally we come across men and women who possess more wealth of hair than is desirable. This condition is known as *hirsuties* or *hypertrichosis*. My first knowledge of this condition dates back to my childhood days, when at a New England boarding-school I committed to memory, by compulsion, the book of Genesis, where you will find in

chapter xxv the report of the twin delivery of Esau and Jacob: "And the first came out red, all over like a hairy garment; and they called his name Esau." Then came a time when the hairy man became a great hunter, and like those of modern days suffered from starvation, and he sold his birthright to his twin brother for a mess of red pottage. Finally, the sightless old Isaac exclaimed: "The voice is Jacob's voice, but the hands are the hands of Esau."

I will never forget the bearded woman who was on exhibition many years ago. She was of sufficient height to have belonged to the famous giant regiment of Frederick the Great. Her beard was magnificent, and showed to great advantage on her snow-white, depilated bosom. Like the ballroom belle, she thought that "beauty unadorned, was adored the most." Years after I had gazed on this freak of Nature, I met in Brunswick, Germany, Mr. Greenwood, who was the American Consul there. In former years he was business manager of P. T. Barnum. Consul Greenwood told me that the bearded woman caused great excitement, and grave doubts as to the sex of this individual existed. Finally, Dr. Valentine Mott and other eminent surgeons made a physical examination, and they declared that she really belonged to the gentler sex. This was fully and satisfactorily proven, as, shortly after, she gave birth to a son, who, like Esau, was "all over like a hairy garment."

Dr. M. Bourneville² states that he was recently consulted by a young girl for an ordinary affection, and that on seeing her he was struck with the following singular anomaly; the eyebrow and the eyelashes of the right eye were thick and black, while the inner half of the left eyebrow, and that of the eyelashes, were entirely blond. The outer half of the left eyebrow was black, although up to the age of 6 years the entire eyebrow had been blond. The left eye and the palpebral opening were somewhat smaller than the corresponding organs of the right side. The hair was black over the entire front part of the head, but on the right side of the occipital region it was black, sprinkled with a few blond locks, and on the left side it was half black and half blond. The patient assured the author that the hair on the rest of her body was black.

Malcolm Morris, F.R.C.S., in speaking of hair turning suddenly grey through extreme terror, says the evidence on which these cases are reported is not always satisfactory, and refers to Dr. Austin Flint, a distinguished American physiologist and physician, and quotes the following statement of Dr. Flint: "In examining the literature of this subject, it is difficult to find in the older works well-authenticated cases of these sudden changes, and most of those that are quoted are taken upon the loose authority of persons evidently not in the habit of making scientific observations. It is not necessary, therefore, to quote the instances of sudden blanching of the hair recounted by the ancient writers, nor those well-known cases of later date so often detailed in scientific works, such as that of Marie Antoinette or Sir Thomas More; and it seems proper to exclude also cases in which blanching of the hair has been observed only by friends or relatives, for in most of them the statements with regard to time are conflicting and unsatisfactory."

An important case was reported in a medical journal, by Dr. Landois in 1866. In this case the blanching occurred in a single night, while the patient was under the daily observation of the physician. When examined microscopically, the white hairs were found to contain

air globules, but there was no loss of pigment. It was in consequence of the presence of the air globules that the hairs appeared white.

Dr. Parry³ gives the following instance of hair turning white from fright. On Feb. 19, 1859, the command of General Franks, operating in the southern part of the kingdom of Oude, had an engagement with a body of rebels. Several of the enemy were taken prisoners. One of them, a Sepoy, was led before the authorities to be questioned. "I then had occasion," said Parry, "to observe in this man the events that I propose to relate. The prisoner, deprived of his uniform and entirely nude, saw himself surrounded by soldiers. He then began to tremble violently, terror and despair were depicted on his face, and, though he responded to the questions addressed to him, he seemed actually stupefied by fear. Then under our very eyes and in the space of scarcely half an hour, his hair, which we had seen was a brilliant black, turned grey uniformly over the whole head."

Dr. P. H. Pye-Smith, of Guy's Hospital, writes of canities as follows: "General blanching of the hair is a well known senile change. But, like baldness, it often occurs in early adult life, especially when the hair is very dark. Besides losing its natural pigment, and so acquiring a dull, yellowish, "milk-white" appearance, the hair is apt to become dry and admit air-bubbles, which increase its refractive power and produce the glistening steel-gray or "silvery" aspect. . . . Bichat and Alibert record cases which they actually saw, and Brown-Séguard has seen rapid blanching in his own beard (*Archiv de Phys.*, 1869, page 442). A gray patch sometimes follows neuralgia."

Dr. Laycock evidently witnessed the instance of the Sepoy just referred to, who was seen to turn gray in half an hour, and reported it in the *Med. Times and Gaz.*, in 1862. A young man once consulted Dr. Pye-Smith for some slight ailment, who had perfectly white hair. "In answer to inquiry he stated that a few years before he had fallen asleep after a debauch, and on waking in a cold room in the morning found that his hair had turned white. The objection that his beard was brown was answered by the explanation that when the change of color occurred it had not yet grown. This sudden change is probably due to development of air-bubbles in the shaft of the hair."

Dr. Schmitt⁴ of Frankfort, reports a case of sudden turning of the hair to gray. The patient was a laborer, 36 years of age, who at the time was suffering from some affection of the neck. His hair showed two white patches, one in the middle line of the head, the other over the right ear. Eight years previously he had had a severe mental shock while on a railroad journey, and it was noted by his friends and relatives that these patches appeared almost immediately after. The possibility of its having been a congenital or gradually acquired defect covered by hair dye, as has frequently been shown, seemed remote.

Before the Academy of Medicine, in Ireland, on March 24, 1883, Dr. Banks⁵ referred to a case which had come under his notice, that of a young woman. Half of the lashes of one of her eyes became snow white, which she attributed to the annoyance suffered from the persistent gaze of a "wall-eyed" admirer who had white lashes on the defective eye.

Several years ago I reported, in a German newspaper of this city, a case of a man where the hair of his scalp and beard turned white during a single night. I obtained the data from a report of a case by Dr. Landois

von Griefswald. As to the shock which caused it, I could get no information.

The following undoubted case occurred in the clinical service of Professor Mosler of Berlin: A man, aged 34 years, was brought in, profoundly drunk. The next morning the doctors and patients noticed that the hair of his head and beard had turned gray. When he looked at himself in the looking-glass he exclaimed, *Ach Gott, wir sind die Haare grau geworden*. A microscopic examination was made in this case. The white hairs were filled with air-bubbles. There was no loss of pigment.

The hair has turned from white to black after exposure to severe cold. "On the 5th of January, 1895, we had a tremendous fire in Louisville," writes Dr. George W. Griffiths;⁷ "the night was very cold and the streets were covered with ice and snow. The gentleman I shall present as the subject of these remarks is an engineer in the Louisville Fire Department, aged 65 years, who was on duty from 11 o'clock on the night of the 5th of January until 2 o'clock of the following day, except when he was taken away overcome by sheer exhaustion, and sent by my friend, Dr. Marshall, in a carriage to his home, where he remained two or three hours, and again returned to duty. Two or three sections of hose were leaking near his engine, and the spray was blown by a strong north wind until he was covered from head to foot with ice, which became so thick that it had to be cut or broken off from his clothing. This man was constantly at his engine, exposed to the north wind, which was carrying the spray of water from the broken hose. The top of his head was the warmest part of the body; his eyebrows and whiskers became wet and were frozen stiff. He had a red skull-cap over his head, and his helmet on top of that; his head was not exposed at all, nor any of his hair, except the eyebrows and whiskers.

"I saw him the next day, when he had a very feeble pulse, and was much exhausted and worn out. He had not been in robust health for some time. The next afternoon after the exposure to the severe cold, as I have indicated, his hair turned black; and the wonder becomes greater when we consider that his hair was perfectly white; before that he was blonde. Now his hair is black. I have known this gentleman for over forty years. The hair is oily and does not seem to be dead at all. His head has been very carefully scrubbed several times, as I was inclined at first to think that the change in color was caused by cinders or other foreign matter; but such did not prove to be the case."

The French supplement to *Le Greece Medicale* contains a curious account by Dr. Roveas of Amorgos, of a relative of his who died recently, aged 90 years. He had never been ill in his life, but the hair of his head and face had become prematurely white. Six months before his death, however, his beard and moustache suddenly became dark, the color continually deepening. "to the curiosity and stupefaction of all." Dr. Foristanos, the editor, adds a story of an old priest, whose white hair fell off, as the result of erysipelas, and was replaced by a thick growth of raven locks. Perhaps some cases of this kind may have given rise to the ancient Greek myths of rejuvenescence, as when

Medea's spell dispersed
The weight of years
And Orson stood a youth
Mid youthful peers.

—*Medical Magazine*.

Alopecia is derived from the Greek word ἀλωπηξ, a fox—not because the loss of hair gives a man a foxy appearance, but the ancient Greeks thought that the

bushy-tailed little animal was liable to baldness. A French medical paper prints what is believed to be the oldest medical recipe. It is a tonic for the hair, and its date is 4000 B. C. It was prepared for an Egyptian queen, and required dogs' paws and asses' hoofs to be boiled with dates in oil.

Theory after theory continues to be advanced for the cause of baldness. It was stated in an editorial article in the *British Medical Journal*, several years ago, that the "new man" finds it almost as difficult to keep his hair as the "new woman" does to find a husband. The theory of the bald-headed man generally is that his exceptionally active brain has used up the blood-supply which should have nourished his scalp; but those whose crop of hair still stands untouched by the scythe of Time unkindly hint that this explanation is of a piece with Falstaff's excuse that he had lost his voice by "singing of anthems." An American author has assigned indigestion as a cause. "Nature, we are assured, is very careful to guard and protect and supply the vital organs with the proper amount of nutriment, and when Dame Nature can not do it, she naturally cuts off the supply of parts least vital, like the hair and nails. I have observed that as a rule it is the best nourished man who is the baldest. I think that it was the virgin Queen Elizabeth who said that she did not look upon a man as being old until he was 'fat and bald.' Men of the build of John Sherman, who lives still, honored and beloved by his countrymen, and Abraham Lincoln and Gladstone, although thin and spare, had luxuriant hair. Bismarck, on the other hand, was large every way, very well nourished, and he is pictured as having had only three hairs on the crown of his head, and they stood up like quills upon the fretful porcupine."

IN THE JOURNAL⁸ there is an article on alopecia, in which the author claims that residual air is the cause of baldness, and explains why women are almost exempt from it.

Music appears to have an effect on the growth of the hair. Brass instruments have a fatal influence, notably the cornet, the French horn and the trombone. They will apparently depilate a player's scalp in less than five years. The baldness which prevails among members of regimental bands has been given the name of "trumpet baldness." It has been suggested that it is barely possible that the baldness which is said to prevail among the habitues of the front rows at the theater may be due to the proximity of the brass instruments, or may be caught by some contagion from the players themselves. Piano playing, on the contrary, seems to prevent or arrest the loss of hair, as is the case with Paderewski and Emil Sauer, and every noted pianist I ever heard of.

The late Prince Albert, consort to Queen Victoria, became bald at an early age, and he held that loss of hair was a sign of high breeding, of noble blood. This brings up the question of heredity.

At the meeting of the American Dermatological Association, held at Montreal, in September, 1895, a paper was read on "A Further Study of Alopecia Præmatura or Præsenilis, and Its Most Frequent Cause—Eczema Seborrhoicum," by George T. Elliott, M.D. "Also a preliminary bacteriological report on Eczema Seborrhoicum. For the first time successful production of the disease by inoculation of pure cultures of certain diplococci," by Wm. H. Merrill, M.D. Dr. Elliott gave the etiological causes found active in the production of alopecia in 344 patients, mostly occurring in private practice. "Only four, or 1.16 per cent. could be attributed directly to heredity." Dr. Merrill found several vari-

eties of bacilli, and made inoculation experiments on fifty patients. Pure cultures were made use of, and he succeeded, in advance of any bacteriologist, in producing lesions characteristic of eczema seborrhoicum.

Dr. L. Brocq⁹ says that when bacteriology of the hair is taken up various microbes are found in it. Six are, however, discovered quite constantly. These are: 1, a white fungus; 2, a yellow fungus; 3, a bacillus subtiliformis; 4, a bacillus in the form of a boat, staining with difficulty; 5, a special micrococcus which Sabouraud designates provisionally under the name of micrococcus cutis communis; 6, the spore of Malassez, the flask of Unna, which he calls the bacillus asciformis. These two microbes, which appear to be the most important, are found in seborrhoics who are not attacked with alopecia areata.

Dr. R. Sabouraud, of the St. Louis Hospital, Paris, by his experiments has given convincing proof that the microbacillus is the constant microbial expression of seborrhoic infection, causing baldness. Sabouraud says: "The three organs of defense possessed by the skin are the epidermis, the derma and the migrating white corpuscles. Each of these organs of defense defends itself by the same function for which its differentiated form has prepared it. The epithelial cell defends itself by making horny cells, the fiber cells by making fiber, and white corpuscles by their constant rôle of a unicellular amoeboid seizing the enemy, closing in around it and feeding on it. Every microbial lesion must be regarded simply as a battle-field. This conception is the foundation for all pathologic histology, and unless this is thoroughly understood, the whole phenomenon is a mystery, while once grasped everything becomes plain; the exfoliation is merely the epidermis defending itself; suppuration merely the leucocytes defending themselves; and the induration merely the mechanics of the fibrous defense. Each tissue, each element, is independently defending itself, and we know that any direct irritation of a living cell induces its multiplication, whether the irritation is mechanical or toxic. The process is a blind, unintelligent process, often defeating its own aim, as when a white corpuscle seizes a microbe and carries it away with it, but is conquered by the microbe. The microbial lesion, as we see it, is not a passive scene of destruction by the microbe. It is essentially a cellular reaction on the part of the organism against invasion, a defensive apparatus erected by the organism itself, and this conception of it places dermatology in an entirely different light, and renders a new classification necessary. Our present classification is like a pharmacy in which all the drugs are arranged according to the size of the bottles without regard to their contents."

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CARCINOMA METASTASIS IN THE SKELETON.—Virchow recently exhibited preparations showing numerous cystic cavities in the bones, particularly numerous in the spine. The bodies of some of the vertebrae had entirely vanished and deposits of lime infiltration were found in the lungs, but never noted to such an extent as in this case. The aspect of the bones resembled that of pernicious anemia.

INSTRUMENT FOR USE IN PHOTOTHERAPY.

BY J. W. KIME, M.D.

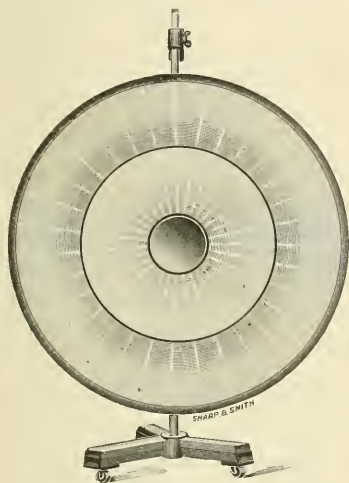
FORT DODGE, IOWA.

I have devised and am now using, in the treatment of cases by means of concentrated light, a reflector which is so constructed that the direct rays of the sun falling on it are focussed at a distance of eight feet, on an area six inches in diameter, the reflector being thirty inches in diameter. Thus a light is produced equal in intensity to twenty times that of direct sunlight, and covering an area of twenty-eight square inches. As the actinic rays of the sun are desired rather than the heat rays, blue glass is placed in front of the reflector, which permits of the passage of the light in nearly its full strength, but excludes a large percentage of the heat rays. The reflector is mounted on a metal stand which permits of motion in all directions. The light from

cures of lupus and of tuberculosis of the lymph glands of the neck.

In the treatment of tuberculosis of the lungs in its earlier stages, the light penetrates the chest wall and, I believe, has some germicidal influence on the bacilli in the lung. But the action of the light is not confined to its local effects alone on the parts diseased. The blood, every drop of which passes a number of times through the area bathed in the powerful light during each treatment, is without doubt beneficially influenced by the chemical action of the light upon it. It is still too early to report final results upon cases of tuberculosis of the lungs being treated in this manner, but I have much reason to believe that sunshine thus used will result in permanent good in the treatment of these cases.

In the treatment of chronic joint affections the reflector is used in the same manner, and has, over the ap-



THE KIME PHOTOTHERAPY REFLECTOR.

this reflector is as powerful as it is possible to make use of on account of the accompanying heat.

The method of using the instrument is as follows: The part on which the intense light is to be used is made bare and the patient is placed in front of the reflector, and at a distance of eight feet from it; the rays of the sun fall directly on it, it being so placed that the reflected rays will be focussed on the part to be treated. If the heat be too great at the focal point, the patient may be seated either within or beyond the focal point of the reflector.

Concentrated light is useful in the treatment of a number of diseases and especially in those of parasitic origin. It has long been known that strong light, and particularly the direct rays of the sun, was very destructive to bacteria. For this reason light is practically excluded from our bacteriologic laboratories. Finsen, of Denmark, has established a light institute and reports excellent results in the treatment of lupus and other parasitic skin affections. Abrams, of California, reports a number of cures of tuberculosis of the lymph glands as well as of lupus and other skin diseases of parasitic origin. The writer has reported a number of



AS USED IN TUBERCULOSIS OF THE LUNGS.

paratus in which high temperatures alone play a part, the additional advantage of the beneficial action of the powerful light.

THE INFLUENCE OF HIGH ALTITUDE ON ALBUMINURIA.*

BY EDWARD C. HILL, M.D.

DENVER, COLO.

The following brief remarks are based on the examination of something over 6000 urines in Denver, at an altitude of one mile above sea-level. No statistics having been kept, the few observations I have to make should be regarded as clinical impressions rather than as strictly scientific data.

In my experience, true renal albuminuria is comparatively rare in Colorado. This desirable state of affairs is probably due for the most part to atmospheric dryness and rarity, both of which favor the eliminative action of the lungs and skin and thus relieve the kidneys in a corresponding degree. It is true that frequent

*Presented to the Section on Practice of Medicine, at the Fifth Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.

winds and sudden weather-changes are a feature of Colorado's climate, so that patients must be warned to dress themselves accordingly, since acute exacerbations are otherwise likely to supervene.

Acute nephritis, though not common here, is exceptionally severe. Amyloid disease is certainly less frequent under predisposing circumstances than most of our text-books would lead us to infer. Chronic parenchymatous nephritis appears to terminate fatally in about the same time as at lower altitudes. The chronic interstitial type of the disease, on the other hand, is influenced favorably by this climate—a fact which I think may be ascribed largely to its tonic, invigorating qualities.

The reports of the bureau of health of this city show 77 deaths from nephritis in a total of 1838 for the year 1897, and 85 deaths from the same cause out of 1928 in 1898. These statistics are very favorable, but they should be considered in the light of the fact that the population of this city averages younger than that of eastern cities.

I invariably examine the urine of infectious cases, and have found albuminuria at some time or other in the majority of instances, but actual nephritis is quite rare, even in diphtheria and following scarlatina. Renal tuberculosis, as might be supposed from the great number of phthisical persons in this state, is comparatively common. It seems to be little influenced by the climate.

As regards other forms of albuminuria, though pregnancy is not infrequently attended by considerable albumin in the urine, serious eclampsia is, I think, less common than at lower levels. Slight, transient, circulatory albuminuria, due chiefly to high blood-pressure, is frequent here, particularly in the ubiquitous bicycle rider. Hemic forms of albuminuria are benefited by the hematosic action of Colorado air and sunlight. Of heterotoxic forms of albuminuria, that due to metallic poisons is seen rather frequently in our smelters and miners. The albuminuria of pyelitis appears to be of more common occurrence here than at sea-level, which may be ascribed, perhaps, to the greater density of urine, favoring precipitation of uratic and phosphatic sediment and the formation of calculi. The false albuminuria of cystitis and urethritis is doubtless just as frequent in Colorado as elsewhere.

VESICORECTAL ANASTOMOSIS.

WITH SPECIAL REFERENCE TO THE TREATMENT OF EXSTROPHY OF THE BLADDER.

BY JACOB FRANK, M.D.

Surgeon to the German Hospital; Consulting Surgeon to the St. Elizabeth Hospital; Jewish Orphan Home and Home for Aged Jews, Chicago; Corresponding Member of the Sociedad Médica "Pro Escobedo"; Member of the Pan-American Congress. International Medical Congress, AMERICAN MEDICAL ASSOCIATION, etc. CHICAGO.

The methods of treatment of ectopia vesicæ have not been very variable and are confined as a whole to two procedures, viz.: the plastic and the various methods of diverting the course of the urine.

Plastic Methods.—The plastic operations which have been performed, and which have for their object the covering of the exposed mucous surface with skin, aim at remedying only the cosmetic effect, which is but a minor evil. In this category belong those of Holmes, Wood, Le Fort, Thiersch, Hirschberg, Kocher, Hagenbeck, Auger, Greig Smith and many others who added much to this method by their own personal technic. All these methods, although they have done much toward the plastic repair, have many objections. They do not pro-

vide a sphincter, and although by covering the exposed mucous membrane they preserve it from external irritation, they do not prevent the escape of urine. The inverted skin flap with its growth of hair favored incrustations of calcareous salts and so irritated the mucous surface worse than before.

Sonnenburg advocated the entire extirpation of the exstrophied bladder, and the implantation of the ureters at the base of the penis, possessing the advantage that the escaping urine could be more effectually caught in a urinal intended for that purpose. Trendelenburg sutured the edges of the bladder after forcibly narrowing the pelvic girdle, thus resuming the operation conceived by Dubois and Dupuytren in France, a plan which has found little favor, as it is open to the same objections as the other methods above described.

The experiments of Tizzoni and Poggi, while they are ingenious, are of little practical purpose. They first isolated a loop of intestine, after the method of Thiry, and at a subsequent operation they ablated the entire bladder, then sutured the ureters into the artificial intestinal loop, and finally sutured this loop to the neck of the bladder. Recently Rutkowski imitated this procedure in a case of exstrophy of the bladder, but his operation is only a novelty in the history of surgery. In his technic he made an abdominal section above the level of the exstrophied bladder, drew out a loop of intestine and resected six centimeters of it. This he left attached to the mesenteric pedicle to receive its vascular supply. The severed ends were closed by circular enterorrhaphy, the excluded segment was split opposite to its mesenteric attachment and the mucous membrane stretched out and sutured to the margins of the bladder after being freshened. The abdominal walls were next approximated so as to cover the bladder. The patient recovered and eight weeks after the operation was able to retain over an ounce of urine for three-quarters of an hour.

Methods of Diverting the Course of the Urine.—The idea of implanting the ureters into the intestines is not new. Simon, in 1851, attempted it on a human subject, and the failure of such an early effort is not surprising when we consider the imperfection of the technic and the absence of antiseptics. The fruitless attempts of Simon, Lloyd and Roux found few imitators, and the question was held in abeyance for many years until aseptic methods gave a new impetus to operative surgery. The union of the ureters with the intestine is not an unusual condition. It is well known that in birds urine and fecal matter is emptied into the cloaca during the entire life. Embryology teaches us that the secretions from the kidneys in the human fetus empty into the cloaca during the first months of gestation. This continues until the time when, in the developmental progress, the bladder is entirely separated from the rectum.

Simon's effort consisted in passing a loop of thread through the walls of both the ureter and the rectum, and tying them tightly together. Necrosis occurred at the point of ligation, and a communication resulted. The patient died of pyelonephritis. Thomas Smith derived no better results from his case. Since then the idea has been renewed and the answer especially sought from the experimental as well as the clinical standpoint, until to-day the suggestions and methods have multiplied to an almost embarrassing extent.

The first in the experimental field were Glück and Zoller, who tried, on dogs, the effect of total extirpation of the bladder with subsequent deflection of the ureters, sometimes to the skin, sometimes into the rectum. The

latter was in all cases unsuccessful. About the same time Bardenheuer tried unilateral implantation into the intestine. His animals recovered from the operation, but subsequently died from hydronephrosis due to stricture of the ureter.

Novaro reported, to the Italian Surgical Society of Genoa, in 1887, that he had successfully anastomosed both ureters with the intestine, and demonstrated that the intestinal mucous membrane is well able to accommodate itself to the presence of urine—a point already established by Richardson, who cites the case of a patient living seventeen years with a congenital implantation of both ureters within the intestine. Paoli and Busachi reported a number of similar experiments, and in nearly every case a constriction of the ureter developed.

Giordano, VanHook, Tuffier, R. Harvey Reed, Morestin, Chaput, and, recently, Kalabin tried similar experiments on dogs, but their results are no better than those of their predecessors. For the relief of exstrophy, Sonnenburg and Harrison, discouraged by the difficulty of ureteral implantation, tried to divert the urine through a cutaneous fistula, an operation performed before by Glick and Zoller. Among others who have experimented in the same direction may be mentioned Le Dentu, Pozzi, Dastre and Treckacki.

In this hasty review the efforts of Pawlick and Boari to divert the urine through the vagina should be recorded. Küster, in 1891, for cancer of the prostate, implanted both ureters in the rectum, but the patient died on the fourth day, of peritonitis and evidences of renal infection. Chaput, in 1892, performed unilateral implantation for the relief of a uretero-vaginal fistula, with success; in another patient, for tuberculosis of the bladder, he implanted both ureters, but at different times, the patient dying from anuria, after the second operation.

The results of these experiments and isolated clinical attempts are almost uniformly unsuccessful. The technical difficulties have been fairly well overcome, but the dangers of septic peritonitis, secondary pyelonephritis from ascending intestinal infection through the ureters, hydronephrosis from stricturing of the ureter, were still unfavorable and unavoidable complications. In order to overcome these Tuffier and Maydl, each claiming priority, proposed and carried out the implantation of the vesicle trigone, thus avoiding the possibility of stricturing and ascending infection. In fact, it is the preserving of the ureteral sphincter that protects the ureter itself and the kidney against infection. As long as the ureter is permeable and its sphincter functioning, so long is the kidney protected.

Boari and Chalot, subsequent to Tuffier's and Maydl's work, each devised a special button for anastomosing the ureters to the intestine, with only moderate success. Others who have contributed by their efforts, since the advantages obtained by transplanting the vesical trigone, are Fowler, Pisani, Martin, Vignoni and Roux. My own work in this direction was commenced in the spring of 1898, when a series of experiments was conducted on both unilateral and bilateral implantation of the ureters in the intestine after a method of my own, with no better success than those preceding me. I then turned my attention to anastomosing the bladder to the rectum, an idea which I thought was original at the time, but in the discussion of the paper before the Chicago Medical Society my attention was called to an operation performed by Timothy Holmes, mentioned in his "Surgical Diseases of Infancy and Childhood." He attempted to establish a vesicorectal fistula by means of a screw-

blade and forceps, and describes his operation as follows:

In the case of a boy in whom I had planted a bridge of skin in front of the exposed mucous membrane, who found much difficulty in procuring a proper urinal, I endeavored to divert the urine into the rectum by the following plan, which, or a modification of which, I proposed to follow in the next case that came under my care. I placed the blades of a kind of screw forceps (much resembling Dupuytren's entérotome) in the rectum and bladder, and by bringing them gradually into the closest possible contact I destroyed the tissues between them, thus establishing a free communication through the subperitoneal tissue between the bladder and rectum. The attempt failed; for though the urine passed in considerable quantities into the bowel, a good part of it still continued to escape above the pubes. I endeavored to obviate this by closing the suprapubic opening altogether by plastic operation. The opening was thus, in fact, reduced to a sinus, but this caused such intolerable pain when the bladder was distended, and such accumulation of sabulous matter in it, that I was fain to abandon the attempt, break open the suprapubic hiatus again, and allow the rectal communication to close. The original fault of the preceding lay, I think, in my having covered over the opening of the ureters before I applied the screw forceps. Had I been able to comprise these openings in the tissue which I destroyed, so that the ureters would have opened directly into the cloaca between the bladder and rectum, I believe the attempt might have succeeded. In my case, though it was a failure in other respects, the communication between the bladder and rectum was established without producing any unpleasant symptoms, and the communication was well above the sphincter, so that the urine was retained in the bowel, and passed naturally along with the motions.

The operation and technic, which is original, now remains for consideration, and consists of anastomosing the bladder to the rectum with my decalcified bone coupler, which has already been described.¹ The technic is as follows: in a male dog, the incision is made in the groin, and in a bitch, in the median line. Generally the bladder is found distended, and is emptied by squeezing it gently with the hand, when the urine escapes through the natural channel. The rectum is next picked up and freed of its contents, as in any intestinal operation. The bladder and the rectum are then brought forward and placed in position for anastomosis. (Fig. 1.) Two or three interrupted Lembert sutures are now taken about half an inch below the lower ends of the incisions determined on in the bladder and rectum, care being exercised in selecting them that the coupler, when it is inserted, will not encroach on the ureteral openings in the bladder. A longitudinal incision is then made in the bladder, large enough for the coupler selected, and a puckering string, applied over and over the cut margin. (Fig. 2.) The rectum is next opened in its long axis and a puckering string similarly applied. The suture should be taken so that the free ends lie uppermost, thus facilitating easy tying. The operator now slips the coupler (Fig. 3) into the bladder opening, at the same time gently spreading the collars apart, while an assistant makes one knot and draws down on the puckering string until the rubber tubing is felt; another knot is made and the ligature cut off short. The other half of the coupler (Fig. 4) is then slipped into the rectal opening and likewise tied and cut off. Several interrupted Lembert sutures are taken around the borders, to make the work more secure. The operation is very simple and can be accomplished in ten or fifteen minutes.

In the first six experiments, a five-eighths-inch coupler was used, but later, in large dogs, a seven-eighths-inch,

¹ Medical Record, N. Y., Oct. 3, 1896; THE JOURNAL, June 19, 1899; Medicine, January, 1897.

and in smaller dogs a three-quarter-inch coupler was inserted. The small piece of rubber tubing never failed to pass away. Silk was used in all experiments.

The opportunity of trying this new method on the human being has not been afforded me, although it was tried on the cadaver and the technic carried out nicely. Of the fifteen dogs operated on, nine recovered and six died. In the first two experiments the technic was not yet perfected and much unnecessary work was done, which undoubtedly contributed largely to the failures. As a rule, the dogs were quite sick for the first few days, and showed signs of pain, with rise of temperature. For a week after the operation urine and feces were voided oftener than after this period. The dogs would hoist their legs as though in the act of urinating, without accomplishing anything, and finally squat down and

throughout. The ureters were not enlarged, but the capsules of the kidneys were greatly congested. The kidneys appeared normal on cut section. The coupler was still in place and the bone somewhat softened. The rectal mucosa, a few inches above and below the site of the anastomosis, was very much injected. No microscopic nor bacteriologic examinations were made.

EXPERIMENT 2.—A male dog, weight 20 pounds, was operated on April 25, 1899, and died April 27. A post-mortem showed a condition of general peritonitis, with the intestines adherent throughout. A pus-like fluid exuded from the wound incision, and the peritoneal cavity was found full of a serous effusion. The bladder was thickened, contracted and greatly engorged. No urine was present in the bladder. The ureters and kidneys showed a marked congestion, but no enlargement. On cutting open the bladder the coupler was found still in

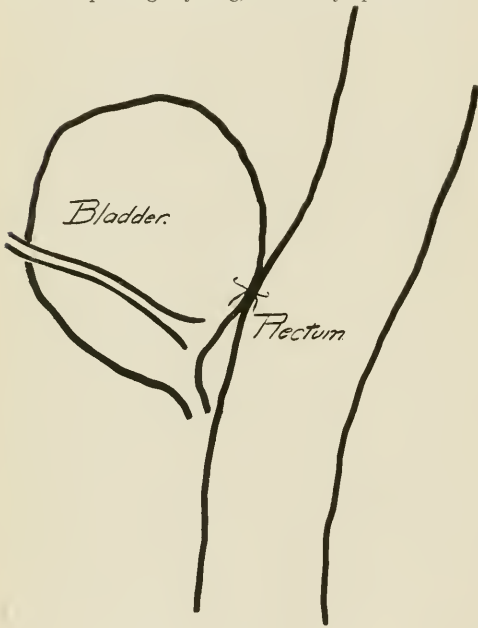


FIG. 1.

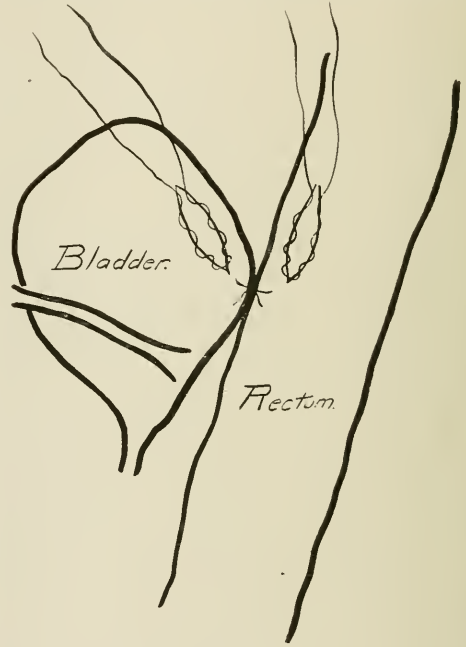


FIG. 2.

urinate from the rectum. The animals that were kept, accustomed themselves to their condition and urinated periodically. The feces were always passed in a liquid form, being softened by the urine. This latter appears to confirm the observation of Novaro, that the rectal mucous membrane readily adapts itself to the conditions of a urinary receptacle. In the following experiments the bacteriologic and pathologic examinations and microphotographs were made for me by Dr. Maximilian Herzog, professor of pathology in the Chicago Poly-clinic.

EXPERIMENTS.

EXPERIMENT 1.—A male dog, weight 25 pounds, was operated on April 18, 1899, and found dead April 22. Rats had disturbed the parts, through the operative wound, so that one could not judge whether peritonitis was present. The autopsy revealed a contracted, thickened, and very much congested bladder. Over the anterior opening the omentum was adherent

place and softened. There was a distinct line of demarcation at the sphincter vesicæ, showing where the inflammation had stopped. The kidneys, on cut section, showed marked engorgement. Here also no bacteriologic nor microscopic examinations were made.

I am satisfied that the rough usage of the parts and the imperfect technic were the prime factors in producing the fatal results in the first two experiments.

EXPERIMENT 3.—(Fig. 10).—A male bull cur, weight 30 pounds, was operated on May 3, 1899, and killed December 15. This dog, before the cold weather set in, was very lively and active, but with the onset of winter and the lack of proper exercise, began to show signs of decline. For several days prior to the killing, he refused food and drink and was moribund when chloroform was administered. At autopsy, externally there was found, to the left of the operative incision, an old, slightly suppurative stitch-hole abscess. The long median post-mortem incision was carried to the right in order to avoid the original laparotomy incision, and the omentum was found

adherent to the anterior abdominal wall and to the left of the laparotomy scar. The adhesions were comparatively firm. The large omentum had been dragged down in such a manner as to pull down the lesser omentum. The latter, in its descent, had displaced the spleen, so that this organ extended from above downward, parallel to the long axis of the body. In a like manner the stomach and duodenum had been pulled down to a marked degree. The adhesions of the large omentum to the anterior abdominal wall had formed, so that they compressed the left ureter near its place of entrance into the bladder. At this point it was slightly bent and constricted, and enlarged to about twice its normal size above the point of constriction, which enlargement extended up to the pelvis of the kidney. The left kidney itself, as a whole, did not appear enlarged. When laid open, its substance looked fairly normal, though dull, as if in a state of cloudy swelling. The pelvis was slightly enlarged and contained a small amount of a yellowish, somewhat cloudy fluid. The right ureter and kidney appeared normal, and the anastomosis between the bladder and rectum was perfect. The bladder was firmly contracted

usual aseptic precautions. The ureters were then dissected free and the kidneys, ureters, bladder and part of the rectum removed *en masse*. Pieces of tissue were taken from both kidneys, the spleen and the liver for microscopic examination. These were fixed in Müller's formalin solution, and subsequently embedded in paraffin, then sectioned, and stained according to various methods. The culture-tubes inoculated from the kidneys developed colon bacilli and a white yeast.

Histologic Examination.—The epithelium of the pelvis was found intact in the left kidney. The subepithelial tissue showed

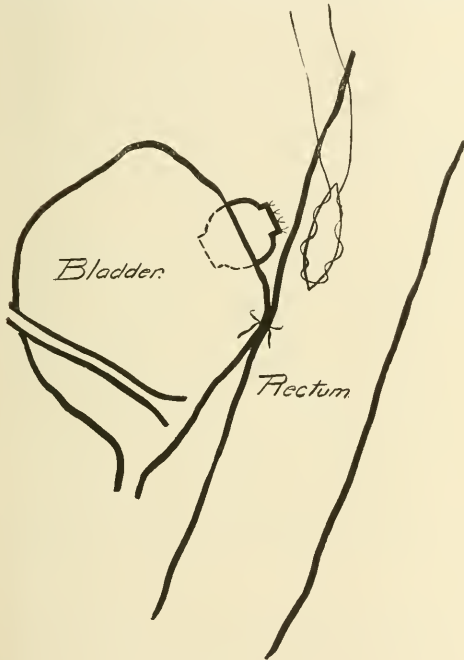


FIG. 3.

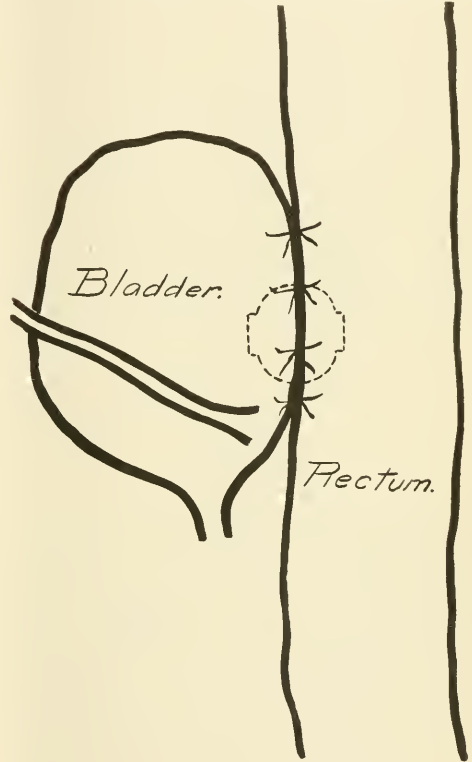


FIG. 4.

and the mucous membrane looked pale on cut section, but showed no evidence of inflammation. The peritoneum in the neighborhood of the anastomosis was smooth and glistening and everywhere appeared normal, except as to the omental adhesions described above. The spleen was dark red in color and its substance firm. The liver was of the same color, but rather soft, and in some places the capsule appeared dull, with circumscribed areas presenting the picture of perihepatic processes. The lungs and heart were normal, although the heart muscle was rather soft and flabby.

At the post-mortem the following technic was conducted and carried out, and in the same manner for all the experiments. The kidneys were freed from the surrounding connective tissue, and a heated platinum loop introduced into the pelvis, and cultures made under the

a very dense round-cell infiltration. The epithelial lining of the uriniferous tubules was in a state of cloudy swelling, and fatty degeneration. Some of the uriniferous tubules contained hyaline casts. Extensive foci of interstitial inflammation were also found and showed a dense round-cell infiltration. They appeared to be of comparatively recent origin, since tracts of fibrous connective tissue so frequently seen in old chronic interstitial nephritis were not found. The whole kidney, from the subepithelial layer of the pelvis to the cortex, was thoroughly infected with colon bacilli, which were found in enormous numbers in some areas.

The right kidney showed changes similar to those found in the left, but they were, however, much less severe. The inflammatory infiltration of the subepithelial layer of the pelvis was well marked, as were also the parenchymatous changes

(cloudy swelling, etc.). Interstitial changes were practically absent. The infection with colon bacilli was moderate when compared with that of the extensive infection of the left side.

The *liver* showed only slight histologic changes. There were present cloudy swelling of the liver-cells and a very moderate amount of small round-cell infiltration around the interlobular veins. The interlobular connective tissue proper was not increased in amount, but a large number of colon bacilli were found scattered throughout the whole liver tissue. The *spleen* likewise showed no very marked histologic changes, but a moderate infection with colon bacilli. Though the cultures from the pelves of the kidneys had developed a yeast micro-organism, none were found in the tissues.

From the above it must be conceded that the dog suffered from a general colon infection at the time when he was killed, but it may be granted, from the histologic examination, that the infection of the kidneys took place only recently, which presumption is borne out by the fact that the dog had been lively and well for six or more months after the operation and had been sick only a short time before it was killed. Probably the omental adhesions with their train of sequelæ, displacement of the spleen, stomach, duodenum and compression of the left ureter, became the agency which led to the infection of the kidneys. The infection of the liver had very likely taken place only recently, by way of the gall-ducts, from the intestinal tract. The generalization of the infection may either have taken place from the kidneys or, what is perhaps more probable, from the liver.

(To be continued.)

SPECIAL ARTICLE.

RELATIONS OF PHARMACY TO THE MEDICAL PROFESSION.*

IV.

INTERNAL MEDICINES.

While considerable latitude may be extended, as mentioned last week, in the ethical requirements, to articles designed for purely external use, such exemption can not be applied to medicinal agents or preparations for internal administration. While it may be broadly asserted concerning every method of medication, oral, subcutaneous or orificial, that the therapeutic effect derived from a remedy depends as largely on the quantity of the particular agent that may "reach the spot" as it does on the amount of the medicine administered, yet for the general therapeutic purposes indicated by preparations for external use, the actual amount of the active agent applied is as a rule of but little consequence compared with the quantity given as a dose of any internal medicine. The only safe rule, therefore, governing the administration of medicine for internal use, is that the composition must be known, and the quantities of the medicinal ingredients of a mixture and the strength of the active constituents of simple preparations must be accurately given. There should be no compromise in this position; medical ethics and medical practice demand it, medical literature and pharmaceutical practice require it. The identity of the medicinal agent must be certain so that its properties may be disclosed; the strength of the preparation must be known in order that uniformity in effects may be fairly secured and that dosage may be determined.

THE FORMULA PRIVILEGES.

In solutions, liquid mixtures and extractive preparations, the selection of the particular solvents, vehicles and menstrua respectively employed in their preparation is based almost entirely on pharmaceutical considerations. The stability of the solutions, for example, the eligibility or palatability of the mixtures and the permanence of the liquid extractive preparations are the chief desiderata. In official preparations these

qualities are secured through the reported researches of practicing pharmacists, and consequently are constantly undergoing improvement. These processes are no more perfect than many a process in operative surgery; the tendency is toward perfection—apparently often attained, but more often only prospective.

The question that now arises is this: If a pharmacist, through his greater experience, skill and integrity, succeeds in producing a more stable, palatable, or otherwise more eligible preparation than has usually been afforded from the same mixture or drug, should he simply make such a working formula public for the benefit of pharmaceutical literature, or should he be permitted to seek such advantage, through exploitation of the superiority of the preparation to the medical profession, to which he may consider himself entitled as a recompense for his labors?

No doubt from a purely ethical standpoint he should be satisfied with the first course, but there is another side to the question; if he has really made an improvement he might be afforded some protection for a limited period, as is done in France, where the National Academy of Medicine is made censor of medical preparations, and decides which shall be awarded protection. In the same way the AMERICAN MEDICAL ASSOCIATION, possibly in conjunction with the American Pharmaceutical Association or the Committee on Revision of the Pharmacopœia, might form a committee whose annual reports should determine the status of these medicinal articles. A formula may be ever so complete in detail and yet not produce satisfactory results at the hands of different workers. The personal equation must be considered, i. e., the experience, skill and integrity of the pharmacist.

LIMITATIONS IN PRACTICE.

Like some other branches of medical service, pharmacy is yet in its formative stage. With the practice regulated by law in forty-five states, in no state is it required that a pharmacist shall have graduated from a college or attended a school of pharmacy as a condition for examination and license by the state board. The result is that while there is no lack of good schools, these are poorly supported, since the vast majority of young pharmacists find that they can, as a rule, easily pass the necessary examination without attending college; the comparatively small proportion who attend school are forced into competition with the non-graduates, but licensed pharmacists, with the inevitable result of reducing them to the irresistible commercial level. They are also still in competition with the hold-overs who were engaged in the drug business some fifteen or twenty years ago, when the pharmacy laws were first enacted; many young pharmacists, well educated, finding little opportunity to practice pharmacy, begin to lose heart and soon fall into a "rut." This is practically the condition of pharmacy throughout the United States to-day.

A formula is a formula—nothing more; it is incomplete without the *secundum artem*, as in all other technical operations from culinary to music. With the official preparations, the methods of manufacture are detailed with great exactness, and it must be assumed that every licensed pharmacist is competent to carry out the directions, yet many can not prepare a perfect "Griffith's mixture." Some may know how but are careless in the selection of the ingredients, do not "expend the necessary synovial fluid," and do not strictly observe the order of adding the many various ingredients. How many pharmacists can make a perfect turpentine-oil emulsion? Some can not even make a perfect one of cod-liver oil. Such a condition should not exist, but it does. So long as a better standard of pharmaceutical service can not be relied on uniformly, the physician must necessarily either pass by the pharmacist by prescribing ready-made medicines, or discriminate in favor of those who are regularly educated and have demonstrated their ability and integrity.

LACK OF STANDARD IN PHARMACEUTIC SERVICE.

It may be said that there are many competent pharmacists in the large cities and sometimes in smaller places, and they are easily discovered. The simplest and most effective method

* The fourth of a series of articles to appear weekly in THE JOURNAL, designed to correct the abuses from advertising and patronizing pharmaceutical specialties.

by which a physician can distinguish the true pharmacist from the pseudopharmacist or "druggist" is to engage him to make a preparation, for example, one of those mentioned above, or one that requires special skill.

It should be remembered that a license is simply a testimonial that the holder has a fair knowledge of drugs and medicines, and can differentiate them and thus prevent error in dispensing and compounding; that he can make the simpler official preparations, waters, solutions, tinctures, etc.; but not necessarily that he has the skill or ability required for any work outside the ordinary routine. If physicians would interest themselves a little more in the younger graduates in pharmacy, and give them opportunities to practice their art whenever possible, these young men would soon be imbued with a professional spirit, realize that pharmacy is a profession—a specialty in medicine—and become better qualified; counter-prescribing and many other evils would cease.

It is not alone in these compound preparations and mixtures that the formula is not always the *sine qua non*. While occultism in medicine belongs to the past, there are many brands of official preparations and even chemicals that maintain the preference of medical men. A considerable number of the older practitioners insist on using one special make of fluid extract of ergot, and this may be said in a still greater degree of one brand of chloroform for use in anesthesia. Until comparatively recently, one special brand of quinin sulphate was the only one that many physicians would use, and in some of the Southern states no other could be sold at all. These discriminations may not have a scientific basis, yet they exist.

The above observations have been made in order to set forth the status of the protective medicines as completely as possible, and to serve as a guide in determining the often-complicated questions involved in their relations to medicine and the medical profession.

In the article in THE JOURNAL two weeks ago, these medicines were classified as follows: 5. Proprietary pharmaceuticals, secret. 6. Proprietary pharmaceuticals, non-secret. 7. Pharmaceutical specialties, mixtures. 8. Pharmaceutical specialties, simples. These will be taken up in their order.

SECRET PROPRIETARY PHARMACEUTICALS.

These are preparations of secret composition—for internal use—protected by trade-marks or copyrighted names, offered for medical prescription. From the fact that they are secret and are sooner or later exploited to the laity, they should never receive medical patronage. They range in degree of secrecy from mixtures of fairly descriptive and therapeutically suggestive names, such as, "Antikammnia" and "Melachol," to the most bare-faced swindles that have ever been perpetuated since Cagliostro replenished the exchequer of Louis XV with gold bricks made by transmutation of the base metals from the proceeds of the bandits who, in his employ, were holding up the nobility and gentry in the Italian mountain passes, on their way to Rome.

A few examples will suffice: "Essence of Oats," some ten years ago, vaunted as a most wonderful restorative, was found to be a preparation of morphin. More recently a preparation made from a plant discovered by a Texas physician, growing in the everglades in Florida and only collected at the risk of sacrificing human life, was recommended in a New York medical journal as a cure for the opium and morphin habit, but was found on analysis, to be a preparation of opium. "Gleditsopine," an alkaloid alleged to have been obtained from the plant *Gleditsia triacanthos*, and exploited by a prominent house, was a mixture of morphin and atropin. "Flora-China," introduced by a concern in Florida, as identical with quinin in all properties save that it was tasteless, on examination proved to be calcium sulphate, gypsum or plaster-of-Paris. These articles were advertised to physicians, and many not only used them, but gave testimonials extolling their virtues.

Besides these examples of rank frauds there are all grades of deceptive articles until a class of mixtures which have suggestive trade-marked names, sometimes associated with a more or less correct definition of their derivation, is reached. One of the earliest and most successful of this class was

"Antikammnia," claimed to be a "combination of coal-tar derivatives," and to possess antipyretic and analgesic properties. It proved to be a mixture of acetanilid and caffeine with sodium bicarbonate and a little tartaric acid—a combination early adopted by medical men to insure more uniformity in the action of the acetanilid and to modify its effect on the heart. This soon had many imitations and paved the way for the introduction of the various "headache-cures" and "remedies" which, in the form of powders, wafers, capsules and tablets, disgrace the show-cases of the drug stores throughout the land, and, it may be mentioned incidentally, have been furnishing plenty of work for the undertakers. Being extensively employed, they were introduced into the revised edition of the National Formulary, in 1895, as: pulvis acetanilidi compositus—compound powder of acetanilid—"Kamma Fuga"—acetanilid, 50 grams; caffeine, 2 grams; tartaric acid, 3 grams; sodium bicarbonate, 45 grams (reduce the ingredients separately to a fine powder and mix them thoroughly).

Other mixtures of similar composition are "Ammonol" and "Phenalgin" or ammoniated phenylacetamid, etc. In these two the sodium bicarbonate is replaced by ammonium carbonate. "Melachol," composition or formula not given, is asserted to be a bulwark against all diseases of the liver that may be caused by candies, rich foods, liquors, or neglect of exercise. To restore and permanently establish vigor of manhood it is "superior to any other known remedy;" "as a tonic, half a teaspoonful in water about meal-time; to move the bowels, one tablespoonful in a glass of water." This preparation is a colorless solution of citrophosphate of sodium and, according to analysis, the following furnishes a similar preparation: sodium phosphate, 100 grams; sodium nitrate, 2 grams; citric acid, 13 grams; water to make 100 c.c. On trituration of the salts with the acid, the new compound is formed and dissolves in the water of crystallization, thus forming a 100 per cent. solution.

The "Formula-preparations" will next be considered.

Therapeutics.

Treatment of Chronic Nervous Diarrhea.

At the recent Congress of Balneology, held at Frankfort-on-the-Main, Pariser (*Berliner Klin. Woch.*, April 2, p. 309) divided cases of chronic nervous diarrhea into several groups. The first includes those dependent on organic disease of the nervous system, such as tabes dorsalis, as well as those attending exophthalmic goiter, and rarely also diabetes. The remaining cases are instances of neurasthenic diarrhea, but here further subdivision must be made for etiologic, diagnostic and therapeutic reasons. The second group includes the cases of toxic diarrhea in which the neurasthenia is only secondarily the result of the intoxication. Toxic nervous chronic diarrhea occurs in consequence of intoxication by dying tenia, and abuse of nicotine and morphin. The third group includes nervous diarrhea induced by reflex influences. The reflex may arise from the male and female genitalia, the stomach and the duodenum and through parasites. It has also been observed from a hernia of the linea alba and from enteroptosis. Also the obstinate diarrhea not rarely observed in cases of chronic gastritis is considered of reflex nervous origin. Here the irritation consists in the ingesta insufficiently prepared for intestinal digestion. The fourth group includes the cases of simple neurasthenic diarrhea. The condition is often one of a central phobia. Patients thus affected are often attacked with diarrhea, especially when influenced by the thought of being unable to reach a place of refuge. Further, chronic nervous diarrhea also occurs in conjunction with hysteria. The last group constitutes the mixed form of neurosis and intestinal catarrh. The mixed form of neurosis with isolated catarrh of the small intestines is especially obstinate and the prognosis is unfavorable. The latter is better in cases complicated with catarrh of the large and the small intestine or of the large intestine alone. The stools never contain mucus in cases of pure chronic nervous diarrhea. In the cases of toxic and

reflex diarrhea the treatment should primarily be causal and local. In these, besides, an antineurasthenic régime should be observed, and in the purely neurasthenic cases this is of paramount importance. Isolation, that is, removal from previous surroundings, is especially desirable. In severe cases rest in bed and applications of heat are unconditionally required. The diet in all cases of chronic nervous diarrhea should be bland. As opposed to the opinion sometimes expressed, that no particular importance need be attached to the diet in these cases of mixed form of catarrh, the treatment must first be directed to the catarrhal state without neglecting the neurasthenia. Among drugs bromids are particularly valuable.

Urotropin as a Urinary Antiseptic.

At a recent meeting of the Leeds and West Riding Medico-Chirurgical Society, Cammidge (*British Med. Jour.*, March 17, p. 641), after briefly referring to a case of cystitis complicating enteric fever in which urotropin had proved beneficial, gave details of investigations that he had carried out with regard to the action of urotropin on the urine from patients who had taken it, on the bacillus typhosus, the bacillus coli communis and the staphylococcus pyogenes aureus under various conditions. He also described some chemical experiments designed to determine the mode of excretion of the drug in the urine, and the cause of its marked antiseptic and inhibitory powers over the growth of micro-organisms possessed by such urine. The result of these experiments seemed to show that although this action is in part probably due to the urotropin itself, excreted unchanged in the urine, another and more powerfully inhibitory substance is present. This was not thought to be free formaldehyde, but possibly a sodium compound of this substance. There is both clinical and experimental evidence tending to show that one condition necessary for success in using the drug as a urinary antiseptic is that the urine should be acid in reaction, as it is secreted in the kidney. Stress was laid on the marked inhibitory action of urotropin and still more of urine containing urotropin on the typhoid bacillus, and it was pointed out that there is a wide field of usefulness for this drug, both in the treatment of cystitis and other conditions liable to complicate enteric fever and as a preventive against the dissemination of typhoid bacilli by the urine. It was suggested that all patients suffering from enteric fever should receive 10 grains three times a day from the end of the second week on, during convalescence. Reference was also made to the usefulness of the drug in the cystitis accompanying enlarged prostate and stone, as well as the benefits to be derived from its administration in the presence of bacteriuria, some cases of nocturnal enuresis in children and as a preparation for operations on the urinary tract.

Treatment of Inguinal Hernia by Injection.

Scully (*Medicine*, April, p. 265) recommends the following formula as an injection in the treatment of inguinal hernia:

R. Fluid extract of quercus alba.....	ʒiiss
Solid extract of quercus alba.....	ʒiiss
Carbolic acid crystals.....	ʒiii
Iodin resublimed.....	ʒiii
Morphin sulphate.....	gr. x

Mix the carbolic acid and the iodine thoroughly in a mortar, and the other ingredients and triturate slowly. Twenty minims of this solution constitute the maximum quantity for a single injection. Before the injection is made, a truss that will retain the hernia in any position the patient may assume should first be fitted. After the parts have been prepared aseptically, the patient should be placed in the recumbent posture, the hernia reduced, and the index finger placed in the inguinal canal by invaginating the skin over the external ring and pushing the finger up the canal until the tip reaches the internal ring. The needle, which should be a stout one, from 1½ to 2 inches long, should be inserted directly over the finger tip and pushed down quickly until it passes the end of the finger. From 3 to 5 minims should then be injected slowly and, as the finger is withdrawn slowly, the needle is made to follow it for about half an inch. During this time the fluid is still injected slowly, and when the 20 minims have been in-

jected the needle should be withdrawn suddenly to avoid depositing any of the fluid in the subcutaneous tissue. The truss should be placed in position immediately, and the patient lie down for about half an hour. Should pain follow, relief will be afforded by the application of a hot-water bag. The injections should be repeated once a week for three or four weeks, when, if the hernia does not come down on removal of the truss and after testing it by having the patient cough or stoop, no further injections need be given. The truss ought to be worn for at least four weeks more, when, if the patient desires, it may be left off. In most cases it is well to advise the wearing of the truss for from four to six months, and one with a large soft pad is preferable.

Treatment of Eclampsia with Saline Infusions.

At a recent meeting of the Edinburgh Obstetrical Society, Jardine (*The Lancet*, March 31, p. 938) reported 5 cases of eclampsia, in addition to 17 previously reported, treated with saline infusions, in which the diuretic effect had been prompt and marked. The solution used consisted of one dram each of sodium chlorid and sodium acetate to the pint of sterile water. From 2 to 3 pints were injected underneath the breasts, between them and the chest wall, or, if required, into the loose abdominal subcutaneous tissue. If necessary the injections are repeated. Besides, a saline purge is administered, sometimes with bromid and chloral and ten minims of tincture of veratrum viride by hypodermic injection. Of the 22 patients, 6 died, 1 from perforating duodenal ulcer. One was treated with ordinary saline solutions. This result compares favorably with that yielded by other lines of treatment for eclampsia, especially in view of the fact that many of the patients had been seized with convulsions for several hours before coming under observation, and the cases of some even had been considered hopeless. No risk attends the infusion and not a single abscess followed not less than 200 injections. Strict aseptic precautions must be observed.

Evaporating Lotion for Wounds.

Reed (*Annals of Surgery*, April, p. 431) recommends the following formula as an evaporating lotion for the saturation of gauze and application to wounds:

R. Boric acid solution, 3 per cent.....	ʒo parts
Alcohol.....	ʒo parts
Glycerin.....	ʒo parts

The addition of 8 drops of a saturated solution of mercuric chlorid (mercuric chlorid 2 ounces, alcohol 2 ounces, glycerin 6 ounces) to a pint of the foregoing makes a solution of about 1 to 3500.

Diarrhea of Infants.

Cattaneo (*Pediatrics: Phila. Med. Jour.*) calls attention to the value of tincture of iodine in the gastrointestinal infections of infants. This remedy has also been praised by Grosch and Stahan. The following combination is recommended:

R. Tinct. iodini.....	gt. v to xv
Aque dest.....	ʒv
Syrupi.....	ʒvi

M. Sig. A teaspoonful every two hours. It is well to administer a purgative dose of castor-oil or of calomel before using the iodine. This combination of a purgative with the tincture of iodine gives excellent and speedy results.

Diaphoretic.

R. Camphoræ.....	gr. xxx
Pulv. opii.....	gr. ʒ
Potassii nitratiss.....	gr. iiii
Sacch. alb.....	ʒiii

M. Sig. Take in a cup of tea before retiring.

—Von Graeffe, *Med. Record*.

Diuretic Pills.

R. Pulv. seillæ.....	gr. xxx
Pulv. digitalis.....	gr. ʒ
Caffeina, aa.....	gr. xxx
Hydrag. chloridi mitis.....	gr. v

M. ft. in pil. No. xxx. Sig. Give one three times a day after meals.

—Practitioner.

Medicolegal.

Not Necessary to Prove Mental Suffering.—In the case of the Missouri, Kansas & Texas Railway Company of Texas vs. Cox, which the latter party brought to recover damages for injuries sustained by being thrown from the top of the caboose of a freight train, the Court of Civil Appeals of Texas holds that it was not necessary for him to prove that he sustained mental suffering, as the jury was permitted to consider that element of damage as arising from the physical injuries sustained, as shown by the evidence.

Requiring Physical Examination of Daughter.—The Supreme Court of Georgia thinks that it would be going a great length to hold that an action by a father for the loss of services of his minor daughter should be defeated by the refusal of the daughter, who, though not quite 21 years old, was practically a grown woman, to submit her person to a physician for physical examination. Certainly, if, as was alleged in the case of Bagwell vs. the Atlanta Consolidated Street Railway Company, the physician, though eminent in his profession and a thorough gentleman, was distasteful to the daughter, the court says it would be placing on the father, even if she were still under his control, a great and painful burden to require him to coerce her to undergo an examination, or else give up his cause of action. But that was not the case here, for the record showed that the refusal on which the judge's order of dismissal was based was made by the daughter after she had become of age. At that time, the supreme court holds, her father had no right or authority to control her person or her movements. His conduct would have been indefensible, if not criminal, if he had undertaken to compel her, against her will, to allow a physician to examine her. It might be that, if he really desired the examination to take place, he might, by perfectly proper means have induced his daughter to consent to it. But be that as it may, the supreme court goes on to say that it is not prepared to hold that he was in any event bound to pursue such a course. On the contrary, it declares that it has no hesitation in holding that a case should not be thrown out of court because of the conduct of one not a party to it, and who was neither legally bound to obey the plaintiff's orders, nor subject to his custody or control; and so it holds that this case was improperly dismissed. In other words, it holds that an action by a father for the loss of the services of his minor daughter, occasioned by personal injuries, should not be dismissed because she, after reaching her majority, refuses to obey an order of the court in which the action is pending, requiring her to submit to a physical examination of her person by a physician.

Test of Testamentary Capacity.—In the Lawrence will case the appellate division, first department, of the Supreme Court of New York says that there was no question but that the testator was insane in the month of October. The substance of the testimony of the experts in the case was that the testator, on October 16, was in a condition of acute melancholia, with delusions; that the onset of that disease had been of a slow and steady character; and that the condition that he was in at that time was the culmination of a progressive disease, which had continued from four to six months. He made his will May 9. And with only this testimony from which testamentary incapacity could be inferred, the court does not consider that it was shown. It holds that the test was, not whether the testator at the time of the execution of this will was suffering from the disease from which he became insane in October, but whether at the date of the execution of the will the disease had so far progressed that he had not sufficient memory to collect in his mind without prompting, the particulars or elements of the business to be transacted, and to hold them in his mind a sufficient length of time to perceive at least their obvious relations to each other, and be able to form some rational judgment in relation to them, and whether he did intelligently determine to make the testamentary disposition in question, and to execute that intention. Wherefore, being satisfied from the whole evidence that at the time the testator made this will he was able to form an intelligent

and rational judgment, and that the will was the result of this intelligent, rational judgment, and carried out his intelligent and rational desire, it holds that the will was properly admitted to probate. Another thing: the court says that the testator, who was at the time of executing the will about 57 years of age, desired very much to be married, but it holds that that certainly was not evidence of insanity or lack of testamentary capacity.

Mental Injury Amounting to Total Disability.—On rehearing, the Court of Civil Appeals of Texas takes a broader view, in the case of the Fidelity & Casualty Company vs. Getzender, than it did before, of what mental injury will constitute a total disability, within the terms of an accident policy of insurance which provides for indemnity for such injuries as, independently of other causes, shall immediately and wholly disable the assured from performing any and every kind of duty pertaining to his occupation. It now believes that it was in error in condemning a charge wherein the jury was told that if the injury in question, which was one to the brain, and, as resulting therefrom, unsoundness of mind, immediately and continuously disabled and prevented the assured from performing any and every kind of duty which was materially essential to his occupation in a manner reasonably as effective as it believed the same would have been performed if he had not sustained the injury, then it should find that he had been totally disabled within the terms of such a policy as the above. As it now construes it, such a clause in a policy does not mean that one must be killed, or become totally insane immediately, or totally paralyzed or collapsed, in order to be entitled to the indemnity but only disabled in some manner to the extent that he can not perform some essential duty in the line of his occupation or profession in a reasonably safe, efficient, and profitable manner. And this question of the extent of the disability must always be left to the jury to determine. The occupation of the assured in this case was that of visiting yards and ranches and buying and selling cattle—one in which sound memory and clear, good judgment were essential. So, if the injury to his brain and mind was such as to prevent him from exercising good judgment and drawing correct mental conclusions, in a manner reasonably as effective as he could have done if he had not received the injury, then, the court now holds, he was "wholly disabled," within the meaning of the contract, because upon these qualities of the mind depends the successful performance of the duties of his occupation. If he could not perform these mental functions as well as he did before, but substantially or reasonably as well, then, the court holds, his disability would be only partial, and he could not recover the indemnity. But if he could perform them, though not substantially or reasonably as effective who, it asks, can say that he could perform them rightly and correctly at all. To illustrate further the principle involved, the court asks, among other questions if a doctor's mental balance is lost, and it becomes known that he is not reasonably as accurate and skillful as he once was, though he may be able to visit patients, write prescriptions and diagnose cases with grave and serious men in the mysterious, technical nomenclature of his profession yet who suspecting his mental disorder, would take his medicine? He would be, it declares, wholly disabled in his profession. Nor does the court find itself alone in the position it thus takes with regard to what constitutes total disability under contracts of insurance. It cites sufficient cases to show the trend of judicial decisions, and, as it expresses it, while the companies have all the time contended for a literal construction, the courts have uniformly adopted a liberal and reasonable one. So it now seems to feel perfectly justified in holding that, as it recapitulates it, if a person is injured mentally to the extent and character that he can not perform some of the essential duties pertaining to his occupation or profession under which he is insured which requires the exercise of a sound mind and good judgment, in a manner substantially or reasonably as effective as he could have done but for the injury then he is wholly disabled, within the meaning of such a contract as this one was, and is entitled to recover the indemnity stipulated for in the policy.

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

New York Medical Journal, April 28.

- 1.—*Contribution to Histopathology of Epidermolysis Bullosa (Hereditaria). (Concluded.) George T. Elliot.
 - 2.—*Nitrous Oxid; Ether; Chloroform. S. Ormond Goldan.
 - 3.—*Reply to an Obsolete Defense of Antioxin. J. Edward Harman.
 - 4.—*Relation of Hydrochloric-Acid Secretion to Ictericuria. Allen A. Jones.
 - 5.—*Ethylic Bromid (C.H.Br) Anesthesia Preliminary to the Use of Sulphuric Ether. George R. Fowler.
 - 6.—*Diagnosis of Hysteria. Charles W. Burr.
- Medical Record (N. Y.), April 28.**
- 7.—*Hottini's Operation for Cure of Prostatic Hypertrophy. (Continued.) Willy Meyer.
 - 8.—*Past and Present of Refraction. Francis Valk.
 - 9.—*Progressive Pernicious Anemia and Malignant Diseases of the Stomach. Albert Abrams.
- Philadelphia Medical Journal, April 28.**
- 10.—*Wesley M. Carpenter Lecture on Infection Through the Tonsils, Especially in Connection with Acute Articular Rheumatism. (Continued.) Frederick A. Packard.
 - 11.—*Study of Rectal Valves, Experimental and Clinical. A. B. Cooke.
 - 12.—*Extra-abdominal Shortening of Round Ligaments by an Inch Incision Over the Internal Ring for Freely Movable Posterior Dislocation of Uterus. Augustin H. Goelet.
 - 13.—*Exophthalmic Goiter; Its Complications and Affinities. Roberts Bartholow.
 - 14.—*Some Obstetric Notes. Francis H. Stuart.
 - 15.—*Early Sign of Tuberculosis. Thos. F. Harrington.

Medical News (N. Y.), April 28.

- 16.—*Some of the Reasons Why the Surgical Treatment of Nasal Disease Has Been Placed on a Conservative Basis. Clarence C. Rice.
- 17.—*Statistics of One Hundred Cases of Cancer of the Breast and the Results of Operation. Clarence A. McWilliams.
- 18.—*Cancer Occurring in Acid Parts of Body. A. L. Benedict.
- 19.—*After-Treatment of Tenotomy. Alexander Duane.
- 20.—*Interesting Case of Syphilis; Epithelioma. L. Blake Baldwin.
- 21.—*New Traction Hip-Splint. James K. Young.

Boston Medical and Surgical Journal, April 26.

- 22.—*Splenic Pseudoleukemia; Historical Sketch. R. C. Cabot.
 - 23.—*Splenic Anemia. J. L. Morse.
 - 24.—*Splenic Anemia. Henry Jackson.
 - 25.—*Case of Splenic Anemia. J. M. Jackson.
- Medical Review (St. Louis, Mo.), April 28.**

Chicago Medical Recorder, April.

- 27.—*General Symptoms of Brain Tumor and Differential Diagnosis. Archibald Church.
- 28.—*Gynecological and Surgical Observations During a Recent Trip in Europe. A. Goldspolin.
- 29.—*Roentgen Rays in Treatment of Skin Disease and for Removal of Hair. Wm. A. Pusey.
- 30.—*Some Therapeutic Observations. Wm. T. Belfield.
- 31.—*Three Specimens of Nematodes Including One Filaria. Wm. A. Evans.
- 32.—*Treatment of Gonorrhoea with Silver Salts. Charles D. Lockwood.
- 33.—*Pepto-Mangan ("Gude") in Post-operative Treatment of Gynecological Cases. Elizabeth A. Riley.

Cincinnati Lancet-Clinic, April 28.

- 34.—*Ophthalmic Memoranda. David DeBoek.

Medical Bulletin (Philadelphia), April.

- 35.—*Tertiary Syphilis. J. V. Shoemaker.
- 36.—*Relation of General Practitioner to Specialist in Ophthalmology. T. E. Conrad.

Value of Tannin in Diarrhea. George A. Hewitt.

International Journal of Surgery (N. Y.), April.

- 37.—*A Few Important Factors in Causation of Diseases of Women. Ralph Waldo.
- 38.—*Regional Minor Surgery. (Continued.) George G. Van Schaick.
- 39.—*Some Excerpts and Deductions from Records of Gynecological Cases. James N. Martin.
- 40.—*Exomphalos and Strangulated Femoral Hernia, in My Own Experience. Thomas H. Manley.
- 41.—*Treatment of Fractures. W. L. Estes.
- 42.—*Introductory to Mechanical Diagnosis and Treatment of Urethral Diseases. Ferd. C. Valentine.
- 43.—*Technique of Surgical Gynecology. (Continued.) Augustin H. Goelet.
- 44.—*Uterine Myoma—Appendicitis. Robert T. Morris.

American Journal of Obstetrics (N. Y.), April.

- 45.—*Dermoid Cystoma of Pelvic Connective Tissue: With Report of Case. Henry D. Beyea.
- 46.—*Hysterectomy for Acute Septic Metritis and Peritonitis. Egbert H. Grandin.
- 47.—*Abdominal Hystero-Salpingo-Oophorectomy by New Method for Multiple Fibroids of Uterus, Fibroids of Ovary, Congenital Malformation of Vagina, etc. J. Coplin Stinson.
- 48.—*Nephro-Ureterectomy. George H. Noble.
- 49.—*New Method of Treating the Ureter in Tubercular Disease of Kidney and Ureter. Wm. R. Pryor.
- 50.—*External Palpation Versus Vaginal Examination in Normal Labor. Wm. M. Sprigg.

- 51.—*Remarks on Operative Treatment of Prolapse. John B. Deaver.
- 52.—*Two Cases of Extruterine Pregnancy. John G. Clark.
- 53.—*Death after Operation Possibly due to Unsuspected Interstitial Hepatitis. I. S. Stone.

American Gynecological and Obstetrical Journal (N. Y.), April.

- 54.—*After-Treatment of Peritoneal Section. Henry T. Byford.
- 55.—*Mortality Resulting from Abdominal Section for Pus in Pelvis. I. S. Stone.
- 56.—*Management of Puerperal Infection. Frederick W. Sears.
- 57.—*Cranio-Rhachischisis. Henry F. Lewis.
- 58.—*Spontaneous Amputation of Both Fallopian Tubes. Emil Ries.
- 59.—*Review of Non-Operative Treatment of Certain Pelvic Inflammatory Lesions. J. G. Clark.
- 60.—*Some Observations on Intubation of Larynx by O'Dwyer Method, Based on Seventy-five Cases. J. W. West.

Pediatrics (N. Y.), April 1.

- 61.—*Injuries of Nerves due to Fracture. Charles Greene Cumston.
- 62.—*Ophthalmia Neonatorum. J. A. Day.
- 63.—*Night Terrors. Francis Huber.
- 64.—*Case of Mitral Regurgitation and Pulmonary Obstruction. Augustus A. Eshner.

Merck's Archives (N. Y.), April.

- 65.—*Adonidin: Pharmacological and Medicinal Properties. Heinrich Stern.
- 66.—*Clinical Uses of Icthalbin. A. G. Servoss.
- 67.—*Use of Guaiacol in Malaria. Charles J. Whalen.
- 68.—*Preparations of Mercury. Virginius W. Gayle.

Medical Register (Richmond, Va.), February.

- 69.—*Indications for and Method of Operating on the Middle Turbinate Bone. John P. Davidson.
- 70.—*Have We a True Nerve Tonic? Robert F. Williams.
- 71.—*Infantile Septicemia: Report of a Case. B. M. Randolph.
- 72.—*Value of Hydrogen Peroxid in Treatment of Cutaneous Affections. F. H. Beadles.
- 73.—*Disease of Spine. A. B. Greiner.

Taryland Medical Journal (Baltimore), April.

- 74.—*Present Status of Appendicitis Question. Hugh H. Young.
- 75.—*Eosinate of Methylene Blue as Blood-Stain. Charles E. Simou.
- 76.—*Two Unusual Cases of Annular Syphilids in Negroes. T. Caspar Gilchrist.

Memphis Medical Monthly, April.

- 77.—*Obstipation. Hypertrophy of the Rectal Valve. Thos. Chas. Martin.
- 78.—*Abscess of Liver, with Report of Case. E. M. Holder.
- 79.—*Antipyretics. Their Rational, Scientific and Practical Use. F. D. Dale.
- 80.—*Aortic and Mitral Regurgitation. A Clinical Lecture. Frank A. Jones.
- 81.—*Surgery of the Biliary Calculi. Wm. D. Haggard, Jr.
- 82.—*Some Points in Pelvic Surgery. A Rectal Curiosity. Case Report, with Photograph. John L. Jelks.
- 83.—*Case of Tuberculosis of Epiglottitis. Richmond McKinney.
- 84.—*Cholera Infantum, Its Practical Treatment. A. T. Dickson.
- 85.—*Seven Cases of Leucorrhoea Treated with Tyree's Antiseptic Powder. A Clinical Report. Edwin Williams.

Illinois Medical Journal (Springfield), April.

- 86.—*The Present Law. J. W. Pettit.
- 87.—*Physician and Medical Law. Hamilton C. Kibbie.
- 88.—*Drainage and Irrigation of Pleura in Empyema. Conflict of Methods and Opinion. Edmund Andrews.
- 89.—*Ambulatory Treatment of Fractures. Chas. D. Lockwood.
- 90.—*Heredity. John Ross.
- 91.—*History of an Outbreak of Rabies, with Clinical Report of a Case in Human Subject. James S. Mason.
- 92.—*Direct Massage in Treatment of Glaucoma. J. A. Pratt.
- 93.—*Erythromelalgia, or S. Weir Mitchell's Disease. W. J. Eddy.
- 94.—*Mastitis in Puerperal Women. Theodore Thompson.

Occidental Medical Times (San Francisco), April.

- 95.—*Typhoid Bone Lesions. Herbert C. Moffitt.
- 96.—*Some Remarks on the Widal Test. William Ophuls.
- 97.—*Treatment of Typhoid Fever. R. W. Baum.
- 98.—*Surgical Treatment of Typhoid Fever. F. E. Carpenter.
- 99.—*Litholapaxy, with Report of Case. G. A. Hare.
- 100.—*Alcoholic Insanity. Mark F. Toner.
- 101.—*Some Diseases of Tonsils. D. H. Trowbridge.
- 102.—*Zoster Ophthalmicus, with Paresis of Facialis. D. W. Montgomery.
- 103.—*Diphtheria. A. R. Nicholson.

Cleveland Medical Gazette, April.

- 104.—*Diagnosis and Treatment of Congenital Dislocation of Hip. Wm. E. Wirt.
 - 105.—*Fragmentary Observation of Prognosis of Brain Syphilis. Charles J. Aldrich.
 - 106.—*Cases Illustrating the Efficacy of Hydro-Therapeutic Measures. Christian Sihler.
 - 107.—*Report of Case of Ovarian Cyst with Twisted Pedicle. Frank E. Buntz.
 - 108.—*Operation for Perforated Typhoid Ulcer Eighteen Hours after Perforation. Wm. E. Lower.
- Carolina Medical Journal (Charlotte, N. C.), April.**
- 109.—*Simple Operation for Rectocele and Repair of Vaginal Outlet. H. S. Lott.
 - 110.—*Case of Placenta Previa, with Happy Termination. J. D. Roberts.
 - 111.—*"The Bote Noire" Congh and its Treatment. W. Peyre Porcher.
 - 112.—*Radical Operation for Cure of Chronic Suppuration of Middle Ear. E. R. Russell.
 - 113.—*Cases of Angio-Neurotic Edema. J. Steven Brown.

115.—Report of a Case. Wm. P. Shuler.

Canadian Practitioner and Review (Toronto), April.

- 116.—Case of Hysteria, with Remarks. J. T. Fotheringham.
 117.—*Successful Treatment of Three Important Cases of Disease of Eyes by Combined Method of Hg and KI Internally and Pilocarpin Hypodermically. O. Herbert Bushman.
 118.—Repair of Old Lacerations of Pelvic Floor. M. L. Harris.
 119.—Antistreptococcus Serum in Measles. M. Edgar Gillrie.
Western Medical Review (Lincoln, Neb.), April 16.
 120.—Medical Legislation: Its Relation to Laity and Medical Profession. R. Harvey Reed.
 121.—Floating Kidney. Charles C. Allison.
 122.—Some Causes and Results of Auto-intoxication. J. H. Nicol.
 123.—*Acute Suppurative Arthritis of Children. James E. Moore.
 124.—Derangements due to Pregnancy. Charlotte G. Hawk.
 125.—Case of Fibroma Uteri. D. W. Basham.
 126.—Abortion. (Continued.) A. D. Wilkinson.

Medical and Surgical Monitor (Indianapolis, Ind.), April 15.

- 127.—Essentials of Success. E. E. Montgomery.
 128.—Report of Case of Fibroma of Neck. J. A. Stetliffe.
 129.—Report of Case of Intestinal Obstruction. E. L. Larkins.
 130.—Ocular Complications of Variola. Geo. F. Keiper.
Georgia Journal of Medicine and Surgery (Savannah), April.
 131.—Why are Doctors Often Failures? J. G. Carpenter.
 132.—Report of 131 Cases of Tuberculosis Treated in Asheville Climate. James A. Burroughs.
 133.—Irregular Case of Cerebrospinal Meningitis. Wade H. Atkinson.
 134.—Astringent Medication in Intestinal Catarrhs of Children. Carl Tittel.
 135.—The Southern Negro: His Recent Erotic Tendencies; Causes; Suggestions as to Prevention. S. C. Baker.

Medical Dial (Minneapolis, Minn.), April.

- 136.—Symptoms and Diagnosis of Smallpox. J. W. Macdonald.
 137.—Relation of Variella to Variola. David O. Thomas.
 138.—Prophylaxis and Treatment of Variola. Chas. Nootnagle.
New England Medical Monthly (Danbury, Conn.), April.
 139.—Muscular Abscess in Right Inguinal Fossa Opening Appendicitis. J. A. Hopkins.
 140.—Notes on Uricæmia. J. Lindsay Porteous.
 141.—"General Practice Including Surgical Work." J. C. Sexton.
 142.—Chemical Action a Vulnerate Force in Destruction of Partial Destruction of Limb; Gangrene from Frost-bites. Thos. H. Manley.
 143.—Dietetic Treatment of Wasting Diseases. W. H. Murray.
 144.—Nerve Depression Following Acute Affections. J. S. Moreman.
 145.—Treatment of Gonorrhœa and Other Purulent Inflammations with Mercuro. L. W. Short.
 146.—Case of Fatal Tachycardia at Menopause. Willard Gillette.
 147.—Observations on Treatment of Strangulated Hernia, its Complications and Sequelæ. (Continued.) J. Coplin Stinson.

Toledo Medical and Surgical Reporter, April.

- 148.—Eczema. Wm. Wickham.
 149.—Peripheral Irritation in Infantile Convulsions, with Report of Case. W. V. Anderson.
 150.—Diphtheria. A. J. Girardot.
 151.—A Perrinent Question. Pearce Prentiss.
 152.—Hygienic Construction of Dwellings. Agnes M. Gardiner.
 153.—Therapeutic Value of Cod Liver Oil. J. D. Ely.

Medical Times (Philadelphia), April.

- 154.—Review of Potence and Impotence, Physiology, Pathology and Other Embarrassments of Procreating Powers. Review of Aphrodisiacs of Past and Present. Sexual Hygiene in Married and Single Life, etc., etc. "Fecundite" (Zola) and "Kreutzer Sonata" (Tolstoi). (Continued.) John J. Caldwell.
 155.—Compound Dislocation of Elbow-Joint. C. S. Parkhill.
 156.—Action of Urotropin in Uric Acid Diathesis. Arthur Nicolaiar.
Oklahoma Medical Journal (Guthrie), April.
 157.—Hemorrhoids. L. A. Biely.

AMERICAN.

1. **Histopathology of Epidermolysis Bullosa.**—In this conclusion of his memoir, Elliot reports histologic findings of skin taken from apparently healthy as well as diseased portions. The morbid changes are illustrated. The process seems to be a degeneration of the cells in certain portions of the epidermis, resulting in a molecular death of the nucleus and protoplasm of the cell body. The individual is born with a congenital irritability of the vascular supply of the skin, which responds abnormally to irritation and produces these degenerative changes. Whether there is also a congenital instability of the cells themselves, he is not prepared to say. His older view as to the condition being a dermatitis, he now rejects, and he believes that the prime feature in the process is an acquired or hereditarily exaggerated irritability of the cutaneous vascular system.

2. **Nitrous Oxid, Ether, Chloroform.**—Goldan describes the requirements of an ether inhaler, and criticises the ordinary method of administering. The inhaler should be simple, easily cleaned, capable of being used as an open or closed one, inexpensive, so fashioned as to use the smallest quantity

consistent with perfect anesthesia, with no sponges, but fresh gauze for each case; it should have large air-passages, so as not to impede the respiration, no useless complicated ether and air contrivances, and a rubber bag of the fullest respiratory capacity. He describes and illustrates the one he thinks meets these requirements and lays down the rules for its use. The patient should be encouraged to breathe deeply, and the head should be slightly extended on a direct line with the body, and turned fully to one side, which position has the advantage of affording better drainage for the mucus and saliva, while the tongue will fall to one side instead of backward or on the epiglottis. The head correctly placed, should remain so through the operation. There should be no forcing of the inhaler on the patient, but it should be gently applied, removed, and reapplied, impressing on the patient at the time that it is perfectly safe. After anesthesia is complete, it should be removed, but there is no absolute rule as to the length of time the patient's face should be uncovered; this varies for each case. For chloroformization, he would have a rearrangement of the parts of the inhaler; the important point is that there should be a free mixture of air, the patient should not be encouraged to breathe deeply, and the chloroform should be begun drop by drop, at first very slowly. Chloroform vapor is heavy and falls, and the old practice of pouring 5i to ʒi on a mask and encouraging the patient to breathe deeply is probably responsible for many deaths. The degrees of anesthesia are described, and the various reflexes in the order of their disappearance: the ciliary, corneal and conjunctival reflexes, deglutition, pharyngeal and laryngeal reflexes, vomiting, the anal, the vaginal, and the uterine reflex. His practice is to keep the finger on the pulse throughout the narcosis, preferably on the temporal artery, and the possible anomalous conditions should be kept in mind. The pupil dilates at the commencement and contracts when anesthesia progresses or is moderately dilated. Its sudden dilatation may indicate dangerous or incomplete anesthesia. The pupil is not always a reliable guide; other symptoms should be watched in addition. The condition of the skin, the respiration, etc., must be watched.

3. **Antitoxin.**—Herman replies to a recent paper by Dr. A. Robin, who criticised his former articles which endeavored to show, by statistics, that antitoxin is a failure.

4. **Indicanuria.**—The relation of hydrochloric acid secretion to indicanuria is discussed by Jones, who analyzes a series of cases which he divides into four classes: 1. Those showing free hydrochloric acid with no indican present. 2. Those showing both present. 3. Those showing neither present. 4. Those showing no free hydrochloric acid but indican present in the urine. From an analysis of these cases and consideration of the facts in regard to the stomach secretion, he concludes that other means than free hydrochloric acid must be depended on to prevent formation of indican in the intestine. It would appear that so long as sufficient hydrochloric acid is secreted by the stomach to satisfy the nitrogenous elements and allow them to pass through the various steps of the cleavage in pepsin-hydrochloric acid digestion, excessive putrefaction is not likely to arise, even if sufficient hydrochloric acid is not secreted in a free state, that is in a normal or almost normal acidity of the gastric contents. When the total acidity is gradually reduced, putrefaction is likely to occur. He finds that excessive indican is more apt to be associated with obstruction in the small intestine than in the large, and it is also found with gastric ulcer where there is a great amount of free hydrochloric acid in the stomach. It has been associated more particularly with inflammatory states of the intestine. If the albuminous constituents of the food undergo digestion in the intestine, they do not putrefy, and in many cases indicanuria must be looked on as an index to the adequacy of intestinal digestion without regard to the state of the stomach.

5. **Ethylie Bromid.**—The use of ethylie bromid—C₂H₅Br—as a preliminary to ether anesthesia is recommended by Fowler, who reports a case. He places ʒi to ʒij of ethylie bromid on the inhaler, and in from thirty to forty-five seconds, according to the freedom with which the patient breathes, the administration of the sulphuric ether is begun,

without changing the inhaler, and proceeded with as in ordinary ether anesthetization.

6. **Diagnosis of Hysteria.**—The practical importance of the diagnosis of hysteria from organic disease of the nervous system is self-evident, both for the physician and the patient. The leading points are given by Burr: The diagnosis is necessarily by exclusion, and the negative elements are as important as the positive. The mode of onset and combination of symptoms are to be noted. Sometimes the nature of the symptom itself may indicate the real nature, and anesthesia is important in this regard. It, however, is not always present; there is no one pathognomonic symptom of hysteria. There may be hyperesthesia, and he points out some conditions in which it may occur. The diagnosis of the fit may be difficult or easy. Palsy, which seems to follow it, is not of diagnostic value. There is one type of flaccid palsy which is seen only in hysteria. In this, though there may be complete loss of voluntary movement, the patient is able to keep the palsied extremity in any position in which it is passively put. The other symptoms of diagnostic value are noted. One symptom is important as distinguishing hysterical paraplegia with contracture from organic disease. In the latter the muscular spasm is extensor and lessens with flexion.

7. **Bottini's Operation.**—Meyer gives the details as to the preparation of the patient, the instruments employed, the *modus operandi* and the after-treatment. He favors filling of the bladder with sterilized boric acid water, and believes that the Lewin experiments indicate the dangers of dilatation by air. The length of the incision, indications, etc., are also fully discussed. The paper appears to be a very complete handling of its subject, and is to be concluded in a subsequent issue.

9. **Progressive Pernicious Anemia and Malignant Disease of the Stomach.**—After reporting two cases, Abrams formulates the following conclusions: 1. Arsenic is a true specific in pernicious anemia, and is as certain in its immediate results as is mercury in syphilis, quinin in malaria, or iron in chlorosis. The specificity of arsenic is so great that in no case of grave anemia are we justified in excluding the progressive pernicious variety, even though the blood-examination is negative, without a heroic trial of arsenic. Like the other specifics, it produces relative cures and can not be regarded as a prophylactic, owing to the frequent relapses. It may be given as Fowler's solution, beginning with three-minim doses well diluted after each meal, and increased by one or two minims daily according to the urgency of the case, until twenty-five or thirty minims are taken three times a day. A safer rule is to push it to the point of toleration and maintain it at this point until the blood examination shows the results desired. The appearance of its physiologic effects—edema and itching of the eyelids, gastro-intestinal irritation, etc.—is a signal for its temporary discontinuance. When arsenic can not be given by the stomach, it may be administered subcutaneously or even by the rectum. 2. In association with arsenic, assimilable food and rest are indispensable. 3. The use of intestinal antiseptics in this as well as in other diseases is a mere therapeutic refinement not sanctioned by bacteriologic reasons, and they ought, therefore, not to be employed as a routine measure. In the Italian literature one finds some authentic evidence of the good effects from thymol, its administration being suggested by the theory that pernicious anemia is caused by intestinal absorption of products which are destructive to the red blood-corpuscles. 4. Iron is not only useless but is apt to create digestive disturbances. 5. Bone-marrow is said to be curative, but it induces nausea and aggravates existing gastro-intestinal troubles. 6. Gastric disturbances suggest stomach lavage. The character of the food ingested must be determined by the results of a chemical analysis of the stomach contents. 7. To counteract the great reduction in the quantity of blood weak saline solutions may be given by the colon or preferably in the subcutaneous tissue. 8. Relapses are best prevented by minute attention to dietetic and hygienic details.

10. **Infection Through the Tonsils.**—In continuing his article (see last week's JOURNAL, ¶ 2, p. 1120), Packard re-

views the literature as to the possibility of chorea, nephritis, abscess, rheumatism, etc., originating from tonsillar infection. The paper concludes with an extensive bibliography of the past ten years.

11. **Rectal Valves.**—Cooke first gives the history of the discovery and recognition of these valves, and states, as his own opinion, that he is prepared to fully endorse Martin's conclusions as to their existence. He points out the possible fallacies in examination for them. Their action in the production of disease is next discussed, and he considers that they are responsible for a considerable proportion of chronic obstipation, or obstruction of the bowels in the lower section, as distinguished from constipation. The treatment is almost invariably operative, as the condition is rarely diagnosed in its early stages. The radical operation consists in incising the valves' free margin down to the muscular coat. He cautions as regards the operation; though apparently easily borne if properly performed, it is one of the most delicate operations in surgery. The part they play in strictures and rectitis is also discussed, and he reports five cases illustrating the value of the proctoscope and the more common forms of lesions of these valves.

12. **Shortening of Round Ligaments.**—Goelet describes a method of shortening which he considers has special advantages. The technique is described in full.

13. **Exophthalmic Goiter.**—Four cases, uncomplicated and with special complications, are reported by Bartholow. He calls attention to the purely functional character of some of the similar types. As regards the treatment, he thinks galvano-faradism is the most efficient agent. He has usually applied the descending stable current so as to include within the circuit the pneumogastric and cervical sympathetic nerves, and in cardiac cases much good is derived from spartein sulphate and picrotoxin, which may be combined with sulphates of iron and manganese. In more chronic cases with valvular lesions and degeneration of the thyroid and the skin pigmented, the best results are had from the combined solution of iodid and bromid of sodium and arseniate of sodium. As to hygienic management, he recommends non-exhaustive systematic exercise, moderate mental occupation, and thinks close confinement, as in the rest cure, is damaging.

14. **Obstetric Notes.**—The three points considered are preparation of the patient for labor, in which Stuart suggests careful examination in the later months, also uranalysis and instruction as to asepsis. The time to use forceps may vary, but should usually be early in cases where there is exhaustion of the uterine muscle or disproportion preventing molding and adjustment and persistent occipito-posterior position. As to repair of the injuries, he has found it of advantage to postpone it until a convenient hour in the first or second day after the operation. For intestinal sutures he would use small-sized catgut, and be sure to include enough tissue in the grasp of the sutures. For external sutures, silkworm gut, iron-dyed, is preferred.

15. **Tuberculosis.**—An early sign referred to by Harrington is a widely dilated state of the pupils, not paralytic but apparently due to some irritation, possibly systemic. He has come to associate this with early tuberculosis.

16. **Nasal Disease.**—Rice reviews the conditions of nasal disease, in which formerly a lesser degree of conservatism prevailed as regards operative interference than is now coming to be the rule; he also shows how we are learning to distinguish between the need of operation and the utilizing of the facts for the benefit of the patient. The one thing that he thinks would justify his paper is that we are beginning to recognize the influence of alcohol and tobacco.

17. **Cancer of Breast.**—A summary of the analysis of 100 cases of this affection is given by McWilliams. Trauma was present in 44.6 per cent. of the patients, 74 per cent. were married; 60.6 per cent. had borne children, the average number to each, 5; pain was present in 56.2 per cent.; nipple retracted in 45.2 per cent.; right breast involved in 51 cases, left in 49; axillary glands palpable in 48.9 per cent., cancerous by the microscope in 78.6 per cent. The average age was 49 years, 6 months, 26 days. The mortality of operation was 4 per

cent.; average length of time in hospital, 20 days; prolongation of life for one year resulted in 59 per cent., for two years in 36 per cent., and the cured—no recurrence at end of three years—34 per cent. Recurrence took place in one year in 21, in two years in 28, locally in 15, in the lung in 6. The average length of time in recurrent cases from operation to death was 1 year, 2 months 20 days, that from the period of recurrence to death, 5 months.

18. **Cancer Occurring in Acid Parts of Body.**—The relative frequency of primary cancer of the stomach as compared with that of the bowels and certain portions of the latter as compared with the mass is significant. Benedict has studied the subject and finds that a great majority of cancers develop in the acid media of the body. He points out that the localities where the natural secretions are acid are elective points for the affection, e. g., the stomach or uterus, and that in other regions where it is liable to occur, the abnormal acidity is possible and frequent. Whether the reaction is the determining factor or not, he does not pretend to state.

19. **Tenotomy.**—The after-treatment of tenotomy, preferred by Duane, is to utilize the directive force of the eyes themselves, and if necessary, by suitable exercises, to gradually substitute a more accurate correction for the approximate one produced by operation. He gives details of treatment advocated, and is so convinced of the value of the results that he regards the technique of the operation of subordinate importance. By the latter we can set the eyes fairly straight and in a position in which, being left free to move, they themselves will work toward an absolute correction. Therefore it makes little difference how we do a tenotomy, but much how we treat the eyes afterward.

22. **Splenic Pseudoleukemia.**—Cabot suggests that we should either abandon the term "splenic anemia," or else take up that of "lymphatic anemia," as applied to the association of lymphatic enlargement with impoverished blood. Or if we agree with Osler that there is no relation between enlargement with the same condition, we ought to make a sharp distinction between the two varieties of leukemia. In going over the literature, it is difficult to separate the forms here considered and those cases due to malaria, syphilis, etc. He gives the diagnostic points. The prognosis, according to Osler, seems to be relatively favorable, though writers differ on the subject. The operation of splenectomy is rational and seems to have been of advantage in one of Osler's cases.

23, 24 and 25. **Splenic Anemia.**—Morse reports two cases with the findings from blood examination, in one the disease may have been of syphilitic origin; the other was probably a relic of some infantile condition, as anemia with splenic enlargement is not uncommon in infants and especially common in rickets. Henry Jackson reports on the only case found in the Boston City Hospital, and he thinks very few if any patients with splenic anemia have entered it. He suggests more careful observation on this point. Another case is reported by J. M. Jackson and Hill, from the out-patient department of the Massachusetts General Hospital.

26. **Danger From Leprosy.**—According to Goodhue, the danger from leprosy in this country is to be found in the general neglect to watch for and isolate patients. It is therefore greater from our home foci in Minnesota and Louisiana, and from over the border in Mexico and Canada, as well as from tropical regions generally, than it is from our new possessions, especially Hawaii, where it is under close observation and well guarded against. If the fancied danger from leprosy from Hawaii is going to arouse us to the real danger of leprosy in our midst, it would be another of the many advantages of annexing the islands.

27.—See abstract in THE JOURNAL of April 7, p. 873.

29. **Roentgen Rays in Skin Disease.**—Pusey calls attention to the value of the Roentgen rays for the purpose of epilation and in the treatment of eczema, lupus, etc. The practical points to be noticed are to avoid too great strength or tension of current, too long or frequent exposures or too close proximity to the skin. At the beginning the sittings are not longer than five minutes, and the distance not less than 12 cm. The current, not more than 1.5 amperes and 12 volt strength,

should be employed. The ordinary skiagraphic currents are not desirable. Suitable lead masks for protecting contiguous surfaces should be used, and the personal idiosyncrasy must be looked after. The evidence that exposures have been carried far enough are: 1. Appearance of erythema and pigmentation. 2. Blanching of the hair. 3. Loosening of the hair. In the treatment of hypertrichosis great care should be used to avoid irritation and, in inflammatory disorders this is not so important, as a slight degree of inflammatory reaction is desirable, but it should be held at this point and not be carried to a painful degree.

30. **Some Therapeutic Observations.**—Belfield reports three cases of the use of gelatin as a hemostatic in persistent hemorrhages, in two of which there was complete success, in the third unequivocal failure. He would, in view of Bauermeister's experiments, refrain from using these injections in extensive nephritis. He also reports two cases of tumor of the breast due to syphilis, which was diagnosed as carcinoma, and he would impress on all his patients the idea that syphilis is not curable as a rule, and that subsequent, obscure or refractory disease should have specific treatment. He also mentions a case of the successful use of carbolic acid in a case of tetanus.

34. **Ophthalmic Memoranda.**—DeBeck reports several cases of eye trouble, among them one of gouging in a fight where he inserted a glass ball in the empty eye socket for cosmetic purposes, with good results. The patient afterward wore an artificial eye with the most satisfactory deceptive effect. He thinks it the only case in which an artificial vitreous has been inserted in a traumatic case twenty-four hours after injury, with success. Another instance reported is that of complete enucleation of the eye by a jet of water from a nozzle connected with two lines of hose by a Siamese coupling. The nozzle got away from those handling it, and the jet struck the man squarely in the face, at a distance of three or four feet, and no trace of the eyeball could be found. It was completely enucleated by the water. The patient made a satisfactory recovery. He also reports other cases of interest.

46. **Dermoid Cystoma.**—A case of dermoid cystoma is reported by Beyea, who gives a very thorough discussion of the subject. In his case he finds it in no way associated with the ovary. The literature of the condition is thoroughly worked up.

47. **Acute Septic Metritis and Peritonitis.**—Grandin finds that while a great majority of patients with puerperal infection recover with minor operation, about 1 per cent. die, notwithstanding operative treatment, unless it is employed early. The importance of early diagnosis, therefore, is clear. When septic symptoms appear in the puerperium, the patient should be most thoroughly examined, preferably under anesthesia, to differentiate saprophytic and streptococcal infection. Sæpemia yields to local operative treatment, unless too long delayed or complicated by streptococcal infection. When the clinical phenomena are of low grade, and the pulse rapid in proportion to the temperature, it is a warning of general systemic infection. Sæpemia having usually been ruled out and other disturbances such as pneumonia, urinary toxemia, etc., being excluded, exploratory abdominal section is indicated for positive diagnosis. By this it is possible to remove the infectious foci, before the system has been involved and the case become hopeless. The streptococcus infection, however, is so rare that it is only exceptionally that abdominal section is required.

50. **Surgery of the Ureter.**—Pryor describes a case of tubercular dermatitis and nephritis in which he had to remove the right kidney, and after enucleating the ureter, he inverted it into the bladder as is sometimes done with the appendix in the bowel. This was done by passing a long surgical probe into the bladder and through the ureter, suturing it to the end of the severed ureter. It was then drawn back into the bladder, inverting the tube. The ureter sloughed off and the probe was withdrawn the third week. Cystoscopy repeatedly showed all traces gone except a slight elevation at the site of the ureter. The convalescence was normal.

51. **External Palpation Versus Vaginal Examination.**

—Sprigg reviews the conditions of labor and mentions that to conduct a case ideally, having previously excluded the existence of deformity and abnormalities, the progress of labor must be observed by extravaginal methods, and after delivery nothing must be permitted to enter the vagina.

52. **Prolapsus Uteri.**—Deaver condemns the Alexander operation and intra-abdominal shortening of the round ligaments and vaginal hysterectomy unless there is a pathologic lesion warranting it; he advises ventral fixation. When the prolapse is complete, anterior or posterior colporrhaphy, or both may be necessary. "The cystocele is corrected by the removal of a sufficiently large oval flap, denuding the mucous membrane and submucous tissue, by which the muscular coat of the bladder is exposed. The incision extends from immediately behind the meatus urinarius to the cervix uteri. Two rows of catgut sutures appose the edges of the incision, the deeper taking the submucous and the muscular coats of the bladder, and the superficial the mucous membrane. The denudation of the anterior vaginal wall in the correction of the cystocele, and of the posterior vaginal wall in the repair of the torn or reflexed pelvic floor, is made with a scalpel. The repair of the anterior vaginal wall is the first step in the operative technique; when this is accomplished the rubber gloves worn are discarded and a new pair, previously sterilized, put on. The next step is the ventrofixation, and, lastly, the perineum is restored.

55. **After-Treatment of Peritoneal Section.**—The after-treatment recommended by Byford consists of the use of 4 drams of fluid extract of cascara, or some equivalent, two hours before operation, and dram doses of sulphate of magnesia every hour after the patient awakes from the anesthesia; a high glycerin and water enema— $\bar{3}$ ij to iv—every two hours after. A high glycerin enema was given before the patient left the table after operations in which the adhesions were separated and raw surface left. A prompt movement of the bowels and free passage of flatus not unfrequently resulted before the others were given, hence he began to give it as a routine practice. As he stated in a former paper, this treatment must as a rule not be discontinued until the patient passes flatus, not only with the enemata but also frequently between them, i. e., efficient peristaltic action should continue at intervals. Means should also be taken to maintain frequent peristalsis and a daily evacuation of the bowels after the first day, and he frequently gives two drams of sulphate of magnesia or two or three ounces of Hunyadi water night and morning for two weeks, regulating the doses according to the effects.

56. **Mortality From Abdominal Section.**—Stone concludes his article as follows: 1. The abdominal route may be selected in the vast majority of "real pus cases," because it not only gives a better opportunity to deal with diseased pelvic structures, but also facilitates the inspection of the abdominal viscera and the relief of any pathologic condition of these organs. 2. The vaginal route is still used by the writer as occasion demands, as when a "pelvic" abscess is pointing in the vaginal vault. 3. In the majority of cases, then, abdominal section is advised; still, in a certain small number, vaginal puncture, and in a third class, when the abscess is large and situated "high" in the pelvis, it is reached through the abdomen, evacuated and drained without attempting "enucleation" if the patient is evidently too much exhausted to bear a radical operation. In short, pus should be sought for and evacuated from that quarter which gives the easiest approach and speediest and safest exit consistent with the present condition of the patient, and having in view her permanent restoration to health.

58. **Cranio-Rhachischisis.**—Under this head Lewis describes a number of interesting cases of the defective closure of the cranium, with illustrations.

68. **Guaiaecol in Malaria.**—Whalen reports the subsequent history of some cases previously reported, with several additional ones. In all his ideas in regard to the benefit of the drug, in cases where quinin fails, as expressed in an article abstracted before (see THE JOURNAL of March 10, ¶ 47, p. 356) are confirmed by these later experiences.

70.—This paper has appeared elsewhere. See THE JOURNAL of April 14, title 41, p. 924.

71. **Have We a True Nerve Tonic?**—Williams gives the results of his experience with various drugs as nerve tonics, and concludes as follows: 1. For long-continued use in conditions of weakened nerve power, strychnin, arsenic, phosphorus, and the hypophosphites are unsuitable on account of the ultimate depressant effect which their continued use may occasion. 2. In the glycerophosphates we have preparations so nearly identical with the natural phosphorus compound of nerve substance as to be more readily appropriated by depressed nerve tissue than any other phosphorus preparations. 3. This near identity of the glycerophosphates with lecithin, and the absence of nerve stimulation produced by their administration, render them true nerve tonics. 4. The success of those of the profession who have used these preparations entitles them to trial by the profession generally.

73. **Peroxid of Hydrogen.**—The use of this is recommended by Beadles in the following conditions: eczema, which may be sometimes aborted by prompt treatment; impetigo contagiosa; lichen planus, in which no other drug gives such good results; tinea versicolor; tinea circinata; chloasma; freckles and bromidrosis.

75. **Appendicitis.**—Young gives a review of the general literature of appendicitis and of the opinions of surgeons in regard to the question it involves. There is a general agreement as to the mortality of the severe, acute cases and the successful outcome of mild ones without treatment, the safety of operation during intervals, and the frequency of relapses, but on other points there seems to be a large range of opinion. The general tendency, however, on the whole, would appear to us to be more conservative than radical, as opinions go on this subject. There is need, as he points out, of exhaustive statistics on these points. The paper is followed by a symposium of communications from various physicians and surgeons in regard to the indications for operation and its favorable moment.

78. **Obstipation.**—The chief symptoms of obstruction and abnormal conditions of the rectal valves are difficult and unsatisfactory straining at stool, with occasional diarrhea and flatulence and borborygmus, and later attacks of intestinal intoxication and neurosthenia. The pathogenesis may be a normal increase of fibroid tissue from any cause. The diagnosis is easily made with the proctoscope. The operation is described and the amount of incision of the valves is estimated by inserting the hook beyond it and drawing it down toward the operator until the presence of the end of the hook shows in the form of a blanched eminence; and in the operation of division the valve should be transfixed at a point considerably nearer the free margin than the estimated position of the eminence. The valve should then be seized by a tenaculum on either side of the point selected for the section, the knife made to transfix the fibrous border of the valve and divide a few fibers of this tissue and the mucous membrane covering it, by cutting its way through the free border of the valve. This should be transfixed with the bistoury at a moment when the valve is situated at a right angle to the wall of the intestine. If the valve be pulled downward by means of the tenaculum, so that it presents an inclined plane toward the operator at a moment when the bistoury is made to transfix the conjoined tendon, the superior dense fibrous lamina will have a tendency to force the knife outward and through the wall; hence the necessity of a proctoscope of a special length for each valve, that its end may be carried to the valve instead of the latter being pulled down to the proctoscope. But a few fibers of the conjoined tendon are to be divided by this bistoury. After the incision is thus started a scalpel-like knife, provided with a similarly built handle, should be used to deepen the incision. In some cases the valve should be cut in two places. The instant the conjoined tendon is divided a gaping wound will be presented to the eye. This wound-cavity is irregularly pyramidal and open at its apex; the two walls running away from the apex consist of the fibrous lamina of the valve; the base is made up of the uncut circular muscular fibers; external to the circular muscular fibers are the longitudinal muscular and peritoneal coats of the rectum, which this technique fortifies against accidental injury.

79.—See abstract in *THE JOURNAL* of Dec. 2, 1899, p. 1420.

82.—*Ibid.*, Dec. 23, 1899, p. 1614.

83.—*Ibid.*, Dec. 2, 1899, p. 1421.

85.—*Ibid.*, p. 1420.

89. **Empyema.**—The contrary views as to the value of drainage and irrigation in empyema are noticed by Andrews, who tabulates the authorities as they have expressed their views in favor of incision, drainage, irrigation and resection of ribs. He considers intercostal incision safer than resection in most cases, especially in children, but not sufficient for every sort of case. As regards irrigation, his experience has been that by avoiding toxic substances, using only warm boric acid solution, small and weak at first and gradually increased, poisoning and shock can be avoided and bronchial fistula discovered before dangerous flooding has taken place if care is used with small quantities at first. The most frequent necessity for resection is in case of old cavities with strong cicatrices, preventing expansion of lungs and whose granulations are not strong enough to fill the space. In these cases we should sacrifice the ribs to let the thoracic walls fall in and fill the cavity. In cases where there is a pseudomembranous lining of the pleura it can be eventually washed out mechanically if a large tube is used.

96.—See abstract in *THE JOURNAL* of March 24, p. 750.

99.—*Ibid.*, p. 751.

103.—See abstract in *THE JOURNAL* of March 31, p. 815.

105. **Congenital Dislocation of Hip.**—After giving ten cases illustrating the diagnosis of this condition, Wirt describes the methods of treatment, which he narrows down to two, viz., the bloodless method of Lorenz and the cutting operation by Hoffa, modified by Lorenz and Whitman. Four cases are reported that were treated with more or less success. He finds that the non-cutting reduction method is rarely effective after the age of 4 or 5, and when it fails the other should be employed up to the age of 8 or 9. Above this it is not worth while to attempt it, on account of the marked anatomic changes which have taken place. In his own method, he does not cut the short muscles as advised by Lorenz, or the long as Whitman advises, but uses considerable force to bring the head of the bone to its normal site.

106. **Brain Syphilis.**—The "fragmentary observations given by Aldrich refer especially to the accurate diagnosis of cerebral syphilis, the limited application of the general laws of prognosis in the specific lesions, the tendency to relapses, the importance of giving attention to the age, sex, social status, alcoholism, cachexia, etc., in each case, and the constant danger of pathologic accident in syphilitic individuals. Later he notices the favorable influence of specific treatment in these cases as compared with similar clinical conditions of non-specific origin.

110. **Rectocele.**—Lott describes a method of operating which he thinks has certain advantages over others, though not widely differing from them. It consists in making a triangular flap on the vaginal wall at the highest point on the rectocele, from the base of which two cuts are carried down to the point on each labium where apposition will re-establish the normal perineum. The space between these, excepting the triangular space mentioned, is denuded and the edges of the outer incision brought together by buried sutures fastened by perforated shot, making altogether a sort of a Y-shaped line of sutures. He thinks this the means of attaining the four cardinal wants of the case, viz., repair of the perineum, taking the slack from the lateral walls, removing the rectocele, and supplying in its stead, in the posterior wall, a contracted, cicatricial column, with prong projections into the vaginal fornix, which most nearly restores the parts to their normal function and gives support to the organs above.

112. **Cough and Its Treatment.**—The reflex origin of cough is especially emphasized by Porcher, who points out the localities from which it may arise, viz., nasal and nasopharyngeal cavities, pharynx and laryngeal tonsil, the larynx and ear. A purely neurotic one is also mentioned and affords some of the most brilliant successes of the physician. In cough we should find the cause and treat that. He finds that the C. and C. mixture of chloroform, codia and hydrocyanic

acid has an excellent effect on pharyngeal irritability. Where there has been much nasopharyngeal catarrh, he has had benefit from the use of a gargle consisting of carbolic acid and glycerin, bichlorate of soda and tannic acid. In tubercular cough nothing is so good as absolute rest of the throat; the gouty and lithemic one requires treatment for that condition, and he has met with cough where specific treatment only was effective. In order to stop the nervous form, the mental impression is a requisite and both constitutional and local treatment are useful. The former may consist of a sharp cathartic for its revulsive effect. He usually makes an application of the galvanocautery to the lingual tonsil, because the explosive effect of the cough is chiefly against that gland, and if it is made a little sore the patient will take more pains to control it. Cough medicine is hardly necessary in these cases, but the above C. and C. mixture may be soothing. It is hard to say just what effects hypnotic suggestion has in these cases, but there is no question that it goes a long way.

117.—See abstract in *THE JOURNAL* of Sept. 2, 1899, p. 622.

123.—See *THE JOURNAL* of February 3.

132.—This paper has appeared elsewhere: See *THE JOURNAL* of April 7, title 46, p. 863.

FOREIGN.

British Medical Journal, April 21.

"**Riding Fragment**" in **Fractured Leg**. C. H. GOLDING-BIRD.—Fracture, especially of the tibia, is noticed at length with special reference to the coaptation of the fractured ends. In the beginning the author calls attention to the real test of the value of any method of treatment, and the tendency of late years to authorize cutting down on the simple fractures to insure very direct apposition. One of the first things is to have the injury repaired at the earliest possible moment. He thinks operation for simple fractures has been carried to extremes. There is a possible danger in skiagraphy; the patient may have a skiagram taken after the fracture has been treated and find a certain deformity and on this may base a claim of improper treatment. If the utility of the limb is perfect, though there may be a remnant visible in the skiagraph, he doubts whether the success of the treatment has been in any way impeded and it is not advisable to incise simple fractures simply to meet the demands of the skiagrapher. The special subject of the lecture, however, is the "riding fragment," and the main point made is that the most frequent fracture is not the oblique, as is commonly supposed, but is rather what is called the spiral type, and for this reason the continuous retention of the bone in place is more difficult. If the tibia is intact it itself acts as a splint, but the more usual rule is for it to be a great opponent to restoration, and the arrangement of the muscles of the two bones causes a spring action, the fibula pulling the muscles of the tibia apart. We have to suppose that jagged ends of the broken fibula have been driven into the surrounding fibrous connections and firmly held there in a false position, to understand how a rotary action applied to the tibia to lock the spiral would, for anatomic reasons, give an equally rotary reaction to the fibula, the fracture of which bone not being spiral would not be similarly influenced. Hence the fractured ends of the fibula, thus twisted, act as springs until the force is removed, or continue their spring action until they unlock the adapted spiral. Golding-Bird does not claim this idea to be altogether new, but he believes the fibula to be the main cause of the trouble constantly found in setting fractures of any portion of the shaft of the tibia, hence the usefulness of operation in these cases.

Calculi Impacted in the Ureters. DAVID NEWMAN.—Newman describes the pathology, symptoms, and surgical treatment of impacted calculus in the ureter, and the symptoms produced by retention of urine in this way are quite fully discussed. The methods of diagnosis are pointed out and illustrated. Much can be done by palpation through the abdominal parietes, provided the walls are flaccid and the patient thin and the stone situated above the brim of the pelvis, but if the patient is corpulent and the muscles rigid this may not be of much use. When the stone has passed the lower third

of the ureter. examination with the finger in the rectum and vagina may lead to its detection. Cystoscopic examination may be of great value. Sometimes the calculus is arrested at the outlet of the ureter and forms a tumor in the bladder, which can be treated immediately through this organ. The Roentgen rays have not been of much value. The distinction from other obstructions, such as tumors and displacements of the pelvic organs, adhesions, etc., is sometimes a little difficult, but the usual suddenness of the obstruction is a characteristic in most cases, and other disease causing pressure of the ureters is generally so prominent as to be recognizable. The adjustment to such cases, however, does not include the calculus. The most important cases to distinguish from calculus obstruction are such as kinking of the ureter, as may happen with movable kidney, or where the impediment arises from angular insertion of the ureter. The treatment depends on a thorough understanding of the conditions. If there is reason to think only one side is affected, it is advisable to await the course of events, and frequently the obstruction is spontaneously relieved and no permanent harm results. Sometimes massage, shampooing and fomentations, etc., are useful. Opium to relieve pain should be used with great care, as even small doses may have serious effects when the kidneys are obstructed; it is better to use other methods, as hot fomentations, baths, or even an anesthetic, which may so relieve the spasm as to facilitate the passage of the calculus. Change of position may have some effect. When the ureter of the only working kidney is affected, operation is necessary, and when it can not be felt with the finger, it will have to be reached through the abdominal parietes. The methods of operation are described. If the stone can be pushed backward into the kidney and removed by nephrectomy, this is probably the best method and the sound should be passed down the ureter to be sure no further obstruction exists. If it is firmly fixed in the ureter, incision should be made, and this can afterward be closed by sutures.

The Lancet, April 21.

Coxa Vara. C. B. KEETLEY.—Coxa vara—a deformation of the femur in which the head sinks to a lower level than the normal, sometimes almost touching the lesser trochanter—is a sequence of rickets. Keetley thinks in many cases of genu valgum the knee deformity is a compensatory curve to a certain degree of coxa vara. He mentions a characteristic alteration of bones of the face and forehead, a sort of expansion and an appearance of thinness in the orbital and nasal regions. Pain is the first symptom and later there is even limitation of the movements and lameness. In diagnosis it should be differentiated from dislocation by the absence of looseness of the limb, and from hip disease by the absence of pain on pressure and movement and its relief by rest, and the lack of startings at night, and the less wasting of the thigh, etc. The disease, at first progressive, usually comes to a stop with a certain amount of deformity and the treatment is to restore the shape of the bone, as far as possible, by osteotomy, and to relieve the pain by rest; the latter is only palliative. The author suggests an operation which he thinks practicable, but not liable to be popular, for, if carelessly and awkwardly done, it may produce imperfect results. It consists in dividing the bone a little above the upper trochanter, then cutting—obliquely, again from the outer surface of the fragment—a portion with the muscular attachment and re-setting the bone on this last surface, fastening it with pins or wires. He thinks this would be more effective than simple osteotomy, and closes with a claim to priority in the recognition of the nature of the disorder, his paper having been published prior to Müller's, in a journal which only lived a couple of years, and has therefore not been largely quoted.

Causation of Nervous Symptoms in Typhoid Fever. ALEXANDER G. R. FOULERTON and E. CAMPBELL THOMSON.—The authors say that the probabilities of finding pure typhoid toxins are likely to be confined to the early stages of the disease as later other complicating infections may occur and involve the nerves and nerve-centers. They report two cases, with post-mortems, of cerebrospinal implication in which they think that the meningeal complication was due to typhoid

toxin. From studies of the cortex in these cases and the findings in the literature they do not learn of any marked changes in the ganglion cells that are characteristic. Experimental researches on the lower animals confirm this, and it appears from other observations that there is nothing to warrant the conclusion that typhoid toxin causes definite alterations in the ganglion cells of the central nervous system. This does not prove, however, that nervous symptoms are not produced by the pure toxins or that they do not act on other portions of the neuron.

Production of Local Anesthesia in Ear. ALBERT A. GRAY.—After experimenting with various vehicles Gray finds that anilin oil with rectified spirit, as a solvent for cocain, has special advantages in producing a specially beneficial effect on suppurating, causing it to diminish or cease. Anilin oil is of benefit also in rendering the drum membrane transparent. The effect on suppurating is probably due to the power of the oil in extracting the water from the tissue, which is also a quality of the rectified spirit. This method of producing local anesthesia may also be employed on other mucous surfaces. He has used it some for throat work. For the latter a 5 per cent. solution is employed; for the ear, he has used as much as 10 per cent.

Backache as a Symptom of Rectal Disorder. E. HARDING FREELAND.—The symptom of backache is usually associated with uterine disorder, but Freeland finds it by no means constant. It is frequently due to reflex irritation, having its origin in the irritation of the rectum, which, even though it is associated with symptoms referable to other pelvic organs, will not infrequently be found to be the cause. He reports several cases and in conclusion says that: 1. Backache is not only a common but a very important symptom. 2. Whether it be practically the only symptom present or whether it be associated with other more or less definite ones it is worthy of a careful and searching investigation. 3. No investigation should be considered complete until the condition of the rectum has been ascertained.

Bulletin de l'Academie de Medecine (Paris), April 3 and 10

Mortality and Disinfection. E. VALLIN.—Grancher recently pointed out, at the Academie, that isolation in measles is ineffectual, for when the disease is recognized it is already too late to prevent contagion; that disinfection is superfluous against the germ, as its virulence is extremely short-lived, but it is necessary to prevent the secondary infections, e. g., measles bronchopneumonia, etc. Vallin now brings evidence from military barracks, to show that the virulence of the germ of measles is not so transient as is asserted by city physicians, for when the disease appears in the barracks the epidemic may drag along for many months. He thinks it probable that the germs revive and thus occasion new cases and cites an instance in which the floors of some rooms in the barracks where there had been measles a year before, were torn up and the dust permeated the entire building; there had been no cases for a year, either in the barracks or in the adjoining small town, but after the floors were torn up several appeared among men who had not been away from the station for a long time. Transmission by a healthy third person is possible and frequent, but in this case no outside source for the infection could be discovered. Vallin therefore heartily approves of disinfection during measles.

Serofula and Adenoid Vegetations. P. GALLOIS.—Gallois seeks to establish that the swelling of the ganglia in the neck is secondary to a primary lesion located in some of the air cavities of the face, usually adenoid vegetations. He considers them the chief cause of cervical adenitis, of otitis and serofulous ophthalmia. They may also lead to cutaneous infections and osteo-articular tuberculosis. By disinfection of the air cavities of the face, numbers of children would be saved from so-called serofulous manifestations. He does not deny the influence of the "soil," but demonstrates that this is not the only factor in serofula.

Appendicular Pleurisy. DIEULAFOY.—In the presence of a fetid and putrid pleurisy of the right side, the possibility of an appendicitis as the origin must always be borne in mind, and by reviewing the history of the case it can usually be dis-

covered six to ten days before the phrenico-pleural stage. Dieulafoy reports several observations, and shows that the ascending infection from the appendix may reach the diaphragm and pass through it in the lymph spaces or by perforation. The fluid of the pleuritic effusion is usually turbid and fetid, but occasionally, in the rapidly recovering patients, it is clear. He still advises prompt surgical intervention in appendicitis, and in case of complicating pleurisy, the operation must be dual, attacking both the pleura and the appendix; or better still, before the appendicular infection has had time to ascend to the pleura.

Rapid Diagnosis of Rabies by Microscopic Examination of Medulla of Suspected Dog. V. BABES.—During the last nine years Babes has been making a special study of this subject, and states that out of the 487 dogs suspected of rabies which he has examined he found 35 with normal medulla, and they all proved free from the disease, as he had anticipated. Microscopic examination of the medulla is therefore one of the best means of rapid diagnosis of rabies at our disposal. The alterations noted consist in a peculiar displacement of the chromatic substance of the cell protoplasm toward the center or periphery, vacuolar degeneration, total disappearance of the chromatic elements, loss of the prolongations, modification of the nucleus until it vanishes, dilatation of the pericellular space and invasion of this space and also of the nerve-cell by embryonal elements and also by peculiar small hyaline, brownish corpuscles, partially metachromatic surrounded by a pale zone. Certain nerve-cells are surrounded by a wide zone of embryonal cells forming nodules which he calls "rabie nodules." The vessels in the medulla are always dilated, and obliterated in places by thrombi formed of leucocytes, but always containing small brown metachromatic, hyaline corpuscles, arranged in heaps, stars or crowns by free granulations and fibrin. These thrombosed vessels occasion hemorrhages. They are also surrounded by wide zones of embryonal elements which are also noted in the gray matter, where the infiltration sometimes amounts to an actual inflammation. The histologic findings are always confirmed by inoculation.

Presse Medicale (Paris), April 7, 14 and 18.

Present Conceptions of Neuron and Nerve Network. A. SICARD.—The recent attempts to dethrone the neuron theory, by Apathy and Bethe, have not succeeded in overthrowing the results of long and careful observation on which it is founded. Apathy considers the nerve-cell and its prolongations a distinct entity enclosed in, but not in contact with, a continuous nerve network which extends uninterruptedly from the sensory periphery to the motor periphery. Bethe goes still further and asserts that the nerve-cell is independent of all the conducting nerve-fibrils, sensory or motor. They converge to a "neuropile" in the center of the ganglion, and he is still uncertain as to whether or not they connect. Sicard concludes that even if the fact is established that the elementary fibrils pass from one nerve unit into another, the neuron theory may have to be slightly modified, but it would still maintain its value and importance.

Glomerulitis. V. CORNIL.—By means of colored plates, Cornil shows the various changes in the glomerulus, whether of the capsule, of the cellular coat of the vascular loops, or of the intraglomerular connective tissue, all leading to the thickening of the walls of the capillaries and a fibrous atrophy of the glomerulus. This last lesion entails the absolute functional loss of the glomerulus, which is transformed into a small fibrous nodule. This fibrous atrophy is very common in the superficial portions of the kidney and under the capsule, in subacute and chronic nephritis. In the latter a calcareous degeneration may occur or a cystic dilation or amyloid degeneration. The glomerulitis may be due to the invasion of bacteria, obstructing the lumen of the capillaries until an abscess is formed.

Painful Polymorphous Dermatitis. L. BROQUÉ.—Corlett described an observation of this affection, at the meeting of the American Dermatological Association in 1898. Another was described in France in 1896, and Broqué now presents the third. He proposes the above name for the group of symptoms in-

cluding pains of variable intensity, usually intense and out of all proportion to the extent of the eruptive phenomena, which are polymorphous, erythematous-vesicular, bullous, urticarial, papulous or pustulous, sometimes herpetiform, more often grouped, but also disseminated. There is a marked tendency to progress by successive "pushes." The general health seems very little affected. In the observation described and illustrated, the eruptive process was limited to each side of the face, extending from the neck in a strip over the forehead, with remarkable production of cicatrices and epidermic cysts in the affected regions, on which it recurred again and again and to which it remained limited, causing absolute alopecia. The patient was a man of 71, otherwise in good health. The affection had commenced a year and a half before, after a severe mental strain.

Cure of Harelip. E. JUVARA.—Severeanou has been much pleased with the results of his method of operating on harelip. No tissue is wasted; the needed raw surfaces are obtained by blunt dissection of the mucous membrane layer of the lip from the cutaneous muscular in front. Each layer is then sutured, the inner over and over, brought up to form the lip, and the cutaneous muscular flap with a special zigzag suture. The needle is inserted from side to side and follows a zigzag path through the tissues; each time it emerges on the skin it is reinserted in the same hole, but slanting at quite an angle from its path to the hole. Drawing the thread with a knot at the end, the lips of the wound are coapted with no dead space, and no signs of the thread except the two knotted ends and a row of tiny holes on each side of the wound, located alternately. If there is a considerable defect to be filled a small flap can be taken from the thickness of the lip with its base toward the exterior. He usually prefers general narcosis but cocaine will answer; and he has even removed a small cancer from the lip in this way, concluding the operation as above.

Prolapsus of Rectum. G. MARCHANT.—The rectovesical peritoneal pouch descends almost to the perineum in the embryo, and later frequently contains loops of intestines. If from any cause, such as relaxation of the rectal wall at this point, repeated efforts at defecation, possibly some congenital malformation of this pouch, the rectal wall yields, the intestine in the pouch will invaginate into the rectum, forming a primary perineal hernia into the rectum. This hernial sac drags the loosely fastened side and rear walls down with it, and the prolapsus of the rectum is complete. This is the explanation of the etiology of prolapsus as advanced by Ludlow last year and endorsed by Marchant. The question arises whether or not this hernial sac can not be operated on and the prolapsus be cured. The best method of treatment is not the usual resection with its frequent relapses, dangers of infection, etc., but recto-coecopyxy, suspending the rectal ampulla from a stable support, the stitches taken well around on the lateral as well as in the rear wall.

Pains in the Side in Habitual Drinkers. G. MILLAN.—Hepatalgia, epigastralgia or intercostal neuralgia, simulating an acute pulmonary affection, are frequently the first symptoms to call the attention of the habitual drinker to his chronic intoxication. Local revulsion, purgatives, opium and diuretics are the means to be employed in treatment, "with a moral purgation of the patient."

Revue de Chirurgie (Paris), April.

Epithelioma of Both Nipples with Secondary Dermic Nodules. A. LE DENTU.—This puzzling case was complicated with tuberculous peritonitis, but no tuberculous lesions were found in the breasts. The patient was a young woman in poor circumstances and, aside from menstrual troubles and syphilis, had never been ill. Suddenly both breasts became enormously tumefied, with acute total mastitis, followed by a stage in which the lesions assumed a nodular aspect, with the simultaneous appearance of ascitic peritonitis. Then ensued a phase of absorption and apparent recovery from the abdominal lesion after laparotomy, followed by a fourth and last phase in the cutaneous neoplastic invasion. Each breast was the seat of a cylindrical epithelioma. The mammary affection subsided to a torpid course at last, and death was due to the progress of

the peritonitis, sixteen months after first indications of the mammary affection.

Total Ablation of Scapula with Retention of Member. L. PICQUE and DARTIGUES.—A myeloid sarcoma in the scapula necessitated the total removal of the bone. The cuts of the patient, a robust young woman, taken a year after operation, showed that with the exception of the lowering of the shoulder, the results had been absolutely satisfactory. A simple brace devised by Picqué restored the shoulder nearly to normal position, and the patient pursues her occupations without inconvenience, and is stronger than before. The partial and total operations of the kind on record are reviewed in tabulated form, including three by Americans at an early day: 34 total; 27 partial, and 6 with resection of the head of the humerus. The mortality was 18 per cent. Recurrence was noted in 7 of the 34 total ablations, but 13 were eminently satisfactory in the ultimate results. Statistics are defective in regard to recurrence in regard to most of the rest. Picqué explains and illustrates the various steps of the operation, opening the capsule of the joint and luxating the head of the humerus, resecting the outer third of the clavicle and severing, as the final step, the last muscles holding the scapula and twisting it around its spinal end as on a hinge, concluding with fixation of the head of the humerus slightly backward, careful hemostasis and drainage.

Uterine Fibroma with Multiple Pedicles. F. TERRIER and E. REYMOND.—Investigation through the cervix, in a case of fibroma described, might easily have led to error, as the fibroma seemed small and the pedicle near the orifice could be readily distinguished. But in reality the neoplasm was extensive and the true pedicle was in the roof of the fundus where it would have been impossible to reach it by vaginal operation. There were two other so-called pedicles, but the writers establish that they were merely secondary adhesions, as the fibrous polyp in its growth came in contact with a portion of the uterine wall and pressed against it, thus forming a depression in which it rested, with loss of epithelium on both the surface of the uterine wall and the polyp, entailing ulceration. As the lobe of the polyp was imprisoned in the ulcerated cul-de-sac, the muscular tissue of the uterus became continuous with that of the tumor, forming a solid secondary pedicle without interposition of cicatricial tissue, and with blood circulating through it. Cysts were noted in the fibroma, but not in the central portion nor in the primary pedicle. An explanation advanced, based on the histologic characters of the cysts, especially their cylindrical epithelium lining, is that while the mucous surfaces of the uterine wall and the encroaching lobe of the tumor were in contact and became continuous, the lower end of the cul-de-sac or pocket thus formed still persisted and became surrounded by the growth of the pedicle, remaining as a closed cavity which increased in size and became a cyst visible to the naked eye.

Anterior Opening for Certain Resections of Hip-Joint. ROCHET.—Comparing the ultimate results in patients operated on directly from the front with those in which the joint was reached more from the rear, Rochet finds that ankylosis in a good position is attained more rapidly and more easily by the former than by the latter method. The dressings are much more easily applied, both for the patient and the attendant, and chances of secondary infection from the anal region are much less.

Pathologic Anatomy of Cancer of Stomach. B. CUNEO.—This author's experience renders his statements worthy of attention. He confirms the infrequency of invasion of the duodenum in case of cancer of the pylorus, and merely considers the first centimeter suspicious, as a rule, recommending resection of 2 cm. as the minimum. The propagation of the neoplasm in the submucosa, beyond the limits apparent in the mucosa, is now fully established, also the invasion of the para-stomachal ganglia, which should be removed in one mass with the tumor, the incision extending as close to the cardia as possible. He suggests that the resection would be much facilitated by preliminary ligature and division of the stem of the coronary near the main fork, and also ligature of the gastroduodenal at its origin.

Centralblatt f. Chirurgie (Leipsic), April 21.

Route to Gasserian Ganglion. F. KRAUSE.—Supplementing his former communications on the subject, Krause observes that the difficulties of the operation for resection of the Gasserian ganglion first begin with the exposure of the third branch inside the skull. From this point onward it is necessary to have the most complete supervision of the field of operation, and this can be accomplished only by elevating the temporal lobe of the brain in its dural envelope, as otherwise the field is in darkness, and complete extirpation would be impossible. Partial extirpation and the use of the sharp curette should both be rejected. But the brain should be retracted as little as possible, and, to avoid it, the side-wall of the skull should be removed down to the crista infratemporalis. It is altogether unnecessary to reset the zygomatic arch. He has tested all the methods proposed on the cadaver, but has found none that allows such ample access as his own. He has made a thorough resection of the trigeminus on twenty-two patients, and states that his method of ligating the middle meningeal artery is so reliable that he can recommend it as a typical operation. He has done it three times so far in cases of hemorrhage, with complete success. He adds that experiments on the cadaver are not equivalent to those on the living subject, as there is no venous hemorrhage from the dural veins, which in isolated cases has immeasurably enhanced the difficulties of the operation, and is much more embarrassing with a narrow opening than with ample oversight of the field. His improved technique in cutting the bone flap consists in drilling a hole at each of the upper corners of the outlined, uterus-shaped flap, after two small incisions through the skin. A Gigli saw is introduced through these holes, and the upper edge of the flap sawed through from within outward, leaving the skin untouched for a time. The two side edges of the flap are then cut with a knife, a little at a time to prevent hemorrhage, and the bone by Dahlgreen's forceps, as far down as possible. The skin-bridge across the top is then divided and the bone lifted and turned over, breaking the bottom edge of the flap across; the jagged edge always corresponds to the thinnest part of the squamous portion of the temporal bone, about 1 cm. above the zygomatic arch. It is indispensable now, to chisel away the rest of the bone down to the crista infratemporalis, after blunt dissection of the periosteum from the large sphenoidal wing and squamous portion of the temporal bone. Without resecting the zygomatic arch therefore, the flap, hanging by skin, temporal muscle and periosteum, can be turned down over the malar bone and free access to the middle cranial fossa thus be obtained.

Deutsche Medicinische Wochenschrift (Leipsic), April 10.

Reproduction of Bacteria. FEINBERG.—With the Romanowski stain, slightly modified, Feinberg has succeeded in establishing the existence of a nucleus in certain bacteria, and now announces that he has traced a series of phenomena in diphtheria, tubercle, typhus and other bacteria, which can only be interpreted as the whole process of direct cell division, from the first constriction in the nucleus to the complete division into daughter nuclei by amitosis. It is best observed in the diphtheria bacillus, in which nucleus does not so completely fill the cell as it does in some of the others.

Finding Acid-Proof Bacteria Resembling Tubercle Bacillus in Gangrene of Lungs. LYDIA RABINOWITSCH.—Several writers have reported finding "pseudo-tubercle bacilli," so-called smegma bacilli, in gangrene of the lungs, but none have succeeded in cultivating it from the sputum. This has been accomplished by the writer, from the sputa and the gangrenous focus of a patient with fetid chronic bronchitis and suspected cavity, but no indications of tuberculosis during life nor at the necropsy. The bacteria proved acid-proof and formed on glycerin-agar, in twenty-four to forty-eight hours, grayish-white, shiny, pinhead sized colonies that gradually spread into a whitish, creamy film. The film lost its shine as it grew older, and became wrinkled, yellow and finally orange-colored. On bouillon there was an indol reaction and disagreeable odor. Guinea-pigs were not affected by inoculations, but mice succumbed in about ten days and the bacilli were found in their blood and organs. The bacilli also proved

pathogenic for guinea-pigs when injected with sterile butter. In this case they produced the same lesions as those already described by the writer, caused by acid-proof bacteria isolated from butter. All the so-called acid-proof bacteria are distinguished from the tubercle bacilli by their pathogenic properties and their cultures. But they respond alike to stains to acids and alcohol, probably chiefly on account of the larger amount of fat they contain. The writer believes that the bacterium isolated in this experience is identical with those found in sputa and which are described by Zahn, Fraenkel, and Pappenheim.

Case of Isolated Paralysis of Nervus Suprascapularis. A. HOFMANN.—Traumatism preceded nearly all of the few cases on record, the rest were consecutive to neuritis of the plexus brachialis. The main symptom is the tray-shaped depression of the infraspinous fossa in consequence of the atrophy of the musculus infraspinatus, and the weakness and effort necessary to rotate the arm outward, or raise it vertically.

Case of Multiple Melanosarcomata with Peculiar Complications in Both Eyes. A. WAGENMANN.—A young man noticed small pigmented tumors on the breast and face, and one developed in the left eye, but was afterward completely absorbed. Another developed later, leaving a layer of lumps of pigment over the cornea. The right eye also became affected with a metastatic process, resembling synchysis scintillans, only the glistening points in the latter were in this case the floating, brown dots of pigment, and the membrane a compact yellow mass.

Acidophile Bacilli in Infants' Feces. H. FINKELSTEIN.—Particles of the feces sowed on .5 to 1 per cent. acetic acid bouillon, to which 2 per cent. grape-sugar had been added, showed that there are at least two and probably four different varieties of acidophile bacteria in the intestine of healthy infants. Finkelstein announces that in certain pathologic cases there is such an increase in the numbers of these acidophile, Gram-staining bacteria that they can be considered a pure culture. They sometimes resemble those found in sound intestines and again show such a difference in their cultures that a specific difference can scarcely be doubted. They are sometimes thread-like, sometimes like streptococci, sometimes slender, curved, short threads. The morbid conditions in which the last-named shapes were noted, were distinguished by infectiousness, remarkable resistance to dietetic therapy and by the preponderance of severe nervous disturbances in the syndrome. They did not prove pathogenic for the usual laboratory animals, but young goats died regularly two to three weeks after ingestion of 10 gm. of fluid feces containing bacilli from severely sick children. The animals became extremely emaciated and temperature was subnormal, but neither clinical nor anatomic alterations could be discovered. The same amount of a pure milk culture, three days old, from a fatal case, caused death in three weeks with the same symptoms, while a like amount of normal fecal matter produced only slight and transient disturbance.

Silver Wire Treatment of Prolapsus Recti. URRAN.—Several years' experience has confirmed the absolute harmlessness and efficacy of Urban's method of preventing prolapsus of the rectum. It consists in merely narrowing the orifice so that the prolapse can not occur. A silver wire is run around the rectal walls 1 cm. above the anus, and the needle inserted back in the stitch hole from which it emerges each time. The wire is drawn up and fastened, closing the lumen until the orifice will admit nothing larger than the forefinger in an adult and the little finger in a child. The wire has been usually removed after two or three months, but he is now leaving it permanently since it heals into the tissues without disturbance of any kind. All the troubles of the prolapsus vanish at once after the insertion of the wire.

Muenchener Medicinische Wochenschrift, April 17.

Diagnosis of Pulmonary Lesions Caused by Inhalation of Dust in Industrial Establishments. BAEUMLER.—Percussion sometimes shows that the upper part of the anterior margins of one or both lungs is very much retracted, and this retraction is evidence of induration and contractions in the lung

tissue. Baemler has noted it in a large number of cases, and in nearly all he could demonstrate lesions due to the inhalation of foreign particles in the dust from industrial establishments. These inhalations cause frequent bronchial catarrh, recurring at progressively shorter intervals, emphysema of the lungs, bronchopneumonia and inflammation, with participation of the interstitial tissue later and termination in the formation of indurations and contractions. Bronchiectasis is frequently the result of the bronchopneumonic processes and atelectasis in the lower lobes, but more or less extensive indurations and shriveling predominate at the apices. Tuberculosis may make its appearance sooner or later, but the alterations it finds are nearly identical with its own healing processes, and its course is liable to be much more favorable than in persons without these dust lesions. Changing to another occupation may rapidly cure persons who have for years presented evidences of serious but non-tuberculous pulmonary processes, but the remains of the former inflammatory lesions persist, and in case of a fresh catarrh or acute bronchopneumonia, may deceive the physician into the belief that he has an advanced case of tuberculosis. It is therefore of great importance in both differentiation and prognosis to determine the significance of the alterations noted. The shortening of one or both of the apices indicates shriveling, but the retraction of the anterior margins of one or both of the lungs along the upper portion is an almost infallible sign of indurations and shriveling. In an observation described and illustrated, the margins are so retracted that the anterior mediastinum is not covered by the lungs in any portion.

Improved Sediment Method for Microscopic Study of Bacteria, Especially of Tubercle Bacilli in Feces. J. STRASBURGER.—An abundant sediment can be obtained from urine or diluted feces containing bacteria, by reducing the specific gravity. This allows the bacteria to settle to the bottom by centrifugalization, while in fluids with the specific gravity of water, the bacteria remain indefinitely in suspension. Strasburger finds the specific gravity can be best reduced by diluting one part of the fluid with two parts of 96 per cent. alcohol. The bacteria will be found in the sediment with half a minute's centrifugalization. The flakes of albumin coagulated by the action of the alcohol assist in the rapid sedimentation of the bacteria. A peculiar advantage of this method is that preparations made by the sediment dry much more rapidly than usual, on account of the alcohol. Even without a centrifugalizer, sedimentation occurs in one-half hour, but would require a whole day without the alcohol. This sediment process is especially instructive in case of suspected tuberculous lesions in the intestines, and will afford information in regard to the presence of tubercle bacilli in apparently normal feces, not obtainable in any other manner.

Zeitschrift f. Orthopedische Chirurgie (Stuttgart), vii, 22.

Congenital Luxations of Knee Joint. G. DREHMANN.—To determine the relations between congenital luxation of the knee-joint and congenital genu recurvatum, which have been frequently confounded by various later writers, Drehmann describes five personal cases and reviews all he could find in the literature of both malformations—127 in all. He restricts the term genu recurvatum to an abnormally excessive extension movement, with otherwise normal flexion, without backward displacement of the condyle of the femur. True luxation consists in the dislocation of the condyle of the femur toward the rear, or a luxation of the tibia on the articulating surfaces of the patella. Later, as the child develops, the more advanced stages of the dislocation are reached, as occurs with congenital luxation of the hip-joint, which is much more frequent, and in which several stages can be distinguished. The slight displacement at birth gradually becomes more and more pronounced forward and upward. Not until later, when weight comes upon it, is the backward luxation observed. We are justified in assuming that at birth there is merely a sub-luxation in many cases. Another point in which it resembles luxation of the hip-joint is the frequent association of other malformations allied to it. Coxa vara usually occurs with luxation of the hip, and genu valgum frequently with luxation of the knee. In the cases reviewed in which the sex was men-

tioned there were 46 females to 29 males and 1 hermaphrodite. In 54 cases of forward dislocation it was restricted to one side; and in 48 it was bilateral; in 6 it was "voluntary luxation;" in 6, unilateral backward; in 3, unilateral outward; in 5, bilateral backward; and in 3, bilateral mixed (backward and forward). The etiology is possibly that in the differentiation of the joints, the knee does not become flexed, or else it gets into extension at a time when the upper portion of the limb is much larger than the lower and thus the lower portion has freer swing. If this occurs before the muscles are completely formed—which we are justified in assuming from the conduct of the patella—the leg can remain a long while in this abnormal position. The foot gets caught by the chin or in the axilla, and notwithstanding the presence of plenty of fluid, is prevented from returning to a flexed position as it has grown in length during the interval. Genu recurvatum first occurs, then pes calcaneus and then the joint surfaces slide apart. The hip or the knee joint may be affected or both together. Prognosis is more favorable for the knee than the hip, which is a much looser articulation. The results of treatment are better, the earlier it is commenced. Reposition—with narcosis for older children—is only complete when the condyle of the femur is no longer to be felt in the popliteal space and the lower portion of the leg remains flexed during narcosis; for after-treatment a circular plaster cast holding the knee at a right angle or in moderate flexion for younger children; operative treatment for older persons or rebellious cases.

Recent Progress in Treatment of Scoliosis. A. HOFFA. —In this profusely illustrated communication Hoffa describes his success in mobilizing the rigid scoliotic spinal column with suitable apparatus; the general and special gymnastic exercises by which he stimulates and restores strength to the muscles of the back, until the patient can voluntarily assume the normal position, and the apparatus which he uses to hold the spine in this normal or overcorrected position. The latter consists of an iron pad covered with leather, which is applied to the prominence on the spine and held by a leather strap over the shoulder, and a stout iron rod which screws up and down in a threefold slide at the base of the spine, modifying its position in three different directions. The slide is fastened immovably in a long corset which embraces the pelvis. The firm support afforded by this is the chief feature in the apparatus. The pressure of the pad is as much like that of the hand as possible.

Progress Medical (Paris), March 31 and April 7.

Tuberculosis of the Eye. A. PECHIN.—The arguments in favor of enucleation as the treatment of supposed primary tuberculosis of the eye are refuted by the extreme rarity of this form of tuberculosis as a primary affection. Pechin advocates very conservative measures. Even a "fungous" degeneration, with the cornea quite destroyed, has been known to heal spontaneously. Iridectomy in case of a solitary tubercle may save the eyesight, as in a few cases on record, in which there was good retention of light vision. With disseminated tuberculosis of the iris there should be no intervention, as the traumatism might develop acute accidents, while there is always a possibility of spontaneous absorption.

Societies.

COMING MEETINGS.

- AMERICAN MEDICAL ASSOCIATION, Atlantic City, N. J., June 5-8.
 Arkansas Medical Society, Jonesboro, May 14-16.
 Illinois State Medical Society, Springfield, May 15-17.
 Medical Association of State of Missouri, Mexico, May 15-17.
 Medical Association of Montana, Butte, May 16.
 Iowa State Medical Society, Des Moines, May 10-18.
 American Medico-Psychological Association, Richmond, Va., May 22-25.
 Connecticut State Medical Society, New Haven, May 23-24.
 North Dakota State Medical Society, Grand Forks, May 23-24.

- Indiana State Medical Society, Anderson, May 24-25.
 Association of Military Surgeons of the United States, New York City, May 31 to June 2.
 American Laryngological, Rhinological and Otolological Society, Philadelphia, May 31, June 1 and 2.
 New Hampshire Medical Society, Concord, May 31 and June 1.
 International Association of Railway Surgeons, Detroit, Mich., May 30 to June 1.
 Baltimore & Ohio Association of Railway Surgeons, Atlantic City, N. J., June 1-2.
 Conf. of State and Prov. Bds. of Health of N. A., Atlantic City, N. J., June 1-2.
 American Academy of Medicine, Atlantic City, N. J., June 4.
 American Medical Publishers' Association, Atlantic City, N. J., June 4.
 Association of American Medical Colleges, Washington, D.C., June 4.
 American Medical Editors' Association, Atlantic City, N. J., June 4.
 Medical Society of New Jersey, Atlantic City, N. J., June 4.
 New Mexico Medical Society, Santa Fe, June 5.
 American Association of Acting Assistant-Surgeons. U. S. Army, Atlantic City, N. J., June 6.
 Rhode Island Medical Society, Providence, June 7.
 Medical Association of Delaware, Rehoboth, June 12.
 Massachusetts Medical Society, Boston, June 12-13.
 American Association of Military Surgeons of the U. S., New York City, June 12-14.
 Oregon State Medical Society, Portland, June 12-14.
 Colorado State Medical Society, Denver, June 13.
 Maine Medical Association, Portland, June 13-15.
 South Dakota State Medical Society, Aberdeen, June 14.
 Indian Territory Medical Association, Wagoner, June 19-20.
 Wisconsin State Medical Society, Milwaukee, June 20.

Worcester North District Medical Society.—This Society's forty-second annual meeting was held in Fitchburg, Mass., April 24. C. H. Bailey was elected president for the coming year.

Greene County Medical Association.—This body met in Waynesburg, Pa., April 24, and elected officers: president, Ira D. Knotts, Davistown; vice-president, T. N. Milliken, Waynesburg.

Bucks County Medical Society.—At the spring meeting, held May 2, the following officers were elected: president, A. S. Wilson, Bristol; secretary, A. F. Myers, Blooming Glen. Prof. John Da Costa, of the Jefferson Medical College, Philadelphia, made the address.

Brainard District Medical Society.—The annual meeting of this Society was held in Springfield, Ill., April 26, and the following officers were chosen for the ensuing year: president, J. L. Lourie, Lincoln; vice-president, S. F. Hurst, Greenview; secretary, Katherine Miller, Lincoln.

Ophthalmological and Otolological Society.—At the annual meeting of this Society, held recently in Washington, D. C., the following officers were elected: president, S. O. Richey; vice-president, secretary and treasurer, Anton Coe, vice W. K. Butler, who resigned, having filled that office for the past four years.

Hunterdon County Medical Society.—The annual meeting was held in Flemington, N. J., April 24, and the following officers elected: president, E. H. Moore, White House; first vice-president, Geo. W. Barton, Three Bridges; second vice-president, H. Ward Servis, Junction; treasurer, I. S. Cramer, Flemington; secretary, O. H. Sproul, Flemington.

Suffolk District Medical Society.—The fiftieth anniversary of this Society was observed April 28, in Boston. The programme contained a history of its organization, sketches of some of its members and speeches by a few who had been with the Society since its inception. The officers elected were: president, H. L. Burrill; vice-president T. M. Rotch; secretary, H. A. Lathrop; treasurer, W. H. Prescott.

Susquehanna County Medical Society.—The fifty-second annual meeting of this Society was held in Wilkesbarre, May 3. The following officers were elected: president, R. M. Stratton, Scranton; vice-president, B. M. Crary, Wilkesbarre; recording secretary, T. W. Thomas, Wilkesbarre; treasurer, J. C. Mertz, Easton. The next meeting will be held in Williamsport.

Hudson County Medical Society.—The annual meeting of this New Jersey organization was held May 1 in Jersey City. Following are the newly elected officers: president, John Parsons; secretary, C. J. Purdy; treasurer, Henry C. Brinkerhoff. It was decided to hold two meetings a year hereafter instead of one, as has been the custom.

American Therapeutic Society.—In pursuance with a call issued by the Therapeutic Society of the District of Columbia, a meeting was held in Washington, May 1, and the organization of the American Therapeutic Society effected. It will become affiliated with the Congress of American Physicians and Surgeons, and will meet annually, next year in Washington, D. C., on May 7. The officers are: president, Horatio C. Wood, Philadelphia; first vice-president, Howard H. Barker, Washington; second vice-president, R. W. Wilcox, New York City; third vice-president, E. H. Long, Buffalo, N. Y.; secretary, Noble P. Barnes, Washington; recorder, William M. Sprigg, Washington; treasurer, John S. McLain, Washington.

Pan-American Medical Congress.—The International Executive Committee of the Pan-American Medical Congress, consisting of Drs. Albert Van Dervere, Albany, N. Y.; Chas. A. L. Reed, Cincinnati, Ohio, and H. L. E. Johnson, Washington, D. C., met in executive session at Buffalo, N. Y., April 27, to determine the place of meeting of the third Pan-American Medical Congress. The Congress should have been held in Caracas, Venezuela, but owing to the uncertain conditions, growing out of the military operations in that country, the executive committee was requested by the medical president to hold the meeting elsewhere. The committee was unable to decide just where the Congress should meet, owing to the urgent requests from several countries, so has taken the matter under advisement, and will report on the date and location later.

Congress of American Physicians and Surgeons.

Fifth Triennial Session, Washington, D. C., May 1, 2, and 3, 1900.

The President of the Congress, Dr. Henry P. Bowditch, of Boston, in the chair.

The Congress voted on a proposition for the appointment of a committee of three with full power to draw up and execute a memorial to the Congress of the United States, asking that charitable, religious, and educational institutions be relieved from such provisions of the war revenue act of 1898 as imposed taxes on the legacies left to such institutions, and to take such other action as may, in their discretion, seem desirable in securing such relief.

ADAPTATION OF PATHOGENIC BACTERIA.

PROF. THEOBALD SMITH, Boston, presented the first paper, in which he spoke of the adaptation of pathogenic bacteria to different species of animals, and discussed at length the diseases incident to, and the infectious diseases which human beings share with, animal life. He said that medical science and medical art are concerned chiefly with the phenomena of human disease. All that medical science desires to know is the series of causes antecedent leading to any given disease. Medical art wishes to know where human ingenuity may enter to modify, suppress, or eliminate portions of this series, to interfere with the progress of the disease and bring it to a standstill. By common consent, hygiene devotes itself to external phenomena; pathology to the internal. Professor Smith contended that to learn the simplest facts recourse to animal experiments has been necessary. Experiments on human subjects are not only not permissible, but as a rule sterile of results under conditions necessarily imposed. He gave a technical description of experiments made on many of the lower animals and demonstrated their value to science.

DR. SAMUEL J. SMELTZER, New York City, followed with a paper in which he dwelt on the physiologic resources of the body in its defense against bacteria and their toxic products; while Prof. Harold C. Ernst, of Boston, spoke in a technical manner of flagella and serum reactions.

BACTERIOLOGY AND CLINICAL MEDICINE.

DR. RICHARD C. CABOT, Boston, discussed the relations of bacteriology to clinical medicine. He classified the diseases whose etiology is known, such as diphtheria, anthrax, Asiatic cholera, tuberculosis, bubonic plague, gonorrhoea, glanders, tetanus, relapsing fever, influenza, erysipelas, typhoid fever, epidemic cerebrospinal meningitis, croupous pneumonia, etc. He then considered diseases whose etiology is probable, but not definitely known, and among these he mentioned meat poisoning, leprosy, epidemic and tropical dysentery, and referred to diseases whose etiology is shrouded more or less in darkness, such as whooping-cough, yellow fever, etc.

He advised examination of the sputum for the influenza bacillus, for the pneumococcus, and in tropical countries the sputum should be examined for the possible presence of the bacillus of plague. Examination of the cerebrospinal fluid enables the physician to identify the bacillus of epidemic cerebrospinal meningitis—the diplococcus intracellularis of Weichselbaum. The pneumococcus can be identified, as well as the tubercle bacillus, in the same fluid. Examining the urine for typhoid bacilli should have a wider range of use than it previously has had. That too, of the nasal discharge, sometimes influences the prognosis.

As to the use of serum reactions, he regards the Widal as established, also the tuberculin reaction, which has taken a firm hold on the profession; it can be carried out without danger, if the proper precautions are taken. The mallein reaction is also well established.

As to pneumonia, it is now known that no one organism is responsible for this disease, but that the affection is produced by many different ones, as can be clearly demonstrated by the appearances and conditions found post-mortem. One organism may cause many diseases; for instance, the tubercle bacillus acts on the brain, bone, peritoneum, etc. The finding of the influenza bacillus in coryza influences the prognosis of that disease. The finding of pneumococci in cases of empyema likewise markedly influences the prognosis of that.

BACTERIO-THERAPEUTICS WITH SPECIAL REFERENCE TO TUBERCULOSIS.

DR. EDWARD R. BALDWIN, Saranac, N. Y., followed with a paper on this subject.

He briefly considered the various uses of bacteria and serums in the prevention and treatment of disease, with a more detailed account of those in tuberculosis.

Living bacteria are little used, except in vaccination for variola and anthrax. Dead cholera, plague and typhoid bacilli are useful in prevention, but irrational in treatment.

Diphtheria and tetanus are as yet the only conspicuously antitoxic serums of practical value. Streptococcus, pneumococcus, cholera, typhoid, plague and recurrent fever serums are either bactericidal or bacteriolytic, and of greater value in immunization than treatment.

There are many extracts of tubercle bacilli under the general name of tuberculin, which the author enumerated and described. No permanent immunity is produced by any of them, though the new tuberculins have some immunizing power in animals. The method is not applicable in man, nor safe, as it is likely to produce chronic poisoning, even in healthy subjects. Research at present aims to discover and utilize the mechanism of relative immunity produced by injections of bacillus substance.

The nature of the tuberculin reaction is of importance. Of the various theories promulgated, that which assumes a ferment action chiefly produced by secretions from the leucocytes, is most in line with present knowledge. Many bacterial extracts, nucleins and digestive albumoses excite some such reaction as tuberculin produces.

Tuberculin used therapeutically has only a limited application, and as it does not immunize for any length of time, may not be better than other substances that can produce local

hyperemia. The production of local hyperemia as a therapeutic measure is rational in lupus, tuberculous peritonitis and to a limited extent in pulmonary tuberculosis.

Serums are not yet successful as to antitoxic properties. They may be bacteriolytic or bactericidal. The profession must still hope for some efficient serum or extract of tissues, though possibly not antitoxic.

ETIOLOGY OF MALARIA.

DR. WILLIAM S. THAYER, Baltimore, Md., discussed the etiology of malarial fevers, and spoke of mosquitoes as causative factors in this affection. Inoculation experiments have shown that through the bites of these insects some type of the disease can be transmitted from one individual to another.

BACTERIOLOGY OF DYSENTERY.

PROF. SIMON FLEXNER, Philadelphia, talked on this subject and presented a summary and the results of his investigations in the Philippine Islands. He said that three sets of organisms have been described by different observers, as the cause of dysentery, namely, pathogenic cocci, bacilli, and protozoa, but the specific organism has not as yet been discovered. Evidence to show that the bacillus coli commune is the cause is wanting in many particulars. The ameba coli, on the other hand, has much more evidence in its favor as a cause of dysentery, and this the speaker dwelt on at considerable length, narrating experiments, etc. A large number of observations tend to show that in the tropics the protozoa which have been found, and are said to be the cause of dysentery by some, can not be distinguished morphologically from the ameba coli which is present in the normal intestine. During a residence of three months in Manila, he had an opportunity of studying this disease among the American soldiers. He found two forms, a very acute one, which was rapidly fatal, and the chronic. The acute was unassociated with the presence of ameba coli; while the chronic showed the amebæ with greater regularity.

SOCIOLOGIC STATUS OF THE PHYSICIAN.

DR. CLARENCE J. BLAKE, Boston, discussed the sociologic status of the physician. Sociology was defined as the science of the laws of human relationships. Among other things, the Doctor said that people turn to the practitioner of medicine for advice and counsel because of his broad knowledge and thorough study of human nature and the relation of one individual to another. The education necessary to fit one for the practice of medicine is more exacting, and requires more intense and closer application than the corresponding courses which lead to a degree in law or divinity. The possession of a knowledge of human life and intimate relationships implies great responsibility.

Attention was directed to the admittance of women into hospital life, and to training schools for nurses. Since the advent of the trained nurse better service has been rendered to both the physician and patient; besides the general beneficial effect exerted on the morale of the latter.

EVOLUTION OF THE PHYSICIAN.

DR. S. WEIR MITCHELL, Philadelphia, recited a poem on the evolution of the physician. It elicited considerable applause throughout its delivery.

THE MEDICAL SCHOOL OF THE FUTURE.

PROF. HENRY P. BOWDITCH, the President of the Congress, delivered an address on this subject. He said that among the intellectual movements that have characterized the century now drawing to a close, there is perhaps none more deserving of careful study than that which is concerned with providing education for the people in the school, the academy, and the university. The importance of popular education becomes apparent in proportion as political freedom is secured for the people. For many years educators looked on their work with no little complacency. The educational systems of the various civilized countries were supposed to be well adapted to the ends in view. Education has not always been found to furnish the required safeguards for order and liberty, and highly educated men have been found singularly lacking in mental balance. Schools for the inculcation of common-sense have never yet been established. The great danger which threatens the system of popular education in America is its too close association with party politics. The office of school committeeman

in one of our large cities has been well described as "the smallest coin in which the politicians pay their debt," and as long as the education of children continues to be entrusted largely to men who consider their positions to be the lowest step of the political ladder, there is small hope of the adoption of rational methods of education.

Professor Bowditch pointed out many of the evils of the modern system of education, paying particular attention to medical colleges, and showing how he believes the faults or defects will be remedied in the future. He thinks the medical school of the future should be connected with some university, but entirely independent of university control outside of questions relating to methods of personal teaching. Such a school will afford advanced instruction in every department. Laboratory instruction will be greatly extended and students trained to get knowledge, as far as possible, by direct object study. The didactic lecture, though it will not occupy as conspicuous a place as it has heretofore, will not by any means be displaced as an educational agency. The work of students will be so arranged that their attention shall be concentrated on one particular subject at a time, and subjects will follow each other in natural order.

Chicago Medical Society and Chicago Medical Examiners' Association.

Joint Meeting, April 11, 1900.

DISEASES OF THROAT AND NOSE IN RELATION TO LIFE EXPECTANCY.

DR. WILLIAM E. CASSELBERRY read a paper on this subject. Diseases of the throat and nose have not as yet been accorded a position of any great prominence with reference to life expectancy. Many of the simpler affections, important as they are from the standpoint of the patient's comfort, show but little tendency to abbreviate existence; yet there are other and graver conditions often confused with the simpler affections, lightly passed over, or wholly unrecognized by the casual observer, which do exert a decided influence on one's expected term of years. Simple, hypertrophic, and atrophic rhinitis, when uncomplicated, have little or no influence on life expectancy, unless the case be of extraordinary severity, or occurring in one of otherwise debilitated constitution. But these unimportant catarrhal affections are liable to be confounded with more serious nasal diseases which are prone to shorten the duration of life and which the examiner therefore should seek to discover. Prominent among these the author mentioned chronic suppuration of the antrum of Highmore, or of the frontal and ethmoid sinuses.

Nasal obstruction commonly indicates only hypertrophic rhinitis or septal deformity, widespread affections which, unless extreme, may be disregarded from the standpoint of life expectancy.

The significance of nasal polypus with reference to life insurance varies with the individual case. If single or small and with little disposition to recurrence after removal, it may add but a trifling risk, but when multiple or large and persistently recurrent, a conservative custom would be to exact a thorough removal of polypi, as a condition preliminary to acceptance. Polypi are a frequent accompaniment and probably at different times both a cause and an effect of sinus empyema, so much so that to the rhinologist their presence is instantly suggestive of a possible chronic suppuration in one or more of the accessory sinuses of the nose.

Another symptom of nasal disease of which the examiner should take cognizance is fetor. When pronounced, it is common both to the *ozena* type of atrophic rhinitis and to the gummatous ulcerative or necrosing stage of nasal syphilis.

Tuberculosis of the larynx is almost invariably secondary to pulmonary tuberculosis. The primary lung disease, however, may be so slight as to escape notice in some cases; hence the importance of bearing in mind the possibility of laryngeal tuberculosis as a rapidly fatal and sometimes early complication.

Impairment of the voice is an important symptom with reference to life expectancy, one which should be the subject of minute inquiry on the part of the examiner, eliciting informa-

tion concerning its cause, mode of onset, duration, variation, disposition to recurrence, etc., and which, if not thus satisfactorily accounted for, should suggest a careful laryngoscopic examination.

DR. E. F. INGALS sent a short paper in which he estimated that less than 3 per cent. of all persons examined for life insurance are subjected to any examination of the upper air-passages. It is not believed that the insurance companies lose anything in a large percentage of the cases supposed to be normal. There is no question, however, among those who have to do with diseases of the upper air-passages that they have an important relation to various other affections which materially influence life expectancy. Sharp deflections of the nasal septum would influence the opinion of the examiner, for the reason that such deflected septa may produce epilepsy.

DR. HOMER M. THOMAS classified a list of diseases into those which are of the acute and chronic type; those which are malignant and non-malignant, and those which are irrelevant as to life expectancy, but inferentially dangerous. A long list of diseases was mentioned. He quoted Horace Green, who maintained that chronic follicular pharyngitis is an impediment for life expectancy, for the reason that this disease might ultimately lead to phthisis. Many other affections were mentioned as influencing life expectancy.

DR. J. HOMER COULTER believes that the medical directors should select younger men as examiners, because the colleges of later years have devoted more attention to life insurance examinations and physical diagnosis as a specialty than formerly, consequently the men who have graduated within the last twelve or fifteen years are better prepared to make critical examinations, when necessary. Medical colleges should establish a chair of insurance examinations. When this is done there would be a practical application of the theories advanced by Dr. Casselberry.

DR. WILLIAM L. BALLENOER said that all patients with chronic hoarseness should be subjected to a critical examination before being accepted as risks, all who have a chronic pus discharge and all with cyanotic hue of the mucous membranes of the nose and throat.

EARLY DIAGNOSIS OF PULMONARY TUBERCULOSIS.

DR. GEORGE W. WEBSTER followed with a paper on this subject. By the early recognition of this disease he means a positive diagnosis made at the earliest time that tubercle bacilli are found in the sputum, either by the aid of the microscope, or by the inoculation of animals, and a tentative probable diagnosis long before this time. He first described the clinical manifestations, including an examination of the sputum, and then other means and methods which are available and valuable, such as the use of potassium iodid, tuberculin, the X-ray, and the inoculation of animals.

The family history should be carefully investigated, for two reasons: 1. The peculiar type of chest and tissue in which resistance is diminished and tuberculosis is likely to develop is inherited. The degree of immunity is below the average. What is inherited is rather an increased vulnerability to adverse conditions of all kinds. 2. Where there has been tuberculosis in the family, the environment has been unusually favorable for the occurrence of infection.

Dr. Webster then discussed, in their order and at considerable length, personal history, age, occupation, habits, previous illnesses, symptoms, general examination, mensuration, circulatory system, palpation, percussion, auscultation.

The earliest respiratory sign of beginning tuberculosis is enfeebled breath sounds, or a slightly roughened harsh respiratory murmur, audible during expiration; or the expiratory sound slightly prolonged. This slight increase in the relative length of the expiratory murmur may be the only sign at first and may not have the slightest suspicion of a tubular quality, but is slightly increased in intensity.

Auscultation of the voice is of great value in confirming the findings of percussion and auscultation. Temperature is one of the most reliable guides. In all doubtful cases it should be carefully taken at least four times in the day and for several successive days. When the temperature is persistently above the normal, especially in the evening, it deservedly arises

above the dignity of a mere suspicion. The sputum should then be examined for tubercle bacilli.

The value of the serum test as a diagnostic aid is as yet not fully determined.

The essayist spoke of a new sign of tuberculosis to which the attention of the profession has been directed by Murat, which consists of a subjective sensation of vibration in the affected apex on loud speaking. Dr. Webster has been able to confirm this sign in cases far enough advanced to cause consolidation, this facilitating the conduction of vibrations, but at this stage it is not needed. He has failed to elicit it in the earliest cases.

The X-ray has its advocates as a valuable means of early diagnosis, but the cost of the necessary apparatus, together with the high degree of technical skill required, will serve to limit its value, which has not yet been satisfactorily demonstrated.

The iodid of potash test is one of very considerable value. In those cases in which there are very faint physical signs and an absence of even the amount of sputum necessary for a microscopic examination, or where we desire to determine the location and extent of the tuberculous process, this method offers many advantages. The author directed attention to and quoted from a paper by Dr. Edward F. Wells, read before the Chicago Society of Internal Medicine, December, 1898, and published in *THE JOURNAL*, Feb. 4, 1899, in reference to the iodid of potassium test.

He presented a mass of evidence for and against the tuberculin test. Opponents of the test allege unreliability, reaction in other diseases, notably syphilis; no reaction in cases of undoubted tuberculosis. Its advocates assert that it is safe, delicate, reliable, and that in very many cases it furnishes an absolutely safe means of making an absolute diagnosis.

Dr. Webster presented the following conclusions: 1. There seems to be no agreement or understanding as to what constitutes the "pretubercular" stage or what is meant by this term. Does it apply to that syndrome of symptoms which arise after infection has taken place; or, to that condition in which vulnerability is increased, the degree of immunity lessened, whether from hereditary predisposition or the effect of disease, unsanitary surroundings, bad habits, impaired nutrition, etc. This may seem a nice distinction, and yet such a discrimination must be made. In the former, any characteristic phenomena are symptoms of tuberculosis; and in the latter they are simply those of other diseases, types, etc., which should warn us that in these cases tuberculosis is especially likely to develop. To speak of such phenomena as pretubercular in the sense that they all make up a symptom group indicating that tuberculous infection has already occurred, is absurd. To speak of it as a "stage" of a disease before the infection has occurred is equally preposterous.

2. We should be able to recognize definitely those cases in which there is that form of chest and type of tissue, together with low vital index, lessened vital capacity, diminished respiratory expansion, perimeter below the normal, corpulence below standard, in which tuberculosis is very likely to develop. This should never be designated the pretubercular stage of tuberculosis.

3. We should also be able to recognize the probable occurrence of infection by the malaise, gradual loss of weight, sense of fatigue, upon slight exertion, digestive disturbances, hacking cough, occurrence of single or repeated hemorrhages, night sweats, increased frequency of low tension pulse, slight evening rise of temperature. In these cases the finding of a slight localized bronchitis in one apex or the slight early auscultatory signs alluded to, ought to enable us to make a correct diagnosis whether the tubercle bacilli are found in the sputum or not.

4. When the tubercle bacilli are present in the sputum there is no excuse for not making an absolute diagnosis.

5. In doubtful cases, the iodid test, and the tuberculin test, may be resorted to with confidence in their safety, efficacy and reliability.

6. But while we should and do welcome every new symptom, sign and method; and while we hail with joy every ray of new or additional light which will enable us the better to read the

symbolical language of disease aright, interpret the "hand-writing on the wall," the great need of the hour is for men well trained in correct clinical methods, and in the art and science of physical diagnosis rather than the addition of new methods.

DR. ROBERT H. BARCOCK indorses in the main what had been said by the essayist, and called attention to the persistent lightness of weight presented by individuals who have a strong tendency to tuberculosis. Individuals of spare weight, who have an inherent tuberculous tendency, are not only of light weight, but they present a peculiar narrowing of the chest, or constriction of the apices, with lightness of bone structure. The pulse of incipient tuberculosis is accelerated and one of low tension and small volume. However, in some cases he has found tuberculosis in individuals whose pulse was not accelerated. In one case the pulse was 80, yet the patient had a marked lesion of the right apex with bacilli in the sputum. A temperature suspicious of tuberculosis is one between 99.5 and 100.5 F. An important point to remember is the facility with which it becomes accelerated on exertion.

DR. EDWARD F. WELLS believes there is no pretubercular stage in tuberculosis. He laid stress on the importance of fetor. Nutritional changes occur with loss of weight. Loss of weight is most marked during febrile attacks, and it is usually not regained. In cases of diffuse miliary tuberculosis, at least in some of them, attended with a good deal of fever, there is no expectoration, or no bacilli in the sputum. The diazo reaction is of certain value. The blood-count is likewise of value in tuberculosis. He has used the sphygmograph constantly for fifteen years, and he has yet to see a case of anemia of any sort, or a case of chlorosis, in which the pulse tension is not greatly reduced.

DR. JOHN A. ROBISON said that while he believes in the majority of cases the tubercular diathesis or tubercular predisposition is inherited, there are many cases in which there is a direct transmission of the tubercle bacillus from the parent to the child. The bacillus of tuberculosis may pass through the placental circulation of the mother to the child. The tubercle bacillus is found in glands and other tissues of children and adults who are apparently healthy. An early sign of incipient tuberculosis is the prolongation of the expiratory sound, heard on auscultation; this sound is accompanied by a rise of pitch. While he does not believe there is really a pretubercular stage, there is a stage which Hare calls the stage of hyponutrition. Lack of nutritive power occurs in persons whom we denominate as those having a tubercular predisposition.

St. Louis Medical Society.

CARCINOMA OF TONGUE; TOTAL EXTIRPATION.

DR. A. H. MEISENBACH presented specimens from a patient 65 years of age, strong in appearance, of good habits, who had smoked a pipe for many years. On account of the front incisor teeth in the lower jaw being defective, he had held his pipe well down in the floor of his mouth, mostly on the left side, and last October he discovered a nodule below the lower jaw-bone about an inch to the left of the symphysis. This grew and became painful, so he shifted his pipe to the right side. The tumor kept on growing, he consulted several physicians without results, and came to St. Louis for relief.

The patient was first seen in consultation with Dr. Henry Summa, on April 1. Examination revealed a very hard mass occupying the floor of the left side of the mouth, extending backward behind the base of the tongue; on the right side the floor was also infiltrated, extending only as far as the first molar tooth. The tongue was so bound down that the patient had no control over it. The body of the tongue did not seem to be involved. At the inferior margin of the jaw-bone, on the left side, about an inch from the symphysis, there was a fistulous opening. On pressing the floor of the mouth pus could be expressed from the fistulous tract. The diagnosis of carcinoma was made and operation suggested, but without any assurance of positive cure and no recurrence.

On April 3 Dr. Meisenbach operated, at the Pius Hospital, assisted by Drs. Henry Summa, Heidemann, Auf der Heide and

Robert Hughes, Denver, Colo. Under chloroform, a preliminary tracheotomy was made, low down. An ordinary large-sized No. 4 canula was introduced. The pharynx was tightly tamponed with iodoform gauze, shutting off the upper air-passage from the field of operation. Chloroform was administered through the tracheal tube, to the completion of the operation. A combined Kocher and Sedillot operation was done, the incision of the former extending from below the mastoid process on the left side to the greater cornua of the hyoid bone and parallel with it, about 1 cm. above it to the median line. The second incision (Sedillot) began about 1 cm. below the mucous margin of the lower lip—thereby saving the coronary arteries from being cut—in the median line, going down to the bone over the symphysis, and extending downward joining the first cut at right angles. The flap thus formed on the left side was dissected up to the inferior margin of the lower jaw, tying the facial artery and vein. The mucous of the lower lip was next cut away from the alveolar process in the median line. A key-hole saw was used to divide the jaw-bone through the symphysis, and both halves were pulled aside giving free access to the floor of the mouth. The operation was continued by using the scissors, cutting through the healthy tissue, beginning at the lower part of the mass above the hyoid bone and freeing it from below upward. During the dissection the lingual artery on the left side was exposed and tied. Having freed the tissues of the floor of the mouth from the left half of the jaw, the tongue could easily be drawn down into the floor of the mouth, with the scissors the tongue was cut across as near as possible to the epiglottis, leaving a bridge of tissue on the right side, in which was the right lingual artery. This bridge was clamped and the tongue cut away. The artery was tied. The jaw-bone was drilled and two silver wires introduced, bringing it again into place, the ends were left long and sticking out of the incision, so that the wires could be removed when the bone was united. The incision was united with a running suture of fine silk. Previous to suturing the wound the packing in the pharynx was removed and replaced by a fresh one, leaving the edges protruding through the fistulous opening below the jaw, the edges of which had been freely excised by the scissors.

Dr. Meisenbach said that the operation was practically a bloodless one, and, on account of the ease with which the anesthetic could be given through the tracheal tube, the pharynx being plugged, it was robbed of many of the unpleasant features that these operations sometimes give rise to if done without preliminary tracheotomy. The canula was left in the trachea, the pharynx kept plugged and the patient kept nourished by rectal enemata. The tracheal tube was removed and feeding commenced with the stomach-tube, on April 17.

The Doctor pointed out that, barring the recurrence of the disease, there are three sources of danger in the operation: 1, hemorrhage; 2, pneumonia; 3, sepsis.

It is of the utmost importance to have full control of the operative field. This can be done by such a method as he used in this case, preliminary ligation of the lingual arteries not then being necessary. Ligation of the arteries at best is tedious work and in this case would have been difficult on account of changed anatomic relations, due to the inroads of the disease.

VAGINAL EXTIRPATION OF THE UTERUS; FIBROMYOMA.

Dr. Meisenbach also presented a specimen of this, from a patient 55 years old, seen March 14. She complained of uterine hemorrhage, irregular in character—lasting three weeks at a time, stopping a few days and then coming on profusely. She weighed 250 pounds, so manual examination was very difficult. The uterus was large, freely movable, $5\frac{1}{2}$ to 6 inches in depth. There was nothing suspicious about the os or vagina. On March 17 he made exploratory curettement. Microscopic sections revealed only endometres interstitialis. Packing and rest and hemostatics did not arrest the bleeding. Although microscopic examination was nil, this was not conclusive evidence that carcinoma could be entirely excluded.

At the menopause fibroids usually cease to give trouble, as well as hyperplasia, so the case was more or less obscure. The patient continuing to lose blood and beginning to feel its

effect, he suggested operation, which was done April 5, at the Lutheran Hospital, by the vaginal route, on account of the thick abdominal walls.

Philadelphia County Medical Society.

April 11, 1900.

Dr. J. H. Musser, President.

SYMPOSIUM ON EMPYEMA.

DR. L. SHARP spoke of a patient who suffered from this condition as a sequel of pneumonia, was operated on and the abscess cavity drained for several months. Considerable discharge continued and another operation was done, when it was found that portions of two drainage-tubes had been retained within the abscess. These were removed and, after a considerable period, the man recovered.

PLEURAL EXUDATES AND PHYSICAL SIGNS.

DR. HERMAN B. ALLYN read a paper entitled "Pleural Exudates with the Physical Signs in the Lungs." He considers the most important physical signs as diminished or absent vocal fremitus, diminished or absent vocal resonance, tubular breathing, and displaced organs. Austin Flint has reported instances of pleural exudates in which the physical signs were variable. The speaker had treated a case in which there was flatness, increased vocal fremitus and subcrepitant râles. Movable dullness, and Skodaic resonance anteriorly are also very important physical signs. Puncture with a needle is always the most certain method of determining the presence of fluid within the pleural cavity. The aid furnished by a skiagraph is very great in some cases.

ETIOLOGY AND PATHOLOGY OF EMPYEMA.

DR. JOSEPH MCFARLAND read a paper entitled "The Etiology and Pathology of Empyema." He regards the condition as an infectious inflammatory process of the pleura, due to traumatism, local disease or metastasis. As to traumatism as an exciting cause, the history in most cases would be hard to trace. As to local disease, tubercular abscesses were important. Metastasis may take place through the lymphatic channels, from an infectious process elsewhere. As to the bacteriology of the condition, in children the pneumococci, in adults the streptococci, have been most frequently present. Tuberculous empyema is not as common as generally supposed. In children the prognosis is generally favorable, while in adults it is grave. As a rule the left side is most often involved. The fluid aspirated may contain leucin, tyrosin, cholesterolin, uric acid, pus cells, and blood. The pulmonary pleura is more frequently involved than the parietal. Spontaneous rupture generally takes place in the fifth interspace.

SURGERY OF EMPYEMA.

DR. EDWARD MARTIN spoke of the surgical treatment of empyema. The most important plan of prophylaxis is aspiration as soon as the fluid becomes purulent. The technic, while simple, is often carried out in a wrong manner. The sight of the wound should be in the eighth interspace, slightly anterior to the angle of the scapula. The parts should be anesthetized and an incision should be made through the skin with a tenotome, and then the trocar and canula inserted. The needle should not be thrust through the external skin. The Doctor has practiced aspiration and drainage with advantage. In some cases it would be advantageous to resect a portion of a rib. Small cavities may be packed with gauze. In old cases frequently the only relief is a resection of a portion of the chest so as to allow collapse of the chest walls. Serous effusion is best treated by aspiration.

DR. S. SOLIS COHEN spoke of certain difficulties met with in the treatment of special cases, and also the difficulties of diagnosis. In one instance three ineffectual attempts were made to aspirate, and afterward the person was anesthetized and the abscess opened. As to the prognosis, he knew of one case in which the tubercle bacillus was the exciting cause. An incision had been made over the abscess, causing it to drain for a period of several months. Later another one opened higher up in the axilla. After a period of six years the pa-

tient is still living. In the speaker's opinion the most favorable cases are those following pneumonia.

DR. L. BRINKMANN said he generally uses the antitoxin needle half filled with normal saline solution. He believes that irrigation of the cavity would rather increase than decrease the amount of discharge. In resecting a rib the patient will often cough violently, tearing apart new adhesions, and this is a disadvantage.

DR. W. E. HUGHES stated that tubular breathing is nearly always associated with pleural effusions, and this seems to be more fully recognized by the English than the American physician. The tubular breathing in pleurisy is different from that of pneumonia, in that the former is more insistent and superficial. As a diagnostic sign he regards displaced organs as of the greatest importance. In aspirating he would not depend on a hypodermic needle, as the orifice is too fine to permit of thick pus escaping into the barrel of the syringe. He believes that all cases of empyema should be drained early, and further that all the fluid possible should be removed at the first operation.

DR. MORDECAI PRICE spoke of the condition when the abscess is sacculated. He believes in resecting a rib, washing with boric acid solution and inserting a double drainage-tube.

DR. W. L. RODMAN spoke of the case referred to by Dr. Cohen. To say that most cases of empyema and pleurisy are of tuberculous origin he regards as an error. He does not insist on resection of a rib, but has found that thoracotomy often gives relief.

DR. H. R. WHARTON agrees on early operation in these cases. He does not believe that resection of a rib is always necessary. Drainage-tubes will often accomplish the same purpose. He has changed his mind in regard to the teaching that most cases of empyema are of tuberculous origin.

ELPHANTIASIS OF LEG.

DR. DAVID RIESMAN, through Dr. Eshner, presented a case of elephantiasis of the leg, in a man of middle age, who had suffered from measles and pneumonia; eight years ago he had a severe fall down stairs. He is a foundryman, and his present illness dates back to four years ago, when he observed enlargement of the left leg, at first painful, especially during certain changes of the weather. He also suffered from pains in the abdomen. Some time after the process began in the left leg the right became much swollen, and is now the larger of the two. The skin is cold and dry, and does not pit on pressure. For relief of pain, 5-grain doses of antipyrin have been given. Several attempts have been made to detect the filaria sanguinis hominis, but without results.

Detroit Medical and Library Association.

April 23, 1900.

TWO FATAL CASES.

DR. D. M. CAMPBELL read a paper with this title. The first case was in a girl of 12, who had been in her usual health up to February 10, when her parents noticed a small pimple on her forehead. This was ruptured the next morning, by the child, and a very small quantity of pus was evacuated. Late that afternoon she had a chill followed by fever. On the following morning the family physician was called. Besides a temperature of 104 F., a pulse of 140 and the general symptoms accompanying fever, the right eyelids were swollen and there was exophthalmus. At 4 p. m. the temperature was 106 F. and the pulse 160. The other conditions were more marked. Dr. Campbell was called as consultant, and at 10 p. m. found a temperature of 105 F. (axilla), the pulse too rapid to count, the patient comatose, widely dilated pupils, enormous exophthalmus on the right side, and great puffiness on the eyelids. No pus was reached through the deep incisions made into the orbital cavity. The child died the next afternoon.

The second patient was suffering from double phlegmonous orbital cellulitis. Great quantities of pus and necrotic tissue were evacuated through free incisions made deep into the orbital cavity. In spite of this the patient died comatose, showing all the evidences of a general septic infection.

THE JOURNAL OF THE
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61 MARKET STREET, CHICAGO.

SATURDAY, MAY 12, 1900.

EFFECTS OF REMOVAL OF LARGE PORTIONS OF THE
DIGESTIVE TRACT.

The tolerance of the human body to surgical intervention and aseptic traumatism, without excessive hemorrhage or shock, is at times quite remarkable. Anatomic structure seems to be so organized and physiologic function so adjusted that there may be compensation for even extensive destruction or ablation of tissue. The records of surgery contain numerous instances in which large portions and even the whole of organs considered vital have been removed by accident or design and life has been preserved. Thus, the kidney, the spleen and the stomach have been removed entirely and successfully. Large portions of liver and of intestine, and considerable portions of brain have been excised with relatively little inconvenience. It can be readily understood that if excessive amounts of the digestive tract be removed death may result from inanition, although it has not been definitely determined what amount of loss can be tolerated. It has been thought that removal of more than one-third of the small intestine is dangerous to life, causing fatal marasmus after a time, although in some experimental observations on animals resection of half the small intestine was well borne. It has been found that the results of resection of the beginning of the jejunum are more serious than those of resection of more distal portions of the bowel. A not inconsiderable number of cases are on record in which more than one meter of small intestine has been removed from human beings. The operation was survived in the majority of cases, and in most digestion was not notably impaired. In a small number, more than two meters of small intestine have been removed, but in most of these digestive disorder followed. To the cases already reported Schlatter¹ adds another in which he resected about two meters of small intestine. The patient was a strongly built, well-nourished man, 23 years old, who received a stab-wound in the hypogastric region and immediately fell to the ground, the intestines protruding from the wound. With aid, the man walked a distance of 320 yards, and in a short time a temporary dressing was applied. He was received at the hospital eight hours after the infliction of the injury. After removal of the dressing, about two meters of small intestine were found lying in the right hypogastric region, the greater part of which varied in color between deep dark blue and black. The serosa was lusterless. The protruding intestine was tightly grasped within the small wound and in places undergoing necrotic change, and resection was with some

difficulty effected. The removed portion of bowel measured 92 cm. in its shortest length. The further course of the case was complicated by an attack of urticaria. The patient drank tea on the day of the operation, ate fried sausage on the seventh day, and was on a full diet on the twenty-fifth. He was permitted to stand on the thirty-first day, and was discharged cured on the fifty-ninth, having gained nearly 24¼ pounds in weight in the course of four months. A study of the digestive processes showed that while nitrogenous assimilation was not seriously interfered with, that of fats was considerably impaired. Later reports concerning the patient, some eight months after the operation, indicated that he could do but little work and this but slowly and with many intervals for rest. He lived principally on broths, soups and animal food, and was quite unable to tolerate solid food. He had lost a slight amount in weight. This case would seem to show that the process of digestion may be seriously interfered with, even in young robust patients, by the removal of more than two meters of small intestine, unless precautions are taken to secure the requisite sustenance.

PSYCHIC SARCOLOGY ET AL.

Along with the delusions of osteopathy, Weltmerism, goats' lymph, etc., we have from Missouri still another, "Psychic Sarcology," which is notable if only for its name. It would appear to be a sort of nomenclatory misfit, but it doubtless has its utility—"words of long length and thundering sound" sometimes take in more than the simple rustics. It is only one evidence, however, of the tendency to which the other medical delusions mentioned above, together with Dowieism, and the generally pervasive "Christian Science," are witnesses—the aptitude of fallen man to go after false gods in medicine, religion and efforts at social regeneration. Just at the present time this tendency seems unusually rampant, and the reason why this "eraze of quackery" exists has troubled some of our contemporaries. If we were to attempt to answer the question, we could suggest several reasons why. While science has advanced, especially in its practical applications, more during the past century than in the centuries before, the mental development of man as a species has made no such remarkable strides. We have now living no greater thinkers than those of the remote past; we have accumulated facts but do not handle them in all respects any better than did our predecessors. The universal vulgarization of science has neither made a race of philosophers nor necessarily bettered the average human power of judgment, but it has perhaps spread broadcast the little knowledge that is a dangerous thing. It is a question whether or not modern methods of education, with their intensely practical side, are really better for turning out cultured and well-balanced men and women than the old limited classical ones, which none can honestly deny had some real educational and disciplinary worth. It is said too, on every hand now, that there is a decay of faith,

¹ The Lancet, January 27, p. 217. THE JOURNAL, February 17, p. 419.

that religion has lost some of the hold it formerly had on the masses of mankind. If these things are so, and they may be to some extent, it is no great wonder that false systems prevail; when man loses his faith it is not in his nature to depend on himself, and he must therefore take up with superstition of some kind or other. Science, falsely so-called, is the most convenient idol of the day, whether it be in the form of Eddyism, Dowiesism, Ingersollism, or any other heterodoxy that is in fashion at the time. There is also a great deal of what Sir Michael Foster has called "blatant science that is worse than the superstition at which it scoffs," and its effect is too often to only prepare the way through unfaith to the most aberrant form of belief. The discontent so prevalent at the present time is another factor, though perhaps a less direct one, in bringing about the special evils here in question. It is not altogether the healthy discontent that tends toward progress, but is the destructive one based on envy and the meaner impulses that in the species reverts to savagery. Our civilization is after all only skin deep with a large proportion of the population, who only need the veneer rubbed off to fit in with and take up any fetish that may present itself. Just now there is too much useless suffering with the itch of discontent, and when, as a popular writer has said, our whole civilization begins to scratch itself it is a serious matter.

Taking all things into consideration it is not so difficult to see a possible reason why quackery should flourish at the present time, and especially why the special medicoreligious frauds of the day should exist. There is, however, no reason for pessimism as to the future, the world will not retrograde into barbarism and superstition, and we are not on the threshold of a second Dark Age. The disturbing present conditions so far as they exist are, we trust, only ephemeral, and while there will probably always be some quackery, we have for our comfort the truth enunciated by Mr. Lincoln, that it is impossible to fool all the people all the time.

THE CLASSIFICATION OF TUMORS.

The modern doctrine of tumors rests wholly on the basis of histogenesis. Some of the shortcomings and the objections to the present embryologic classification of tumors are noted by Klaatsch¹ and by Charles Powell White.² The former points out some of the inconsistencies which are creeping into our classification, and that the distinction between mesodermal and other structures of the body is in reality not as hard and fast as it is usually drawn. White emphasizes the fact that the developmental origin of some parts of the body is not yet fully explained; the present onkologic classification separates tumors that are not distinguishable histologically, such as some forms of carcinoma and endothelioma; some authors, for instance Ziegler, class tumors of epiblastic origin—the gliomas or neuro-epi-

theliomas—among the mesoblastic ones. In order to overcome these inconsistencies, and also in order to avoid all theories as to the as yet unknown etiology of tumors, White proposes a purely morphologic grouping and definition. He defines a tumor as "a mass of cells, tissues or organs, resembling those normally present in the body but arranged atypically, which grows at the expense of the organism without at the same time subserving any useful function therein." This statement seems a serviceable one. It seems to include all tumors and to exclude retention cysts, hypertrophy and hyperplasia, and also inflammation, because the inflammatory processes are held to be adaptive and useful changes. White divides all tumors into three classes, viz.: 1. Organ tumors—the teratomas of the present classification. 2. Tissue tumors, which include all so-called benign or simple tumors of epithelial or mesoblastic origin. 3. Cell tumors, i. e., the sarcomas and carcinomas. The present classification of tumors on the basis of embryologic origin may be imperfect and difficult of application in special cases, and while it in a measure involves a theory as to the origin of tumors, yet the study of their histogenesis incited by this theory has borne rich fruit, as perhaps shown more especially by the remarkable and partly quite recent developments in regard to adrenal tumors of the kidney, the adenomyomas and other tumors of the female genital structures, the neuroepitheliomas, and the embryonal adenosarcomas of the kidney. A theory which has given rise to so many important discoveries should not be too hastily discredited or abandoned.

THE LYMPHATICS OF THE LUNG.

Councilman¹ points out that the lobule of the lung constitutes a definite unit in its anatomy, normal and pathologic. The outlines of the lobules are seen most perfectly on the pleural aspect of the lung; they are triangular, the base corresponding to the pleural surface, and are separated from one another by small strands of connective-tissue which forms either a complete investment of the lobule or is in places wanting. At the apex the bronchus and the artery enter. The small areas supplied by the terminal branches of the bronchus are commonly called "acini," though Miller has designated them lobules, but the use of the term lobule in this sense can be at once seen to be confusing. The bronchial passage ends in an atrium, thoroughly described by Miller, from which the air-sacs or infundibula are given off, and from these arise the air-cells or alveoli. Councilman emphasizes the importance of this atrium because it is the starting-point of the focal pneumonias of children.

Accompanying the bronchial branches are branches of the pulmonary artery; a small amount of connective tissue accompanying the arteries, maintaining some connection with the perilobular connective tissue; veins are also found in the fibrous septa, the largest

¹ Münch. Med. Woch., Feb. 7, 1899.

² Jour. of Path. and Bact., 1899, vi, 220.

¹ Jour. Boston Soc. of Med. Sci., 1900, iv, 166.

at the periphery of the lobules. In focal pneumonia of children Councilman found the lymphatics distended so that they could be followed with ease. They are described as originating about the acini, and divided into two sets: 1. A central, running along the pulmonary arteries and emptying directly into the peribronchial glands at the root of the lungs. 2. A set which ramifies in the interacinous and interlobular septa and empties into the pleural lymphatic plexus. The second set is the more extensive; its vessels are provided with valves which point toward the pleura. When a smaller vessel enters a larger, the walls of the smaller project for some distance into the lumens of the larger, forming an effective valve. These interlobular lymphatics are important because it is probably through them that infections in the center of the lung extend to the pleura. They also play a prominent rôle in the absorption of exudates and in the removal of organisms entering the lungs.

The central lymphatics are large vessels which often become greatly distended in pathologic conditions. Small branches from the peribronchial tissues and probably also from the tissue of the acini open into them. Councilman did not find valves in the central lymphatics, but he thinks they are probably present; neither has he found any connection between the central lymphatics and the peri-arterial, but it is reasonable to suppose that such exists.

A TRAITOROUS HOSPITAL CORPS.

The *New York Medical Journal* comments with deserved severity on the treason, to the Geneva Cross, of a so-called hospital corps that went from this country to the Transvaal. No censure can be too strong for men who thus violate their voluntarily assumed obligations, nor, whatever our sympathies may be in other regards, can we justify the Boer Government for accepting them as militant recruits. It is said that the Boers as a class have a distrust of medical assistance from the outside and it is hinted, we hope unjustly, that they encouraged rather than otherwise the transformation of a hospital into a combatant force. So far as the facts have come to us there is enough to suggest greater care in those who have influence or interest in the international Red Cross movement in endorsing or recommending volunteer hospital corps for the present war, unless they go under particularly well-known and reliable auspices.

MEDICAL PRACTICE LAWS.

The efficient working of the new medical registration law of Michigan has been materially aided by a recent decision of the supreme court of the state, noted in our news columns last week. A graduate of a "fake" medical college obtained registry under the old law and has contested the right of the State Board to refuse him this under the law now in effect. The case was made a test one and the decision is that although registered under the old act he was not legally entitled to that registration, because the affidavit on which it was based did not show him to be duly qualified. It is said that about 780 so-called physicians will be ruled out by the

decision, most of them holding diplomas from the Armstrong-Bland "Independent Medical College," though there are two other similar concerns that also appear to have done a thriving business. The authorities appear to be thoroughly in earnest in enforcing the law, and this will be very much to the advantage of the profession in Michigan, though much more needs to be done to bring the state up to the standard that is the ultimate object of the best wishers of our profession. It is, however, a step in advance, and will be followed later by others. In this connection it may be remarked that in Rhode Island, the only remaining New England state that admits to practice on a diploma, legislation is now pending to bring it abreast of its neighbors in this respect.

MEDICINE AND MISSIONS.

Among the subjects of interest discussed in the recent missionary conference in New York City was that of medical missions and their advantages in aiding mission work among the heathen, noted in our columns last week. It was the unanimous testimony that in this way, often before any other is opened, a successful attack on the strongholds of heathenism can be successfully inaugurated. That this must be so is self-evident; the wonder is that mission boards were so long in adapting this for their purposes. Amongst savages and unenlightened people generally, including the degenerates who take up with "Christian Science" and Dowieism, the healing of the body and the healing of the soul go together—the shaman, the sorcerer and the priest have alike the control of health here and hereafter. The destruction of the old faith and its replacement by the new can be no better aided by purely human agency than by the introduction of scientific medicine and surgery, hence the value of medical missionaries. That they can not always overthrow error proves nothing; medical science fails in this even in the most civilized Christian countries; the mental peculiarities that even the gods strive against in vain exist everywhere. But as a material accessory to mission work medicine must always take first rank, and as a profession we should be interested to have it always thoroughly representative of our best.

THE FUTURE OF THE NEGRO.

In an address delivered before the Tri-State Medical Society of Virginia and the Carolinas, Dr. Paul B. Barringer very forcibly presents his views on the medico-sociologic aspects of the negro question in this country. He thinks the negro is, under present conditions, rapidly reverting to savagery, that the future of the country is in peril and that "unless a brake is placed on the ontogeny of this savage, the South will be uninhabitable for the whites." The picture he draws is a dismal one; we prefer to see a brighter possibility ahead, and hence are glad to be able to correct one or two of the premises on which his conclusions are based. He thinks that the negroes in the large Northern cities are not advancing as compared with those of the country districts of the same sections. It is true that they include many disreputables, but it would, we believe, be an error to say that they are retrograding, and the careful studies by students of degeneracy reveal a prevalent

type that, as far as physical stigmata are concerned, is a marked advance on the African and the southern field negro. One negro regiment recruited from these Northern negroes and officered by men of their own color made a record in service during and after the late war that ought hardly to fall under his wholesale condemnation of such organizations. The northern negro, city or country, is very far from being altogether what he ought to be, but he presents no very serious problems. In the South the vast number of the blacks renders the more serious aspects of the subject more prominent, and it is perhaps not surprising that pessimistic views are sometimes expressed. There may be in places a segregation of the blacks and some undesirable developments, but never a Hayti under properly supported Anglo-Saxon laws and institutions. The Jamaica negro is not always a pleasant individual, but he is not a Haytian. The development of the South will, we believe, bring out some interesting anthropologic evolutions that will be well worthy of study, but it does not seem that the future of the white race is in danger.

REDUCTION IN MORTALITY IN DIPHtherIA IN AUSTRALIA DUE TO USE OF ANTITOXIN.

We have had so much to say on the subject of the treatment of diphtheria with the antitoxin that we hesitate to reiterate our position in this connection, but we feel that the truth can not be too securely driven home and that even yet some lives are needlessly lost that antitoxin could save. Statistics—the brute force of figures—and personal experience alike testify most eloquently to the efficacy of this method of treatment, and the saving of life thereby accomplished must forever stand as a monument to the scientific acumen and the unselfish devotion of a profession always distinguished by high motives and noble ideals. Some additional statistics of an interesting character in this connection are presented in a recent communication by Turner,¹ who reports the results of a study of the mortality from diphtheria in the three principal Australian colonies, Queensland, New South Wales and Victoria, for fifteen years, with especial reference to the influence of the antitoxin on the death-rate. In the eleven years preceding the introduction of antitoxin—from 1884 to 1894—the number of deaths from diphtheria and croup per hundred thousand in Queensland varied between 65.3 in 1885 and 35.8 in 1894, the mean annual death-rate per hundred thousand being from 1884 to 1889, 49.2, and from 1890 to 1894, 44.1; while during the four years of antitoxin-treatment, from 1895 to 1898, the number of deaths from the same diseases per hundred thousand varied between 21.2 in 1895 to 12.9 in 1896, the mean annual death-rate per hundred thousand from 1895 to 1898 being 16.4. In New South Wales the number of deaths from diphtheria and croup per hundred thousand between 1884 and 1894 varied from 62.8 in 1885 to 27.8 in 1886, the mean annual death-rate per hundred thousand being, from 1884 to 1889, 43.2, from 1890 to 1894, 47.7 and from 1895 to 1898, 18.4. In Victoria the number of deaths from diphtheria and croup per hundred thousand varied, between 1884 and 1894, from 92.2 in 1890 to 15.6 in 1893, the mean annual death-rate per hundred thousand being,

from 1884 to 1889, 45.4, from 1890 to 1894, 39.8 and from 1895 to 1898, 19.7. In all three colonies the number of deaths per hundred thousand between 1884 and 1894 fluctuated between 72.6 in 1890 to 29.7 in 1894, the mean for the eleven years being 44.4, while the number of deaths per hundred thousand between 1895 and 1899 varied between 19.9 in 1898 and 16.4 in 1896, the mean for the four years being 18.7.

HEMISYSTOLE.

This designation has been applied to a condition in which it is supposed that there exists asynchronous action of the ventricles of the heart, so that with each contraction of one ventricle, one or more contractions of the other take place. The evidence as to the actual occurrence of such a phenomenon is, however, not conclusive. For obvious reasons the demonstration can only be made by experimental means, but the observations that have thus far been recorded in this connection are not wholly free from criticism. For these reasons Frank and Voit² undertook an investigation of the subject with the aid of specially devised apparatus. They employed a rubber manometer and made their observations on rabbits and dogs. Narcosis was induced by curare, the thorax opened in the middle line and a small, curved metallic catheter introduced through the left auricle and fastened into the left ventricle, while a straight metallic catheter with lateral fenestra was introduced through the jugular vein into the right ventricle. Both catheters were connected with rubber manometers, as was also a canula fastened in the carotid artery. In accordance with previous statements attempts were made to induce hemisystole, in part by means of suffocation and in part by means of poisoning with helleborein. Marked irregularity in the action of both ventricles, such as could be designated hemisystole, was, however, not noted in a single instance in either rabbits or dogs, although the observations were continued for long periods of time. Almost unexceptionally the pulsations of both ventricles were synchronous throughout, and each variation in the pressure curve of one ventricle was exhibited by that of the other. In some instances the carotid pulse failed, although that of the ventricles remained normal. Occasionally also there was slight disparity in the maxima of successive pulse-waves. These observations would seem to demonstrate that the condition of hemisystole does not develop under the influences to which it has been attributed, and it is thought that the designation is unjustified.

HYPERthermia AND HYPOTHERmia.

In spite of the fact that physiologists state that life can not be maintained for any length of time at temperatures above 110 or below 90 degrees, reports of both higher and lower figures are made from time to time, and often one is perplexed for an explanation. In some instances deception is obvious, and in others it can not be wholly excluded, but, even allowing for these, there still remain a number whose authenticity can not be doubted. The evidence, so far as it goes, would therefore seem to prove that extremes in either direction are possible, though, naturally only for brief periods. Hypotheses have not

¹ *Intercolonial Med. Jour. of Australasia*, January 20, p. 39.

² *Deutsches Archiv. f. Klin., B. Ixv, H. 5 u. 6, p. 580.*

been wanting to explain the mechanism of heat-regulation, but the problem is not easy of solution and the final word has not yet been said in this connection. In the familiar case of Teale, in which a lesion of the cervical spine was present, the temperature reached 122° F. Jacobi has recorded the case of a hysterical fireman in whom a temperature of 148 degrees was observed, Jones one of a girl in whom the temperature rose above 150, and Galbraith one of a young woman in whom he noted a temperature of 151; and in the same case a nurse noted one of 171. It is noteworthy that many of the cases of hyperthermia have occurred in malingerers or hysterical women or men. Not less remarkable observations of hypothermia have been recorded, a number of which are cited in a communication by Hulbert,¹ in which he reports a most remarkable case of morbid drowsiness in a man, 36 years old, in whom the rectal temperature fell as low as 81.6 degrees and on numerous occasions was under 90. Such hypothermia has been variously observed by others in connection with shock, collapse, as in cholera and pernicious malarial fever, with disease or injury of the spine or brain, with inanition, hemorrhage, chronic wasting disease, like carcinoma, with intoxication, as with alcohol, carbolic acid, uremia, with diseases of the skin as sclerema, and with heat-exhaustion.

THE IODIN REACTION OF SPERMATIC FLUID.

There are times when the determination whether spots on linen are due to seminal fluid or not may be of the highest medicolegal importance, and a method would be welcome that will permit a ready and reliable decision. Florence assumed that the seminal fluid may contain specific alkaloidal substances, and in order to determine this point undertook a study of the effect that the alkaloidal reagents would have on human spermatic fluid. Using a solution of iodine and potassium iodide he was able to obtain a reaction only when the iodine was present in amount sufficient to correspond to a solution of potassium tri-iodide. For this purpose he used 1.65 grams of iodine and 2.54 grams of potassium iodine to 30 grams of water, and added 1 drop of this solution on a glass slide to a watery extract of seminal stain. In the course of a few minutes there appeared brownish microscopic crystals, closely resembling hemin crystals and, like these, appearing in typical form as rhombic plates, together with numerous rudimentary forms. No other secretion, as well as brain-substance, alkaloids, dough, articles of food and spermin, yielded a similar reaction, but only lecithin and cholin did. It was believed that possibly the reaction was due to some previously unknown body peculiar to seminal fluid, but in view of the reaction yielded by cholin and lecithin it was deemed wise to employ the test as a preliminary one, and when it yielded a positive reaction to search for spermatozooids. Subsequent observers, however, obtained a similar reaction with spermin, muscarin, derivatives of nuclein and of uric acid, and still others attributed it to cholin and lecithin. In view of these rather radical differences of opinion Vertun² undertook a series of independent observations. A quantity of seminal fluid was

added to a mixture of alcohol and ether, the supernatant fluid decanted, the extract precipitated with an acid alcoholic solution of platinum chloride, the filtered alcoholic solution of platinum chloride, the filtered precipitate dissolved in water and permitted to crystallize obtained in this way were placed on a filter and washed with a mixture of alcohol and ether until the wash-water was colorless, for the removal of the excess of platinum chloride. The filter was then placed in a vacuum-exsiccator. In one case in which seminal fluid twelve hours old was examined crystals remained, indicating the formation of a double platinum salt of an organic base, and thus the presence of another base besides spermin. In two other cases, in which the seminal fluid was only a few hours old, no crystals remained, so that no other base and, therefore, not cholin, was present. As the reaction of Florence was present in all three cases it can be attributed to spermin, although in the one instance it may have been intensified by the presence of cholin. Inasmuch as the reaction has been yielded besides by members of the cholin group—cholin, muscarin, neurin—by spermin and by derivatives of nuclein or alloxuric bases—adenin, xanthin, hypoxanthin, guanin, carnin—it must be looked on as belonging to a group of substances and particularly a large number of organic bases. In view of these facts the development of the reaction with a watery extract from spots on linen would not indicate conclusively the presence of seminal fluid, but would necessitate microscopic examination for spermatozooids; nor would its failure to develop be sufficient to exclude the presence of seminal fluid. It was found further that the reaction was prevented in direct proportion to the albuminous concentration of the fluid tested.

URIC-ACID AUTOINTOXICATION.

Although much has been written on the subject of uric acid, it can not be said that there is universal agreement as to its influence in the causation of disease, or as to the means of affording relief from its reputed manifestations. While perhaps our present nomenclature may prove to be incorrect and current explanations inadequate, it is safe to assume that certain derangements in metabolic activity are capable of bringing about morbid manifestations of a more or less definite and sometimes even alarming character. Of this we have evidence in the development of gout, of diabetes, and of the condition or process that correctly or incorrectly, it is customary to speak of as uric-acid intoxication. Care must, however, be taken not to generalize too freely on the basis of scant knowledge of a precise character. The individual factor should never be forgotten or ignored, and a growing experience teaches that the reactions that take place in the body can not always be reproduced in the laboratory. Uric acid may appear in the urine of persons under widely different conditions—on a diet of milk, as well as on one of meat or carbohydrates; in those who abstain from, as well as in those who indulge in, alcohol; after exercise, as well as after rest—so that one is often at a loss for an explanation of its occurrence. For the present we must be satisfied with the statement that this represents an aberration in metabolism; but the patient is not so much concerned with the mechanism of

¹ The Lancet, January 13, p. 84.

² Centralbl. die Krankheiten der Harn- und Sexual-Organen, B. ix H. 1, p. 1

the process as with the treatment, or rather with its results. Some interesting observations of an original character were made in this connection in an address delivered a short time ago by Goodhart,¹ before the Reading (England) Pathological Society. He expressed the conviction that in the majority of cases of uric-acid intoxication the condition is scarcely one of diet at all, as uric acid will sometimes appear in the urine when, so far as is known, all food capable of giving rise to it has been withheld. Uric acid is considered as an ash or a final product common to the many metabolic processes that take place within the body. In one case the cause may be the visceral sluggishness that is the common outcome of nervous exhaustion; in another the hereditary condition that determines gout; in still another a great or a sudden shock or great anxiety or exhausting illness; in others some early defect in the kidney; in others it may be an indication of senility and of a failure on the part of the organism to accommodate itself rapidly to various changes in its environment. The important part in the arrangement of a dietary is first to determine the metabolic capability of the individual. Thus, under suitable conditions even sugar and fat and alcohol in one form or another may be permitted. The object of treatment should be, so far as possible, to prevent the formation of uric acid rather than its elimination. The free drinking of water is a most useful measure, not only flushing out sand in the urinary passages, but also softening and disintegrating small calculi.

Medical News.

DR. GEGENBAUER, professor of anatomy at Heidelberg, has been awarded the Vohlbrecht prize of 12,000 marks for works on natural science.

COMPOSITION OF OLEOMARGARIN.—Secretary Wilson, of the United States Department of Agriculture, is making an effort to determine the ingredients which go toward making oleomargarin. It is believed that much of what is sold as pure butter is made from a mixture of cheap fats and tallow, together with deodorizing substances and artificial coloring matters.

COMMITTEE APPOINTMENTS.—At a meeting of the American National Committee of the XIIIth International Medical Congress, held at the Cosmos Club, Washington, D. C., May 2, with Dr. W. W. Keen in the chair, the secretary read the minutes of the preceding meeting and reported that about two hundred American physicians had already joined the Congress. It was unanimously voted that the president of the American Medico-Psychological Association be added to the Committee, and that the organizations whose presidents compose the Committee be requested to contribute to the expenses of the Committee. The meeting adjourned subject to the call of the president.

INVITATION TO INTERNATIONAL DERMATOLOGICAL CONGRESS.—At the meeting of the American Dermatological Association, just held in Washington in connection with the Congress of American Physicians and Surgeons, a committee was appointed consisting of Drs. J. Nevins Hyde, of Chicago, Henry W. Stelwagon, of Philadelphia, and T. Caspar Gilchrist, of Baltimore, to represent the Association at the International Dermatological Congress which meets in Paris in August. The

committee is to extend an invitation, in the name of the Association, to the members of that Congress to hold the next international meeting in New York City. It was further instructed, in the event of the Congress giving a favorable response, to present the name, and urge the election, of Prof. James C. White, of Boston, the first president of the American Dermatological Association, and an honorary member of the French and Italian Dermatological societies, for the presidency of that Congress.

PROGRESS OF THE PLAGUE.—Having one of the best harbors in the world, Sydney, N. S. W., acts as a shipping center for the South Sea Islands, and a correspondent writes that the plague is thus thought to have gained entrance from one of the New Caledonia group. Up to the date of writing (April 11), 94 cases were reported, with 31 deaths. All cases, with one exception, were in English-speaking people, the exception being in a Chinaman, and all but one can be traced to the original plague center around the wharves. Among other sanitary measures in progress, 28,600 rats were destroyed. It has also been demonstrated that the flea acts as a means of inoculation, and 4 cases are reported, all showing blebs, the result of flea bites. In three the blebs were broken before examinations could be made, but those from the other patient showed the bacilli of plague present. Plague serum has been used in about 1200 contacts. Cases of plague are also present in Melbourne, Perth West and Brisbane. According to the *British Medical Journal* (April 28), the deaths from plague in Bombay city showed an increase for the first week in April over the last week in March. For the first 4 days in April, in Karachi, the new cases were, respectively, 49, 31, 54 and 60, and the deaths, 34, 28, 33 and 42. For the same dates, in Calcutta, they were, 111, 109, 93 and 103, and the deaths, 99, 109, 104 and 89. One new case was reported in Mauritius for the week ending April 19.

MEDICAL SERVICE IN TRANSVAAL WAR.—S. Osborn, chief surgeon of the Metropolitan Corps of the St. John Ambulance Brigade, speaking of the hospital arrangements in South Africa (*The Lancet*, April 21), says that the war has upset many of their former ideas as to military surgery, because many seriously wounded men, suffering from injuries which would, ordinarily, have demanded operative measures, have recovered without surgical interference. While this might have been due either to the excellent antiseptic dressings adopted as first aid on the field, or to the nature of the projectile, he is inclined to think it is because of the antiseptic precautions. The ambulance and nursing organizations, in point of comprehensiveness and efficiency, he considers far beyond anything of the kind previously seen; and though he served in the Franco-German War, in the wars between Russia and Turkey and between Turkey and Greece, he says that never was the effort to save the lives and limbs of the wounded made on anything like the extensive scale found in South Africa to-day. In regard to the rescue of the wounded, the devotion shown by the ambulance section of the British army, and the completeness of the machinery by which the efforts have been aided, is most admirable, since every engagement has witnessed scenes of heroism in which the officers of the Royal Army Medical Corps and their helpers have themselves suffered wounds and death in the discharge of their duties. As to enteric fever, at Modder River 6 per 1000 of those inoculated and 9 per 1000 of the non-inoculated suffered from the disease, and the prevalency of this he considers the saddest feature of the situation.

¹ *The Lancet*, January 6, p. 1; *THE JOURNAL*, January 27, p. 225.

NEW YORK.

THE SIXTY-NINTH commencement of the Albany Medical College was held May 2. The class numbered twenty-five and is the last to be graduated under the three-year course. The address was made by Dr. Jas. H. Canfield, librarian of Columbia University, and Rev. Dr. Raymond, president of Union University, conferred the degrees.

New York City.

REV. GEORGE F. CLOVER, who has been connected for a number of years with St. Luke's Hospital, has been appointed pastor and superintendent to fill the vacancy caused by the retirement of the Rev. George S. Baker, previously noted in THE JOURNAL.

A FIRE in the industrial school on Randall's Island recently caused a panic among the inmates of the Children's Hospital and neighboring institutions. The school, which was a one-story frame building, was burned to the ground, but the fire did not spread to the adjoining buildings.

NURSES' CONVENTION.

About one hundred superintendents of training schools for nurses have just held a convention in this city, and during the three days they were in session discussed various topics connected with the training of nurses. Special attention was given to a consideration of the advisability of increasing the course of study to three years, fifty schools having already done so. They also adopted the following resolution:

Resolved, That this society strongly indorses the principles set forth in the Army Nursing bill recently brought before Congress, and pledges itself to use every effort to further the objects therein set forth.

HONOR DR. JACOBI.

A complimentary dinner was given to Dr. A. Jacobi on the evening of May 5, in commemoration of his 70th birthday. Dr. Joseph D. Bryant presided, and among those who responded to toasts were Carl Schurz; Seth Low, president of Columbia University; Dr. William H. Thomson, president of the Academy of Medicine; and Dr. William Osler, of the John Hopkins University. A notable feature of the evening was the presentation of the "Festschrift," a volume of 500 pages entitled "International Contributions to Medical Literature." This book is modeled after those annually presented to European scientists on similar occasions. For many years Dr. Jacobi has been widely known as an authority on the diseases of children, but particularly since 1870, when he became clinical professor in that department of the College of Physicians and Surgeons.

PENNSYLVANIA.

ELEVEN COWS near Spring City were recently declared infected with tuberculosis and ordered killed.

LAND VALUED at \$25,000 has been left to the Sisters of St. Francis, for the establishment of a hospital for convalescents on the hills adjacent to Bridgeport. The proposed building will be constructed of gray stone, and when finished will cost in the neighborhood of \$75,000.

PREVENTION OF INFECTIOUS DISEASES.

The annual report of Dr. Leonard Pearson, state veterinarian, and of the State Live Stock Sanitary Board, has been submitted to the Secretary of Agriculture. Of the \$40,000 allowed the Board, \$26,992.98 was paid for the destruction of tuberculous cattle; \$233.50 for horses and mules suffering from glanders; \$5692.03 for tuberculin tests and inspection of animals; \$2906 for inspections, vaccinations, etc.; \$3286.46 for animals afflicted with other diseases than glanders and tuberculosis, and \$889.48 for special services in connection with the enforcement of the law regarding the prevention of diseases among cattle. There were 9 cases of glanders reported during the year. Anthrax occurred in the following counties: Bradford, Cambria, Chester, Delaware, Franklin, Jefferson, Monroe, Philadelphia, Pike, Potter, Susquehanna and Warren, with 236 deaths from the disease. Rabies was reported from 12 counties: Allegheny, Berks, Blair, Center, Chester, Clearfield, Clinton, Delaware, Erie, Montgomery, Philadelphia and Union. The number of tubercular cattle found was 1187. They were paid for at \$22.30 a head.

Philadelphia.

DR. JOSEPH GOLDBERGER has been appointed assistant to Dr. T. F. Richardson, medical officer in command at the Reedy Island Quarantine Station of this city.

DURING commencement week, a well-designed bust of the late Dr. George B. Wood, formerly professor of the practice of medicine in the University of Pennsylvania, will be presented to the University.

SUIT FOR \$25,000 has been entered against Dr. Charles W. Dulles, to recover damages for illegally declaring the plaintiff insane. It is stated that the Doctor has a complete defense to all the charges made.

THE COMMITTEES on elementary schools and hygiene, of the Board of Education, recently adopted a resolution recommending that regular instruction be given in physical culture in the elementary schools and that a teacher be appointed to take charge of such work at a salary of \$1200 a year, beginning next September.

MARYLAND.

DR. GEO. W. SIMMONS has been appointed physician to Kent County Jail, at Chestertown.

DR. JAMES V. URIC has been appointed health officer of Kent County, vice Dr. W. Frank Hines.

DR. J. L. NOBLE has been reappointed health officer of Caroline County.

Baltimore.

DR. WM. OSLER has been called to Canada to see his brother, who is ill.

DR. LEWIS W. ARMSTRONG has been appointed first assistant in the insane hospital at Bayview.

DR. ST. CLAIR SPRULL has resigned the post of superintendent of University Hospital.

DR. N. G. KEITLER, JR., has been appointed resident physician to Bayview Hospital, etc., and Drs. C. Howard Lewis, Frederick Crawford and J. L. McKnight assistant physicians in the same institution.

DR. WILLIAM R. STOVER was formally installed as resident physician in the Baltimore University Hospital. April 30. Dr. William D. Bacon was made assistant.

DR. JOSEPH CLEMENT CLARKE has been elected professor of psychiatry in the Woman's Medical College of Baltimore, vice Dr. Edwin A. Brush, resigned. Dr. Clarke is a graduate of the University of Maryland and superintendent of Springfield Asylum for the Insane, Sykesville.

A complimentary dinner was tendered to Prof. Wm. H. Welch, of the Johns Hopkins Medical School, May 4, by those who have carried on investigations in his laboratory in past years. On this occasion the "Festschrift," containing the work of his pupils and associates, was presented to him as a testimonial of affection and esteem and to mark the twenty-fifth anniversary of his professional career.

THE THOMAS WILSON Sanitarium for sick children was opened May 1. The hospital is eight miles from the city, on a hill six hundred feet above sea-level; there are three wards, each accommodating about thirty. The mothers of the children are allowed to come, their transportation being paid for them.

THE SCOPE of work in Johns Hopkins Hospital and Medical School has again been broadened. The hospital will offer special courses of instruction for graduates during May and June. This is intended to meet the requirements of practitioners of medicine and is almost wholly of a practical character.

OHIO.

SEVERAL CASES of malignant diphtheria having been found in Mansfield, the health officer caused an investigation to be made. A sick cat, with which the children had been playing, was found to have diphtheria germs in its throat.

APPROPRIATIONS.

The seventy-fourth general assembly of the State of Ohio, just adjourned, appropriated \$180,400 for the Ohio Hospital for Epileptics at Galipolis, for the fiscal years 1900 and 1901. For construction the sum of \$125,000 is available, and the items are a general hospital (\$35,000), administration building (\$50,-

000), and two new cottages for patients (\$40,000). The purchase of more land, including a considerable addition to the colony farm, is also authorized. Funds are provided for the continuation of the work in the pathologic laboratory, and a special appropriation has been made expressly to enable this laboratory to participate in the pathologic exhibit of the AMERICAN MEDICAL ASSOCIATION.

THE OHIO LAW.

The new medical practice act enacted April 14, 1900, by the Ohio Legislature is of more than local interest, and now that a copy of the measure has come to hand a satisfactory review of its provisions can be made. The number and character of the Board of Medical Registration and Examination was not changed, and the Board will consist, as formerly, of seven members, of whom three are "regulars." The new portions of the law will take effect on July 1, with the exception that students who were matriculated in Ohio medical colleges on Jan. 1, 1900, and who shall graduate from their respective schools and present their diplomas to the Board prior to July 1, 1904, shall be entitled to have their diplomas simply registered as provided by the existing statute. This concession to the students was necessary in order to silence their opposition to the bill as a whole, and it is not in any way unjust, for present students matriculated at Ohio colleges with the implied understanding that their diplomas when received would entitle them to a State license.

With this exception, all applicants to practice medicine in Ohio must pass a satisfactory examination before the State Board in the future in all branches of medicine; and more important still, shall present, as a necessary preliminary to their admission to the examination, certain specified evidences of previous education. In this respect the Ohio law is now second to none; for in addition to having a medical diploma granted after four years of study in a medical college which is recognized by the Board as in good standing, the applicant must show either that he has obtained the degree of A. B., B.S., or its equivalent from a reputable college; or a diploma from a normal school, high school or seminary, issued after four years of study; or a teacher's permanent or life certificate; or a student's certificate of examination for admission to the freshman class of a reputable college; or a certificate of his having passed an examination conducted by the Board itself.

From this it will be seen that the State of Ohio is no longer behind in the matter of medical legislation, but possesses a statute second to none in its standard of educational qualification.

The Board has always had some difficulty in adjudicating questions that arose from the presentation of diplomas which under terms of the former law in regard to various forms of foreign certificates, entitled the holder at home to practice a certain branch of his profession. This has been fully met in the new statute by a plain statement that the certificate must have conferred the full right to practice all branches of medicine or surgery in some foreign country. Another important provision is the one permitting the Board to arrange for reciprocity in registering certificates which have been acquired from state boards after examination when the other states have laws demanding an equal grade of qualifications. This is one of the first direct legal enactments toward arranging for reciprocity in registration, something in which so many medical societies are now interested.

While under the existing law midwives were required simply to produce evidence of some experience in order to secure a license, the new statute compels them to appear before the Board and take such examination as it shall require. Because many loopholes had been found by lawyers, in the section of the former law that defined the practice of medicine, a new one has now been enacted which will prove much more difficult of evasion, and even the Supreme Court of Ohio, which not long since held that osteopathy was not "an agency for the treatment, cure or relief of any bodily injury, infirmity or disease," will probably not be able to nullify this revised section. It will not be so difficult in the future to secure proof of the illegal practice of medicine. This section being of some general interest, it is given in full, as follows:

Any person shall be regarded as practicing medicine or surgery within the meaning of this act, who shall use the words or letters "Dr.," "Doctor," "Professor," "M.D.," "M.B.," or any other title in connection with his name which in any way represents him as engaged in the practice of medicine or surgery or midwifery, in any of its branches, or who shall prescribe or who shall recommend for a fee for like use any drug or medicine, appliance, application, operation or treatment of whatever nature, for the cure or relief of any wound, fracture or bodily injury, infirmity or disease. The use of any of the above-mentioned words or letters or titles in such connection and under such circumstances as to induce the belief that the person who uses them is engaged in the practice of medicine or surgery or midwifery or any of its branches, shall be deemed and accepted as prima facie proof of an intent on the part of such person to represent himself as engaged in the practice of medicine or surgery or midwifery.

The osteopaths having developed strength, largely through the influence of Senator J. B. Foraker, some recognition of them became necessary to the enactment of the law. Even then they almost succeeded in getting a law of their own passed, that would have nullified all restrictions governing the practice of medicine, and this measure was openly lobbied for by two judges of the Supreme Court of Ohio. The law, as passed, provides that an osteopath must have a diploma from a legal school of osteopathy which requires four years of study of at least five months, each taken in four separate years; and that he must pass a satisfactory examination before the state board, in anatomy, physiology, chemistry and physical diagnosis. It is also provided that osteopaths "shall not be granted the privilege of administering drugs, or of performing major or operative surgery."

The passage of this amended law is the full fruition of the dreams for many years of the leading members of the Ohio profession, and it required the most assiduous and most self-sacrificing labor on the part of the legislative committee of the State Medical Society assisted by committees of some of the local societies. The result, however, clearly demonstrates that when the medical profession shows itself to be determined in its requests to the politicians it can overcome all opposition. Because the new Ohio statute is to be administered by but one board for all the so-called schools of medicine, in addition to the commendable points above enumerated, it possesses features of superiority over any medical law in America, and it will no doubt for many years be a model after which other states will pattern. The politicians can not attempt to disturb it for two years at least.

Cincinnati.

AT THE commencement exercises of the Cincinnati College of Medicine and Surgery, May 2, diplomas were granted to thirteen young men and women.

TWENTY-SEVEN young men were graduated, May 1, from the Miami Medical College. The alumni banquet was attended by two hundred members.

A CITIZENS' committee visited the city council recently and secured the repeal of the compulsory vaccination ordinance.

ILLINOIS.

THE LADIES of the hospital board at Galesburg gave a benefit bazaar and concert May 1 and cleared \$500.

Chicago.

DR. ARTHUR R. EDWARDS has returned from an extended European trip.

DR. JAMES B. HERRICK announces that he will hereafter limit himself to office and consultation practice.

LAST WEEK the donations to the fund for the hospital for consumptives were \$1186, bringing the total up to \$18,333. The committee awaits only the settlement of the labor trouble to begin building.

EXAMINATION of candidates for license to practice medicine was held May 3. There were 105 applicants.

KANSAS.

SIX ACRES of ground had been transferred to the Bethany Hospital Association at Kansas City for the consideration of \$12,500, and on this site will be built a new \$100,000 hospital.

Rev. J. H. James, of Oakley, Kan., has given \$60,000 of this, and work will be commenced soon.

DISTRICT OF COLUMBIA.

BILL FOR INCREASE OF MEDICAL DEPARTMENT OF ARMY.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

Sec. 1.—That there shall be added to the number of medical officers of the army now authorized by law, four assistant surgeons-general with the rank of colonel, thirty surgeons with the rank of lieutenant-colonel, thirty surgeons with the rank of major, and eighty assistant-surgeons with the rank of first lieutenant who shall have the rank of captain at the expiration of five years' service as now provided by law. Provided that the original vacancies created by this act in the grade of colonel, lieutenant-colonel and major shall be filled by seniority promotion in accordance with established laws and regulations.

Sec. 2.—Hereafter candidates for appointment in the medical corps of the army who pass a medical examining board in compliance with existing regulations, shall be appointed acting assistant-surgeons for a probationary period of six months; during this probationary period they shall attend the army medical school established at the army medical museum in the city of Washington, and the faculty of the army medical school shall report to the Secretary of War at the end of the prescribed course of instruction upon the fitness and relative standing of the probationary candidates; those who are recommended by the faculty may then be commissioned by the President to fill existing vacancies in the medical corps of the army.

Sec. 3.—Acting assistant-surgeons appointed in accordance with the provisions of Section 2 shall be paid \$100.00 per month and shall not be entitled to any allowance or to mileage in reporting for the prescribed course of instruction, or in returning to their homes if they are not recommended for a commission.

Sec. 4.—The number of acting assistant-surgeons appointed in accordance with the provision of Section 2 shall not exceed the number of vacancies existing or to result from retirements during the probationary period.

Sec. 5.—Candidates who have rendered satisfactory service as acting assistant-surgeons or as commissioned medical officers in the volunteer army of the United States for a period of six months or more, shall be exempted from this period of probation and may be commissioned at once if vacancies exist and they pass a satisfactory examination as to their physical, moral and professional qualifications.

DELAWARE.

THE GOVERNOR has appointed the following trustees of the State Insane Asylum: Drs. J. J. Black of Newcastle, J. H. Wilson of Dover, and H. W. Baker of Seaford.

THE FOLLOWING members of the Wilmington Board of Health have recently been elected: president, George B. Ward; treasurer, James H. Morgan; secretary, Andrew A. Cahill; executive officers, Harry Graham, Thomas Garvey, George Spath and Thomas Welsh.

LOUISIANA.

THE SIXTH annual session of the Charity Hospital Alumni Association was held in New Orleans the 18th ult.

A LARGE CLASS was graduated from the medical department of Tulane University, May 2. The total number of students this year was 426, the largest in the history of the college.

NEBRASKA.

AT THE commencement exercises of Creighton Medical College, held in Omaha, April 27, a class of twenty-two received diplomas. Prof. J. L. Greene, of Lincoln, who is a member of the faculty, delivered the doctorate address, and Rev. M. P. Dowling, president of Creighton University, conferred the degrees and presented the prizes.

IOWA.

AT CEDAR RAPIDS, the Sisters of Mercy cleared over \$1300 through a bazaar given to raise money for furnishing and equipping a hospital.

THE NEW ST. Joseph's Hospital buildings were dedicated in Sioux City, May 6. The institution was founded about ten years ago, but the improvements and enlargements made recently have cost \$150,000.

MISSOURI.

THE SUM of \$3000 has been subscribed for the erection of a chemical laboratory at Westminster College, at Fulton. The building when completed will cost \$5000.

THE COMMENCEMENT exercises of the Marion-Sims College of Medicine in St. Louis occurred April 27, and fifteen received diplomas from the medical department. Rev. J. W. Day addressed the graduates and Dr. Y. H. Bond conferred the degrees.

WASHINGTON.

A NEW WARD will be added to the Medical Lake Hospital for Insane; \$4000 has been appropriated for the purpose and the plans are now being drawn.

SPOKANE is to have a new Protestant Hospital. John A. Finch has donated a site and about \$15,000 has already been pledged. The cost will be about \$50,000. It will be incorporated as St. Luke's Hospital, under the auspices of the Protestant Episcopal Church.

CANADA.

DR. G. A. B. ADDY, St. John, N.B., has gone to England to study pathology under Dr. Sims Woodhead.

DR. J. W. DANIEL has just been elected mayor of St. John by over 600 majority.

THE MEDICAL health officer of Toronto, accompanied by the city engineer, will go to Europe soon for information regarding the construction of sewers.

EIGHTEEN medical students from McGill University are making their way to the Paris Exposition by taking care of cattle on the *Lake Huron*.

THE MCKAY bill, previously discussed in these columns, has been withdrawn from the local legislature.

DR. P. A. MCLENNAN, Nelson, B. C., has been appointed public vaccinator for the Kootenay districts, with power to perform vaccination on all school children.

THE SMALLPOX outbreak in Winnipeg has extended to twelve cases. Four nurses of the General Hospital are down with the disease and another death has occurred.

AT THE coming meeting of the Ontario Medical Association, June 6 and 7, Dr. Lowellyn Barker, of Chicago, will deliver the address in medicine, and Dr. Luke Teskey, the address in surgery.

THE PROVINCIAL Board of Health of Manitoba has issued a circular letter to the press dealing with the benefits of vaccination. The city officer of Montreal has also had published a decision of a U. S. judge on the same question.

DR. FARRELL, Halifax, has issued a warning to the citizens of that city who are moving at this time of the year, to the effect that tenants should see that all apartment houses and other residences have been thoroughly disinfected and especially should this precaution be taken where consumptives have been the previous occupants.

MEDICAL ALLIANCE OF AMERICA.

THE *Canada Gazette* contains the notice of the incorporation of this institution. It emanates from Montreal and is composed of citizens of that city. Full particulars appeared in THE JOURNAL early last fall, but this may be given as additional information. The company is a limited one with a capital of \$100,000, in \$10 shares. Among other powers bestowed, the following is granted: "To negotiate and arrange agreements and contracts between physicians, surgeons, pharmacists, nurses and the like, whose profession or calling is to care for and attend the sick, injured or infirm on the one hand, and such persons as desire these services on the other hand, whereby the latter shall be attended, treated and cared for by the former in return for a fixed fee or subscription, payable weekly or otherwise, to be collected and paid by said proposed corporation."

TRAUMATIC ORIGIN OF CANCERS—A MEDICOLEGAL CASE.

A case which has caused much talk among the profession in Toronto has just been concluded here in the courts of law. About the middle of last December, a traveler was walking to his home and carrying two heavy valises. He slipped, and in the attempt to recover himself, it is alleged that one of the

valises was thrown against the region of his liver with some violence. About the beginning of January the man went on a business trip to the maritime provinces, not having suffered much from the accident, but still not being in good health. He returned early in February, when his physician counseled an exploratory incision. This was performed, and it was found that he was suffering from a severe cancer of the liver. The incision was immediately closed, and two days later the man died. Dr. H. B. Anderson performed a post-mortem and found that the liver was greatly involved with cancer, and that there was also a nodule in the head of the pancreas. Nothing was found in any other part of the body. The traveler carried an insurance (accident) policy for \$5000, and the company refusing to entertain the claim; suit was brought for the recovery thereof, and a goodly number of the city physicians were summoned to give expert evidence, *pro* and *con*. It turned out that that part of the liver adjacent to the supposed injury was entirely free from the disease, and also that a doctor out of town had examined the man two or three months before the alleged injury and had diagnosed cancer of the liver. The action was dismissed.

ASSOCIATION OF TRAINED NURSES.

A bill was recently introduced into the Dominion Parliament by Dr. Roddick, on behalf of nurses of Montreal, who sought to obtain legislation toward the formation of a Canadian nurses' association. Opposition developed which was ultimately successful in forcing the withdrawal of the measure. The powers sought by this "association" were both extensive and unlimited so far as the Dominion was concerned, and the latter was the chief, though not the only, objection to the bill. J. Ross Robertson, M. P., chairman of the Board of Trustees of the Victoria Hospital for Sick Children, Toronto, took an active part in opposing the measure, and it was through his energy and representations to Dr. Roddick that the latter concluded to withdraw the bill. The introduction of the measure has, however, accomplished good, for it has laid the foundation for the formation of a trained nurses' association for the entire Dominion. The membership of this will include the woman superintendents of all the hospitals of Canada, together with the alumnae of each training school. The hospital authorities of the following cities have already given their support to the scheme: Vancouver, Winnipeg, London, Hamilton, Toronto, Kingston, Montreal, Ottawa, St. John and Halifax. It is understood that in the formation of this society Dr. Roddick will give hearty co-operation.

SAMARITAN HOSPITAL, MONTREAL.

The annual meeting of the above institution for women was held last week and the results show that the hospital is in a very satisfactory condition. The surgeon-in-chief, Dr. A. Laphorn Smith, read his report for the year. During the 5½ years since the hospital was founded, there has been each year a very substantial growth, while the past one has been the most active in the whole history of the institution: 124 patients have been under treatment, as compared with 101 last year, an increase of 23 per cent.; 41 of this number suffered from tumors or other forms of abdominal disease, requiring abdominal section for their cure. Of these 41 women, none died in the hospital, but 2 with hopeless cases of cancer died two weeks after return to their homes. There were 95 other gynecologic operations for inflammations, lacerations, cancer, etc., and 24 received only medical treatment. Three deaths occurred in the hospital during the year, but not one from the 41 major operations. In addition, in the out-door department, 150 patients were treated, 23 of these were admitted to the wards. Thus 274 patients have been cared for during the year, and 1310 since the hospital began its work. The receipts for the year amounted to \$3086 and the disbursements \$2696. It is altogether likely that a new building will shortly be erected. Dr. A. Laphorn Smith was re-elected surgeon-in-chief, and Sir Wm. Hingston consulting surgeon. Sir James Grant and Dr. F. W. Campbell were elected consulting physicians.

RECENT MEDICAL LEGISLATION IN NOVA SCOTIA.

Three acts of importance to the medical profession in the province of Nova Scotia passed the legislature at its recent sitting: An act to amend the public health act; one to establish

a provincial sanatorium for the treatment and care of persons suffering from tubercular disease of the lungs, and a third, introduced by Dr. Kendall, which aimed to remedy the abuses associated with medical attendance on employees of collieries and manufacturing companies. The act regarding the public health of the province provides for the appointment of county medical health officers, who shall be duly qualified practitioners. As noted in THE JOURNAL last fall, Nova Scotia was far behind the times in this respect. These appointments are to be for one year, the appointee to be paid a salary of not less than \$100. The act also sets forth at considerable length the duties required of these officers. Nova Scotia is the first province in the Dominion to set apart an allowance for the erection of a state sanatorium for consumptives; and the \$15,000 provided for this purpose speaks well, when it is remembered that the Ontario legislators voted, at their recent session, only \$4000, to enable municipalities to carry on this work. Clause (h) of the act is: "To pay to any municipal or civic body, corporation, private person or benevolent organization maintaining and conducting a sanatorium within the province for the treatment and care of persons suffering from tubercular disease of the lungs, a sum not to exceed 30 cents per day for not more than 100 days that each patient may be in actual attendance and under treatment at such sanatorium."

Correspondence.

Medicine in the Far East.

VIENNA, AUSTRIA, April 13, 1900.

LUCKNOW.

To the Editor: I found rather "short picking" as far as medicine is concerned, in Lucknow. There is a special hospital there for lying-in and gynecologic cases, but as everywhere in India women have a deep-rooted prejudice against allowing men to examine or treat them; they are very generally cared for by an inexperienced female.

By a visit to King's Hospital, I made the acquaintance of Dr. Raham Khan Bahadur, a native physician of wide reputation, and especially noted as an operator for cataract. The Doctor has done over 7000 operations of this kind, after a manner that he claims is practiced only by himself. He uses pure cocaine in powder, to render the eye insensible. He makes the usual incision before his extraction, but uses no eye speculum, and does not fix the eye with forceps while operating. After the incision is made, he uses a small ring-shaped instrument to press out the lens, but makes his pressure on the outside of the eyelid. The room that he operated in opened out on a dirty street; the air was full of dust, and he failed to wash his hands before beginning to operate, though he took the precaution to dip his instruments into hot water before using them. In spite of all this his results seemed to be excellent. The Doctor, like the other physicians whom I met in India, has a general practice. I saw a few patients with typhoid fever in his wards, all white men; in fact, every white man he had in his service had this disease, while among the natives, who outnumbered the whites twenty to one, there was not a case. In the management of enteric fever the Doctor has a hobby, i. e., the restriction of the diet of his patients. He claims that overfeeding is responsible for a large amount of the mortality in this complaint. He gives his patients only sterilized milk, and limits the quantity of this to from 1½ to 2 pints in the twenty-four hours. As to medication, he is entirely indifferent, but washes out the entire lower bowel by free injections of tepid water once in twenty-four hours.

AGRA.

I visited the Civil Hospital of this place, under the charge of Dr. Anderson, in whom I found one of the best all-around men.

He is a living refutation of the idea that for thorough efficiency in the practice of medicine it is necessary to divide it into an infinite number of specialties. I saw him do, in one forenoon, a half dozen cataract operations, with marked skill, and he crushed a stone in the bladder with a dexterity that I have seldom seen excelled. He also operated for hemor-

rhdoid and amputated a forearm in a manner that would do credit to any general surgeon. Besides all this, I visited, with him, his wards that contained nonsurgical cases, and he examined and prescribed for these in a manner that showed him to be well up in internal medicine. The patients in this hospital were all natives, and bowel troubles and malarial complaints were the most widely prevalent diseases among them.

I saw swarms of rats running over the patients' beds and chasing each other about the floor. On asking the Doctor why he did not exterminate these pests, he told me that if he should kill or poison a single one every patient who could walk would abandon the ward at once. "These people," he said, "would divide their last grain of rice with a rat," and these little beasts were as tame as cats.

I visited also the prison hospital, where 2000 prisoners are confined, and the attending physician told me that during a service of ten years he had never had a case of typhoid fever under his care. Such is the willingness of the British authorities to pander to the religious prejudices of its Indian subjects, that three cooks are employed in this institution to prepare the food for the different sects into which the inmates are divided.

DELHI.

In this remote city of the Far East, I was surprised to find the table in the reading-room of my hotel covered with numbers of Dowie's *Leaves of Healing*. I looked these over with considerable interest, for the success of this man illustrates a phase of humanity that I have always studied with interest. This periodical, and the doctrines that it teaches, show into what absurdities mankind will drift in search of a religion to save their souls, or some therapeutic agent to heal their bodies. It most thoroughly illustrates "What fools we mortals be." Platform orators and writers for the press are wont to paint, in glowing terms, the intellectual progress that the race has made during the century just closed. Let, however, any cultivated man or woman, with a well-balanced mind, read this sheet of Dowie, study the absurd pretensions of the man, and consider the success that he has achieved in that great center of modern progress, Chicago, and I think he or she will lay it down with a mind full of pessimistic reflections, and a firm conviction that our race has a long journey yet before it ere it will have shaken off the shackles of ignorant fanaticism and freed itself from the power of designing mountebanks. In a single article in this periodical the term stinkpot is used a score of times. Yet this man who revels in such slang is looked upon by his followers as so near approaching the Divine that a god who is deaf to the entreaties of the noblest of our race hears him and does his bidding. In conversation with a prominent western lawyer, in regard to Dowie and his work, he said: "I had always been inclined to be a little agnostic, but had never settled down into an attitude of absolute unbelief. Being in Chicago over Sunday I went to hear Dowie, and after listening to him for an hour and a half, I left the hall where he spoke fuller of doubts than I had ever been before in my life, and I have ever since been a firmer believer in agnosticism than I had ever been before." Ingersoll is dead, Dowie is the best man living for the propagation of his tenets, and the confirmation of thinking men in their doubts as to the Divine authenticity of the Bible.

JEYPORE.

I visited the Mayo Hospital, in this city, an institution containing 200 beds, under the charge of Dr. Pank, an up-to-date Englishman. Like Dr. Anderson of Agra, I found him doing all kinds of work, and that, too, in a most satisfactory manner. Jeypore is the capital of the native state of Rajputana, and the ruling Maharaja is a liberal-minded ruler, and furnishes Dr. Pank with unlimited funds to keep up this hospital.

The patients in the wards devoted to internal medicine were largely those in whom malaria and its complications played the most important role. I saw a large number with spleens that filled the entire abdominal cavity. Dr. P. told me that this disease kills more people in India than all others combined, the plague and cholera not excepted. He treats these cases by the administration of large doses of the iodid of arsenic,

together with 3 grains of quinin three times a day. I traveled 2000 miles over the dry plains of India, where for nearly two years not a drop of rain had fallen, and where men and beasts were dying by the thousands on account of this drouth, yet if this dry crust of earth on top be disturbed and the underlying soil exposed there emanates from it a malarial poison, the influence of which the oldest resident can not withstand. Dr. Pank confirmed the opinion I have so often heard expressed by physicians in India, that the natives never have typhoid fever. Pneumonia is very prevalent in Jeypore during the winter months, and the natives, who are nearly all illy nourished, fall ready victims to its ravages; 60 per cent. of those attacked die.

It seems that at Colombo, Madras, Calcutta and Bombay, each of which is located near the sea-level, and where the temperature is nearly uniform during the entire year, pneumonia scarcely ever prevails and articular rheumatism is a rarity. However, at Jeypore, where the altitude is considerable and where the nights are cool, the former disease is very prevalent. Its treatment is entirely of a supportive character, consisting of the administration of the tincture of bark and the carbonate of ammonia. I saw the Doctor treat several cases of lupus, by first curetting the diseased surface and then sprinkling antipyrin over it in the form of a powder, and applying over this an adhesive strap to keep it in place. He claims that in his hands this treatment has been eminently satisfactory.

At my first visit to the Mayo Hospital Dr. Pank began his forenoon's surgical work by operating on four patients for cataract, and two for stone in the bladder. In operating for stone the Doctor crushes everything. If the stone be too large to be caught in the jaws of the lithotrite, or too hard to be crushed by that instrument, he makes a perineal incision, not for the purpose of removing the stone in its entirety, but to introduce a powerful crusher, and after the stone is crushed, the fragments are washed out, both by the perineal opening and by the urethra.

The earth-closet system of the disposition of the excreta of the patients in the hospitals in the interior of India is the one generally adopted, and as the dry earth is abundant, and is changed often, the system seems to work well. Jeypore was the first great famine center that I struck in my tour through India. In the Mayo Hospital grounds long rows of temporary rice-straw sheds were erected, where nearly a thousand women and children were being housed and fed, their husbands and fathers working on public works in the vicinity. Many of these, especially the children, presented a most sorrowful aspect. Starvation among them carried with it a train of morbid phenomena to which many of these poor creatures succumb, even after they have an abundant supply of food. A catarrh of the whole alimentary tract affected a good many of the children, and in their emaciated condition nothing seemed to arrest it. Two score years devoted to the practice of medicine ought to school a man to the sight of human misery and suffering, yet in famine-stricken Jeypore I witnessed scenes against which my blunted sensibilities turned away with horror and disgust. For instance, a woman with a child just born, naked and unwashed, paraded herself before me, exhibited her withered, skinny breast, telling me that as she had no food to eat, she could not give milk to nourish her child. Then came a nearly nude skeleton of a man carrying in his arms a dead child, and he recounted with tears in his eyes that the infant he carried was the last of his family to die of starvation, and he would soon follow them to the grave unless I gave him money to buy food.

M. S. CALDWELL, M.D.

The Mad Stone.

PHILADELPHIA, April 11, 1900.

To the Editor:—A question in regard to the so-called "mad-stone," in THE JOURNAL of April 7, 1900, prompts me to reproduce from my notes on hydrophobia some facts in regard to this subject, as it is one about which much uncertainty prevails.

One of the earliest descriptions of such a thing is that attributed to Abbé Grosier, in his "Description of the Chinese." He there gives an account of the use of a stone called the ser-

pent-stone in "Tang-King." This was applied, stuck fast, absorbed the poison, dropped off, and the patient was freed. The stone was washed in lime-water, dried and could then be used again.

In a work on hydrophobia, published in 1812, Dr. Thacher says: "There prevails a fanciful opinion among a certain class of people, that a celebrated substance, known by the name of snake-stone, possesses, intrinsically, the power of extracting the poison of a snake or mad dog from the human body; that when applied, the stone will adhere like a leech to the bitten part, nor loose its hold till its numerous pores are literally glutted with the liquid poison. A case intended to corroborate this doctrine is recorded by Mr. William H. Harding in the *Medical Repository*, Vol. 4, hex. 2. He relates that his child received a bite from a dog supposed to be affected with rabies. The snake-stone was applied (in due form and full faith no doubt) by which every particle of poison was extracted, and no ill consequences resulted from the accident. Dr. Mease has, in the *Medical Museum* (Vol. 5, p. 1) with his usual freedom and good sense, animadverted upon the unreasonable prejudice in favor of this popular but fallacious expedient. He informs us that in India such stones are very common, and the credulous natives believe, most firmly, in their preservative powers against the effects of the bites of venomous snakes. The author of the 'Wonders of Nature and Art,' says Dr. Mease, thus notices these stones in the account of Tonquin. 'Persons who happen to be bitten by serpents, press out the blood, and apply a small stone, called the serpent-stone, which is said to possess the miraculous power of drawing out the poison. When impregnated with the venom it drops off like a leech. It is then carefully washed with milk and water in which lime has been diluted, and on a second application to the wound, it exhales all the virus so completely, that in less than an hour, the patient becomes perfectly free from pain.' 'Two of these stones,' adds Dr. M. 'are in the cabinet of the Philosophical Society, and another one is in my possession, all of which were brought last year by a gentleman from India. They are rather more than an inch long, and about five-sixteenths of an inch broad, of a bluish or slaty color and flatish shape.'" [Pp. 204-206.]

In 1801 Dr. Samuel Davis, of Petersburg, Va., wrote a letter to Dr. Benjamin Rush, which has never been published, but which is preserved in the Ridgway Branch of the Philadelphia Library. In this letter he describes a mad-stone which emitted bubbles when put in water after the application, and this was taken to be evidence that it had extracted the poison from the bite. The owner of this stone refused an offer of 300 guineas for it, a very large sum of money at that time. It was yellow, light and had many black pores. It had been given to the owner by a stranger who had been sick and cared for. It was wrapped in a printed paper, which declared "Francis Torres, a Native of France, is in possession of a chymical preparation, called a Chinese snake-stone, which will extract the poison of the bite of snakes, spiders, and of a mad dog and will cure cancers, which are sold at half a Guinea for the small and a Guinea for the large ones." This was dated Charlestown, S. C., 1740.

Mad-stones seem to be of two sorts: 1, some porous form of calcareous rock, or, 2, a concretion found in the intestinal canal of herbivorous animals, in this being like the Bezoar stone which figured so largely in the pharmacopoeias of one hundred and fifty or two hundred years ago; in fact, it seems as though the mad-stone was indeed in many cases the Bezoar stone, which, when it ceased to be used in internal medication, came to be applied externally. There have been a number of so-called mad-stones in different parts of this country, most of them in the South and Southwest. In one case, in Virginia, the owner of a mad-stone in 1885 believed that it was the "talisman" sent by the Sultan as a wedding present on the occasion of the marriage of the Earl of Huntington to Edith Plantagenet.

Serious writers usually treat the mad-stone as having no specific virtue, but serving as a means to calm the apprehensions of those who have been bitten by rabid animals. I quite agree in this opinion, but am assured from my long-continued investigations of the subject of hydrophobia that in this re-

spect it is not really inferior to some other modes of preventive treatment which have obtained the approval and support of men whose distinction in medicine is far greater than their industry in critically investigating the real worth of prophylactic measures which present themselves, with a pretentious air of scientific accuracy.

CHARLES W. DULLES, M.D.

4101 Walnut Street.

Division of Fees.

CHICAGO, April 29, 1900.

To the Editor:—For some time the surgeon and specialist have been giving their opinions as to the demands for fees and their division between the general practitioner and the operator. The view taken by the majority of specialists, that division of fees is dishonest and does the patient an injustice looks well in print and reads as though it were necessary for the specialist to guide the physician and correct his dishonest, grasping hand.

This controversy has been one-sided. And to show where the corruption is to be found I will state my own personal experience with the specialist. Within the last three years I have been approached by no less than three of the prominent and leading surgeons of Chicago who, openly and of their own free will, made these propositions to me: One said he would be pleased to do all my surgical work and give me 50 per cent. of his fees from all patients I sent him. Another said he would do the square thing and give me 33 per cent. The third, and not the least, so far as his reputation as an operator and writer, offered me 50 per cent. of all fees. These same specialists have given their opinion freely at medical meetings, denounced the general practitioner and placed him alongside the crook. If all surgeons and specialists who have been so free to denounce the practice are playing the double game it is time to correct the would-be honest surgeon and place him where he should be. For my part I think he has played the part of the wolf long enough. I feel sure that I am not the only physician doing general work who has had such propositions.

LEWIS S. EASTLAKE, M.D.

Castor-Oil in Neuralgia.

NEW YORK CITY, April 26, 1900.

To the Editor:—In the discussion on castor-oil in the treatment of neuralgia, I note (see THE JOURNAL of April 21, p. 982) that Dr. Paddock is troubled to know how the oil can be given, while Dr. Fütterer tells of giving it with alcoholics that may in some degree interfere with its usefulness; and Dr. Hirst is quoted as advising that it be given in warm milk, while the question is raised as to how warm milk disguises the taste of the oil.

Some fifteen years ago I not only gave to the profession the fact that cold milk is the best of all vehicles in which to administer both castor-oil and cod-liver oil, but also pointed out the method of administration with the reasons for the method used.

Milk, like these two oils, is an oil or, more properly speaking, an emulsion—and just here let me say that it is Nature's emulsion and, in a very short time, when allowed to stand, it separates, hence the uselessness of all emulsions made by men, for all separate and are a snare and a delusion. Few if any of the emulsions contain the amount of oil that is claimed for them, hence the stomach tolerates the supposed amount of oil better than the amount given when we measure out the oil ourselves.

The method I gave is this: fill the mouth with milk and hold it there; dip up a tablespoonful of milk and pour into this spoon—already full of milk—about a teaspoonful of oil; whether cod-liver oil or castor-oil, you will see that it displaces milk to the extent of its bulk, as any other liquid would do, but the globules of either of these oils, being different from the globules in milk, do not mix with the latter, and the oil will be in a round ball, not touching the spoon. As you swallow the milk that has been held in the mouth, take the spoonful of milk in the mouth and at once begin to drink milk from a cup at hand. I have never yet found the person who, if the procedure

was carried through in this manner, could tell whether he had taken castor-oil or cod-liver oil, or taken none at all. There is absolutely no contact with the mouth or throat, of any particle of the oil, nor can it be smelled on the spoon. All this implies taking immediately, but not with undue haste.

The oils as well as the milk must be cold and the colder the better. The quantity can be increased by degrees as the stomach will stand the oil desired, but if a large dose of castor-oil is desired, it can be given better by repeating the procedure than by attempting to swallow too much at one time.

This procedure has given me and so many of my patients, especially parents when administering oils to children, so much comfort that I repeat what I wrote over fifteen years ago, hoping others who do not seem to have heard of it in detail may also find relief from the nauseous taste that so many dread.

Yours respectfully,
WICKES WASHBURN, M.D.

Association News.

The Official Program.—In order to avoid misunderstandings and to protect the interests of advertisers, attention is called to the fact that there is but one official program. This program is copyrighted by the Board of Trustees and contains no advertising matter.

Delegates to the Meeting of the American Medical Association.—Secretaries of societies are requested to forward the names of delegates as soon as possible after these are appointed or elected. George H. Simmons, M.D., Secretary, 61 Market St., Chicago.

General Business Committee.—The first meeting of the General Business Committee of the AMERICAN MEDICAL ASSOCIATION will be held at the Hotel Dennis, Atlantic City, N.J., on Monday afternoon, June 4, at 4:30 o'clock. Subsequent meetings of the Committee will be held at the same place and hour, every afternoon, during the meeting of the ASSOCIATION, unless otherwise directed by the Committee. In order that the business of the ASSOCIATION may be effectively transacted, it is very important that all the members of the Committee should attend all its meetings. L. DUNCAN BULKLEY, Acting Secretary.

Entertainment of Members of the Association.—The Directors of the Philadelphia County Medical Society, aware of the large number of physicians who will pass through Philadelphia on their way to and from the meeting of the AMERICAN MEDICAL ASSOCIATION, to be held at Atlantic City, N. J., June 5 to 8, and desirous of affording them an opportunity to visit the various hospitals and scientific institutions of Philadelphia, and to witness operations, etc., will establish a bureau of information for the furtherance of these objects. This will be at the College of Physicians of Philadelphia, northeast corner of Thirteenth and Locust Streets, the College having kindly placed a room in its hall at the disposal of the Philadelphia County Medical Society. This room will be in charge of a competent physician, and open from 10 a.m. until 5 p.m., daily except Sunday, from Monday, June 2, to Monday, June 11. Physicians are invited to make free use of the bureau, where they may obtain full information relative to the situation of the various hospitals, medical colleges, and other scientific institutions of Philadelphia, and to the time of operations and clinics at the different hospitals throughout the city. Information will be secured and tabulated daily, showing the leading attractions for that day. The College of Physicians of Philadelphia has also voted to extend to the members of the AMERICAN MEDICAL ASSOCIATION the courtesies of the library and of the Mütter museum. The library, which was founded in 1788, is, with the single exception of that of the surgeon-general's office in Washington, D. C., the largest collection of medical books in this country. The Mütter museum, which was endowed in 1856, by the late Prof. Thomas D. Mütter, contains about 4000 specimens of normal and pathologic anatomy, besides valuable models, casts, and illustrated anatomic works. Both the library and the museum will also be open from 10 a.m. to 5 p.m., daily except Sunday. Additional information may be secured

by addressing the Bureau of Information, at the address above, from June 2 to 11, and prior to that time by addressing any of the directors of the Philadelphia County Medical Society, as follows: Drs. A. O. J. Kelly, Chairman, No. 1911 Pine Street, Chas. A. Oliver, John G. Clark, Addinell Hewson, or Emma Musson.

Deaths and Obituaries.

S. G. PLUMMER, M.D., Rock Island, Ill., died April 29, aged 79 years. He was born in Pennsylvania, received his early education in the Greenville (Pa.) Academy, and the Western Reserve College in Ohio. In 1856 he was graduated from the Cleveland Medical College, and in 1861 was made surgeon of the Thirteenth Ill. Vol. Inf., later appointed medical director of the First Division, Fifteenth Army Corps, and made its surgeon. Since the Civil War, he had practiced medicine in Rock Island, where he served on the medical staff of St. Anthony's Hospital. He was a member of the AMERICAN MEDICAL ASSOCIATION, the Illinois State Medical Society, and the Iowa and Illinois Central Medical Association.

M. M. BAGG, M.D., died May 2, in Utica, N. Y., aged 89 years. He studied in Hamilton College; in 1833 went to Yale, where he was graduated four years later; and in 1842 received his degree in medicine from the Geneva Medical College. After a year spent in Paris, he returned to Utica, where he had since practiced. He was a trustee of Paxton Hospital and a member of its board of physicians, was also on the consulting staff of St. Luke's Hospital and one of the visiting physicians to the Utica Orphan Asylum.

LEANDER H. BAKER, M.D., Louisville, (Ky.) Medical College, died May 4, of bronchitis, at his home in Oak Park, Ill. He practiced medicine in St. Louis, Mo., until the breaking out of the Civil War, when he was appointed surgeon of the Twenty-fourth Mo. Vol. Inf. In 1864 he located in Quincy, Ill., and from there went to Payson, Ill., thence to Oak Park.

JOHN STOCKTON HOUGH, M.D., a retired physician, died at his home in Ewing, near Trenton, N. J., May 6, aged 54 years. He was graduated from the Pennsylvania University's medical department, and had traveled extensively in Europe in the interest of his profession. He was also one of the best known men in New Jersey, a bibliographer possessed of a large library, and of late years was active in the movements for good roads. His death resulted from injuries received by having been thrown from his carriage a week previously.

RICHARD H. KEALHOFFER, M.D., aged 50, died suddenly of heart disease, in Philadelphia, May 1. He was a resident of Hagerstown, Md., and had been on a trip to Atlantic City. Dr. Kealhofer was educated at Franklin and Marshall College, studied medicine with Dr. J. McPherson Scott, of Hagerstown, and received his degree at the University of Maryland in 1866. He practiced for a time in St. Louis, Mo.

BENJAMIN GERET, M.D., St. Charles, Mo., died May 3, aged 58 years. He was a native of Bavaria, and in 1868 was graduated from the Royal College of Medicine at Erlangen; later he was appointed a major-surgeon in the German army, and was decorated with high honors by both the king of Bavaria and the emperor of Germany.

G. R. C. TODD, M.D., a brother-in-law of Abraham Lincoln, and a surgeon in the Confederate Army during the Civil War, died at his home in Barnwell, S. C., April 25. He was graduated from the medical department of the Transylvania University, Lexington, Ky., in 1850.

CHARLES H. MESEREAU, M.D., College of Physicians and Surgeons, New York City, 1884, died of cardiac disease at his home in New York City, May 4, aged 37 years. For two years he was a house-surgeon in the Hartford (Conn.) Hospital, and was for several years a sanitary inspector of the New York Health Board.

JOHN P. LANDON, M.D., died at his home in Tilleride, Colo., recently. He was graduated from the Bellevue Hospital Medical College, New York City, in 1875, and practiced in Sterling, Ill., for a number of years before going West.

DAVID STOVEL, M.D., Detroit, Mich., died May 1, aged 61 years. He was born in Mount Forest, Ont., and graduated first from the Toronto College of Medicine, then from the Detroit College of Medicine.

EDWARD LYON, M.D., a graduate of the medical department of the University of Pennsylvania, class of 1867, died recently at his home in Williamsport, Pa.

W. N. ROGERS, M.D., of Waco, Texas, died May 1. He graduated from the Louisville Medical College in 1878, and practiced in Belton, Texas, until four years ago.

GEORGE FULMER, M.D., Jefferson Medical College, 1853, died in Mechanicsburg, Pa., May 1. He was a member of the AMERICAN MEDICAL ASSOCIATION and of the Medical Society of the State of Pennsylvania.

EDWARD PAYSON WILLIAMS, M.D., Atlantic City, N. J., died there April 29, aged 69 years. He was graduated in 1875, from the College of Physicians and Surgeons, New York City.

WM. E. H. BROWN, M.D., of Algiers, La., died April 23, aged 70 years.

Miscellany.

Food Poisoning at San Juan, Porto Rico.—On March 25, 1900, out of a company of ninety-four men of the Eleventh United States Infantry, forming part of the garrison of San Juan, P. R., 57 were admitted to hospital and 10 became slightly sick, but did not apply for treatment. The symptoms were persistent vomiting, severe cramps in the stomach, purging, great prostration, dilatation of the pupils, headache, clammy perspiration, chilliness and great thirst. The stomach in each case was washed out by means of the stomach-tube. In some cases the stomach was empty and nothing but water and mucus came away; in others the washings were tinged with bile, and in others again a moderate amount of food that had been eaten for breakfast was washed out, but in no case was the stomach overdistended or even full. The vomiting was controlled in several instances by the washing out of the stomach, but in many it persisted for several hours afterward. The prostration was so great that some of the patients fainted before reaching the ward. A large number vomited blood in small clots, in most instances mixed with nothing but mucus, showing that the hemorrhage had not taken place until after the contents of the stomach had been expelled. Purging began in most before the vomiting had ceased, and continued for twelve to fifteen hours. At first the stools were natural, soon watery, afterward becoming mucous and blood-tinged. Cramps in the voluntary muscles were mild in some, but other patients writhed in agony, their sufferings being relieved only after thorough kneading and massage by the hospital attendants. Forty were discharged on the following morning; the others from day to day until the fifth morning, when all were returned to duty.

A careful study of the food eaten that morning led the surgeon in charge, Captain George M. Wells, assistant-surgeon, U. S. A., to refer this general attack to the milk used with the mush furnished for breakfast. This meal consisted of hash made from meat and potatoes, which had been baked in the oven for two hours prior to being served; mush made from the corn-meal of the subsistence department and served with diluted condensed milk of the Eagle brand; bread, coffee and sugar, but no cream. The evidence seemed to point to the condensed milk as the ingredient of the food containing the poison.

Sanitary Progress in Porto Rico.—General Orders, No. 69, April 2, 1900, Headquarters Department of Porto Rico, prescribes regulation for the establishment and care of cemeteries, public and private. So far as relates to public cemeteries, it is required that on or before June 30, 1900, each municipality shall provide within its limits at least one civil cemetery, which shall be available for the burial of all who die in the municipality. Graves or lots in such cemeteries may be sold for the interment of the remains of individuals or families, but a sufficient area must be set apart for the free and proper burial of the remains of the poor and friendless.

All interments in, or disturbance of, the soil of any cemetery now in use, after the above-mentioned date, are prohibited, provided, however, that the alcalde of any municipality may submit evidence to show, as respects any cemetery in his municipal district, that there is a space in a designated one available for burials, and that interments may be made in such space without disturbing the remains of others previously buried therein. This proof will be forwarded to the military governor, and if, after investigation by the Superior Board of Health, the facts as claimed shall be established a special exception will be made in the case of the cemetery in question.

General Orders, No. 74, April 7, 1900, establishes a board of charities in each municipality, to consist of three members to be selected by the alcalde, with the approval of the municipal council, on account of their special fitness for organizing and supervising charitable work. All matters respecting municipal charitable institutions, including homes, asylums and hospitals wholly maintained from public funds and intended for the care of the destitute, sick or incurables, the nomination of destitute children for admission to the insular charity schools, and matters relating to the improvement of the state of the poor and distressed in general are submitted to this board.

Again, No. 78 of the series of General Orders, dated April 10, 1900, provides for the appointment in each municipality of a competent inspector of cattle and meat, to be appointed by the municipal council and paid from the municipal funds. When sick animals or those suffering from sores or wounds are offered for slaughter, for human consumption, the inspector will forbid the slaughter. Meat which has not been inspected, approved and duly tagged by the authorized inspector will not be sold for human food. The flesh of animals suffering from tuberculosis, fever, actinomycosis, glanders, cancer, hydrophobia, eruptive skin disease, measles and cholera (in hogs), and of those which have died natural deaths, is especially unfit for human food and must be condemned. No animal over six months pregnant shall be slaughtered for food, and the number of cows shall not exceed one-fourth of the total number of cattle butchered. The district courts have jurisdiction in cases of violation of the provisions of this order.

Lastly, Circular No. 16, dated April 9, from the same headquarters, publishes rules and regulations respecting burials, disinterments and transportation of human bodies.

The Prognosis of Appendicitis.—For a time discussion raged warmly around the question as to the indications for operation in cases of appendicitis, and while it can not be said that a final decision has been reached, there is a growing tendency to operate early and to operate often. There are not many who to-day consider appendicitis a medical disorder exclusively, but the condition is rather looked upon as a borderline affection in whose management the surgeon should be consulted from the outset, in order that, should his opinion be desired, he can give it intelligently, and should operation be required, he can perform it promptly. The general proposition that successful treatment demands early and accurate diagnosis is especially applicable here, but even under the most favorable circumstances it will be difficult, if at all possible, to determine the character of the disease, the nature of the infection, the intensity of the morbid process, and the quality and the extent of the lesions. The prognosis will depend on all of these factors and this aspect of the subject is given careful consideration in a recent communication by Caley (*The Lancet*, February 10, p. 378), based on observation of 200 cases of appendicitis. Of this number 98 were treated in the medical wards, with 3 deaths, and 102 in the surgical, with 22 deaths. The low mortality among the medical cases is attributed to the large proportion of simple ones and the high mortality among the surgical to the large proportion with general peritonitis.

The cases were divided into five groups: 1, simple appendicitis and perityphlitis, in which the inflammation was limited to the walls of the appendix or localized non-suppurative adhesive peritonitis developed; 2, appendicitis with localized suppuration; 3, appendicitis with diffuse peritonitis; 4, chronic and relapsing peritonitis; 5, appendicitis with special compli-

eations, such as intestinal obstruction, fecal fistula, suppurative pyelophlebitis with portal or general pyemia, hepatic or subphrenic abscess, thrombosis of the iliac veins, pleurisy, pneumonia, parotitis and secondary hemorrhage.

From a pathologic point of view the prognosis will depend principally on the extent and the nature of the peritoneal infection—whether local or diffuse, suppurative or non-suppurative, of a mild or of a severe degree of virulence—and in less degree on the nature and the course of the lesion of the appendix—whether mild or severe, as measured by its infectivity. No certain data are available for determining the virulence of the infective micro-organisms, but the lesions may be considered as severe or mild accordingly as one or another of the following phenomena are present: Severe—1, perforation, whether from concretion, ulceration or gangrene; 2, gangrene, whether from interference with the blood-supply or from intense infectivity of the inflammation; 3, ulceration due to specific infections, e. g., tuberculosis, typhoid fever, dysentery or actinomycosis, the presence of concretions, or the result of intense inflammation; 4, concretion; and 5, suppuration within the appendix itself. Mild—1, simple inflammation—catarrhal or more correctly, "parietal" appendicitis—acute or chronic; 2, stenosis or obliteration of the lumen, which is frequently associated with; 3, cystic dilatation of the distal portion; 4, concretion without ulceration; 5, superficial ulceration, and 6, kinking, adhesion, volvulus or hypertrophy of the mucosa.

From the clinical point of view the prognosis depends on: 1, the local symptoms; 2, the general symptoms; 3, the local signs; and 4, the progress of the case. Of the local symptoms pain is one of the most constant, and its distribution, severity and character are of much significance. In mild cases it is localized to the right iliac fossa, whereas in perforative ones it is usually more sudden, more severe and more generalized. When associated with definite collapse it suggests perforation, rupture of adhesions or rapidly spreading peritoneal infection. It may at first be dull and aching or slight and colicky—from inflammation of the appendix—and followed by a sudden increase in severity, with vomiting and general disturbance—from inflammation of the surrounding peritoneum, or extension of peritonitis, or rupture of an encysted abscess. In mild cases the pain tends soon to become localized and less intense. If persistent and severe it generally indicates a severe lesion. If it is also radiating it indicates extension of peritonitis; if persistent, severe and local, it is indicative of a concretion; if increased by deep respiration, it indicates considerable local peritonitis; as does also pain or difficulty in micturition. It should not be forgotten, however, that a severe lesion may be attended with little pain.

Vomiting, if present, usually accompanies or follows the pain, although it sometimes precedes. If frequent and severe, and especially if persistent, it indicates a severe lesion, as it does also when it occurs after a period of comparative repose. If it is stereocaceous or coffee-grounds in character, it is of serious import. Absence of vomiting, however, is inconclusive. Other things being equal, natural action of the bowels is a favorable sign. Hiccough, especially if persistent, is of unfavorable omen.

Among the general symptoms the temperature, pulse and respiration conjointly and the aspect and the general condition of the patient with especial reference to collapse or anything approaching it, restlessness or general distress, are reliable guides in determining the effect of the local lesion on the organism as a whole. The temperature may be subnormal in the initial collapse of acute perforative or gangrenous appendicitis, fully developed septic peritonitis, localized circumscribed suppuration, mild appendicitis without appreciable local peritonitis. High fever of a continued type in the first two or three days is generally indicative of a severely infective lesion. A decline in temperature with a reduction in pulse, frequency and improvement in the general condition is usually reassuring. A secondary rise of temperature after the first few days is indicative of spreading peritonitis, suppuration or intercurrent complication, while fever persisting after eight or ten days is generally indicative of local abscess. A high pulse-rate is sug-

gestive of a severe lesion, and in particular diffuse peritoneal infection, especially if the pulse-frequency is disproportionate to the temperature. Frequent and shallow respiration of costal type, with low temperature and pulse-rate, suggests grave peritoneal implication.

A pinched and anxious expression, restlessness, obvious distress and collapse indicate peritoneal shock or general peritonitis. The initial collapse that marks the onset of perforative appendicitis is significant. More or less persistent collapse is of the worst possible omen.

The local signs include impaired mobility during respiration and distension, tenderness, muscular rigidity, tumor or deep-seated resistance. Local immobility is the rule in cases of appendicitis with localized peritonitis. General immobility, except of diaphragmatic origin, is indicative of diffuse peritonitis. The area of local tenderness is proportionate to the extent of the local inflammation. Muscular rigidity corresponds with cutaneous hyperesthesia and tenderness. Local tumor or deep-seated resistance and dullness on percussion are common but not invariable. Their absence may be of serious prognostic significance and their presence reassuring.

The progress of the case during twenty-four, thirty-six and forty-eight hours may furnish a needed indication in prognosis and treatment. In mild cases the symptoms recede or become localized, while in severe ones the symptoms persist or become intensified.

Recurrence may be expected in about one-third of all patients, usually within two years, and most commonly within one year of the first attack. In the presence of local suppuration the probability of recurrence is relatively slight. A mild first attack is frequently followed by recurrence. If the condition clears up slowly and local pain, tenderness or swelling persists for some time, the probability of a relapse sooner or later is great. If in the interval between attacks there is occasional pain or discomfort, with irregularity of the bowels and definite local tenderness or resistance, a chronic appendicitis probably exists, recognizable on palpation, with a chronic tendency to relapse so long as the appendicitis remains.

EXAMINATION QUESTIONS.

The Michigan State Board of Registration in Medicine, presented the following questions at a recent examination in the several subjects noted.

PUBLIC HEALTH LAWS AND HYGIENE.

1. Name the diseases dangerous to public health that must be reported to the Board of Health. 2. What restrictive measures should be adopted in an outbreak of smallpox? 3. Describe method of disinfection during and following a case of scarlet fever. 4. Nuisances: What constitutes a nuisance? How abated? 5. Milk: Dangers from impure milk? How adulterated? What is the legal standard in Michigan? 6. What preventive measures should be adopted in typhoid fever? 7. Number of cubic feet of air that should be provided in schools for each pupil. 8. Name some of the impurities in drinking water. 9. State Board of Health: Number of? How appointed? Their powers? 10. Local Boards of Health: Who are they under? The general law in townships? in cities and villages?

OBSTETRICS.

1. Name four of the most important signs or symptoms of pregnancy. 2. What are the disorders resulting from the mechanical interference of the gravid uterus. 3. Give causes and symptoms of puerperal eclampsia. 4. Define the terms abortion, miscarriage and premature labor. 5. Define accidental hemorrhage. 6. Placenta previa—diagnosis and prognosis. 7. Describe the stages of labor. 8. Describe the terms presentation and position. 9. What should an obstetric bag contain.

MINOR SURGERY.

1. Describe the process of applying a plaster of paris jacket. 2. Name ten important agents used as germicides. 3. Describe preparation for aseptic operation: a. Surgeon and assistants; b. patient; c. instrument. 4. Define anesthesia and name two local anesthetics. 5. Give principal differences in effects of chloroform and ether. 6. What is an aneurysm? 7. Give eight methods of controlling hemorrhage. 8. Describe: 1, compound fracture; 2, simple; 3, comminuted. 9. Describe Colles' fracture, and how would you dress it? 10. Describe Pott's fracture.

EYE AND EAR.

1. Briefly describe the anatomy of the eye. 2. What symptoms are diagnostic of conjunctivitis? 3. Describe keratitis, and state in a general way its treatment. 4. How would you diagnose cataract? 5. What do you understand by the terms hypermetropia, myopia, astigmatism. 6. What treatment do you recommend in cases of ophthalmia neonatorum—in what way can you prevent its occurrence? 7. What is the treatment for acute peristitis of the mastoid process? 8. In what way is air admitted to the middle ear? 9. Are growths and obstructions within the nose apt to cause deafness? If so, how? 10. How would you remove foreign bodies from the auditory canal?

The Public Service.

ARMY CHANGES.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., April 28 to May 4, 1900, inclusive:

Charles H. Alden, colonel and asst.-surgeon-general, U. S. A., retired from active service April 28, 1900, by operation of law, under the provisions of an act of Congress, approved June 30, 1882.

James A. Alexander, acting asst.-surgeon, from Fort Fremont, S. C., to Tampa, Fla., and thence to Havana, Cuba, for duty in the Division of Cuba.

H. Eugene Allen, acting asst.-surgeon, from Chicago, Ill., to duty in the Department of Texas.

Charles Brunning, acting asst.-surgeon, from New Orleans, La., to Tampa, Fla., and thence to Havana, Cuba, for assignment to duty.

August von Clossman, acting asst.-surgeon, from St. Louis, Mo., to duty at Jefferson Barracks, Mo.

Edward Everts, captain and asst.-surgeon, U. S. A., retired from active service as a major, April 28, 1900, having been found physically disqualified by reason of disability incident to the service.

Robert J. Gibson, major and surgeon, U. S. A., from the hospital ship *Missouri* to temporary duty in the Department of California.

William C. Gorgas, major and surgeon, U. S. A., from the department of Havana and Pinar del Rio, Cuba, to duty as chief surgeon, Division of Cuba.

Randell C. Stoney, acting asst.-surgeon, from temporary duty at the Presidio of San Francisco to duty in the Department of California.

Harrison W. Stuckey, acting asst.-surgeon, former orders, requiring him to accompany troops to Manila and report for duty in the Division of the Philippines, revoked.

Hedley V. Tweedy, acting asst.-surgeon, from Jackman, Me., to Seattle, Wash., for duty at Fort Egbert, Alaska, or other post, if deemed advisable.

Benjamin B. Warriner, acting asst.-surgeon, from Crewe, Va., to Fort Fremont, S. C., for post duty.

NAVY CHANGES.

Changes in the Medical Corps of the U. S. Navy for the week ended April 28, 1900.

P. A. Surgeon L. Morris detached from the *Brooklyn* and ordered to the *Baltimore*.

P. A. Surgeon J. Stoughton, detached from the *Bennington* and ordered to the *Cass*.

Asst.-Surgeon T. M. Lippitt, detached from the *Baltimore* and ordered to the *Oregon*.

Asst.-Surgeon J. C. Thompson, detached from the *Castine* and ordered to the *Bennington*.

Asst.-Surgeon A. G. Grunwell, detached from the *Yosemite* and ordered to the *Brooklyn*.

P. A. Surgeon J. F. Leys, detached from the *Essex* on reporting of relief, and ordered home and to wait orders.

Asst.-Surgeon C. H. Delancy, detached from the *Amphitrite* and ordered to the *Essex*.

Asst.-Surgeon J. C. Thompson will return to the United States by the *Bennington*.

P. A. Surgeon A. Farenholt will return to the United States by the *Concord*.

P. A. Surgeon M. R. Piggott, from the naval academy and ordered to the *Chesapeake* same day.

Asst.-Surgeon K. C. Ohnesorg, detached from the naval academy and ordered to the *Scipio* same day.

MARINE-HOSPITAL CHANGES.

Official list of the chances of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital Service for the seven days ended April 26, 1900.

Surgeon J. M. Gassaway leave of absence for 5 days from April 23, 1900, under the provisions of Par. 179, Regulations, M. H. S.

P. A. Surgeon C. P. Wertebaker, detailed to represent the service at the meeting of the Association of Military Surgeons of the United States at New York City, May 31 to June 2, 1900.

P. A. Surgeon W. G. Stimpson, granted leave of absence for ten days from April 28, 1900.

Asst.-Surgeon John McMullen, granted leave of absence for seven days; upon expiration of leave of absence to proceed to the Gulf Quarantine Station, Miss., and report to medical officer in command for temporary duty.

Asst.-Surgeon Joseph Goldberger, upon being relieved from duty at the Immigration Depot, New York City, to proceed to the Reedy Island Quarantine, Del., and report to the medical officer in command for duty and assignment to quarters.

Acting Asst.-Surgeon J. B. Engelson, granted leave of absence for three days from May 8, 1900.

Acting Asst.-Surgeon J. C. Rodman granted leave of absence for four days from April 23, 1900.

Hospital Steward E. T. Olson, upon being relieved from duty at Wilmington, N. C., to proceed to Mullet Key Detention Camp, Fla., for duty.

Hospital Steward C. F. Crowley, to proceed to Wilmington, N. C., and report to the medical officer in command for duty and assignment to quarters.

PROMOTIONS.

P. A. Surgeons T. B. Perry, R. M. Woodward and G. T. Vaughan, commissioned as surgeons.

APPOINTMENTS.

Charles F. Crowley, of Nebraska, appointed junior hospital steward.

HEALTH REPORTS.

The following cases of smother yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ended May 5, 1900.

SMALLPOX—UNITED STATES.

Alabama: Mobile, April 14 to 28, 14 cases.
District of Columbia: Washington, April 21 to 28, 1 case.
Illinois: Chicago, April 21 to 28, 11 cases.
Kansas: Wichita, April 21 to 28, 5 cases.

Indiana: Evansville, April 21 to 28, 2 cases; Indianapolis, April 21 to 28, 7 cases.

Kentucky: Covington, April 21 to 28, 6 cases; Lexington, April 21 to 28, 1 case.

Louisiana: New Orleans, April 21 to 28, 43 cases, 25 deaths. Massachusetts: Boston, April 21 to 28, 1 case.

Michigan: Detroit, April 21 to 28, 1 case; Grand Rapids, April 7 to 28, 1 case, 1 death.

Minnesota: Minneapolis, April 14 to 28, 47 cases, 1 death.

New York: New York, April 21 to 28, 2 cases.
Ohio: Cleveland, April 21 to 28, 12 cases.

Utah: Salt Lake City, April 21 to 28, 1 case.

SMALLPOX—FOREIGN.

Austria: Prague, April 1 to 7, 2 cases.

Belgium: Ghent, April 7 to 14, 2 cases.

Brazil: Rio de Janeiro, March 2 to 28, 42 deaths.

China: Hongkong, March 10 to 31, 10 cases, 5 deaths.

England: Liverpool, April 7 to 14, 9 cases, 2 deaths; London, April 7 to 14, 2 deaths.

Gibraltar: April 8 to 15, 4 cases.

Greece: Athens, April 7 to 14, 5 cases, 1 death.

India: Bombay, March 27 to April 3, 120 deaths; Calcutta, May 3 to 10, 10 deaths; Kurrachee, March 24 to April 1, 27 cases, 6 deaths.

Japan: Nagasaki, March 21 to 31, 1 case; Tamsui, February 22 to 28, 87 cases.

Mexico: Chihuahua, April 14 to 21, 2 deaths; Guadalajara, April 21, epidemic.

Russia: St. Petersburg, March 24 to April 17, 80 cases, 24 deaths.

Scotland: Glasgow, April 7 to 14, 1 case.

Spain: Madrid, April 1 to 7, 10 deaths; Valencia, April 14, 1 case and 1 death.

Straits Settlement: Singapore, March 19 to 26, 7 deaths.

YELLOW FEVER.

Brazil: Rio de Janeiro March 2 to 23, 104 cases, 50 deaths.

Colombia: Panama, April 10 to 24, 4 cases.

Costa Rica: Port Limon, April 21, 1 death.

Cuba: Neivitas, April 24, 1 case.

Mexico: Vera Cruz, April 14 to 21, 3 deaths.

San Salvador: Livingston, April 11, epidemic.

CHOLERA.

India: Bombay, March 27 to April 3, 7 deaths; Calcutta, March 3 to 10, 74 deaths.

PLAGUE.

India: Bombay, March 27 to April 3, 685 deaths; Calcutta, March 3 to 10, 601 deaths; Kurrachee, March 24 to April 1, 248 cases, 162 deaths.

Japan: Tamsui, February 1 to 28, 47 cases, 38 deaths.

CHANGE OF ADDRESS.

Brown, G. R., from 49 W 5th St., Cincinnati, Ohio, to Pleasant Valley, Ky.

Breebault, J. C., from Kansas City, Mo., to Pucklin, Kan.

Binkley, J. T., from 452 E. 49th St., to Windemere Hotel, Chicago, Ill.

Caldwell, W. S., from Vienna, Austria, to 7 Rue Scribe, Paris, France.

Carr, C. W. of Moore & Co.

Chesmore, H. P., from St. Joseph, to Nowaday, Mo.

Campbell, W. L., from 504 Olive St. to 123 Brooklyn St., Kansas City, Mo.

Anderson, C. L., from 2400 Chestnut Ave. to 2316 Agnes St., Kansas City, Mo.

Dunn, B. S., from Whitestone, N. Y., to Ardsley on Hudson.

Devine, G. C., from Chetek to Mason, Wis.

Dye, J. S., from Little Rock, Ark., to Chattanooga, Tenn.

Groffness, W. O., from Wauwatosa to Ixonia, Wis.

George, L. C., from Alexandria to Shreveport, La.

Hunter, R. B., from Winchester, Ky., to 904 South St., Springfield, Mo.

Hering, E. R., from Manawa to Cross Plains, Wis.

Hutchins, S. E., from Arcadia to Whitehall, Wis.

Halstead, A. E., from 844 Warreu Ave. to 2037 Indiana Ave., Chicago, Ill.

Harold, A. W., from Iowa City to Ackley, Iowa.

Hills, W. A., from 618 Kansas Ave., Topeka, to Delphos, Kan.

Hemingway, W. C., from Rome to Lambert, S. C.

Heminger, V. J., from Union City to Ohlen, Tenn.

Johnson, I. E., from Lebanon to Lebanon Junction, Ky.

Kee, H. D., from New Orleans, La., to Gonzales, Tex.

Kirby, E. G., from Salem to Elgin, Ore.

Lehman, C. A., from 2009 Market St., to Gill & League Bldg., Room 13, Galveston, Texas.

La Rue, H. M., from 511 E. 8th St., to Savoy Hotel, Kansas City, Mo.

Lamerton, E. W., from Chicago, Ill., to Wymong, Iowa.

Litzinger, G. H., from Kansas City, Mo., to Milford, Kans.

Miller, E. E., from Omaha to Surprise, Neb.

McClough, S. S., from Itasca, Texas, to Ramsay, Miss.

Medringhaus, R. E., from St. Louis to Eagle, Mo.

Le Moyné, P., from Pittsburg, Pa., to Melvale, Md.

Major, C., from Salt Lake City, Utah, to Denison, Iowa.

McGill, J. M., from 42 Laflin St., Chicago, to Pontiac, Ill.

Morcom, D. W., from 618 W. Monroe St. to 165 Wood St., Chicago, Ill.

Murtagh, A., from Delaware to Monticello, Iowa.

Maxey, W. E., from Caldwell, Idaho, to Johns Hopkins Medical College, Baltimore, Md.

Miller, J. H., from Pana, Ill., to 1901 Jefferson St., Baltimore, Md.

Pettyjohn, E. S., from Alma, Mich., to Stewart Bldg., Chicago.

Posh, F., from Ives Grove, to Western Union Junction, Wis.

Plant, J. J., from Pembina, N. D., to Arcadia, St. Paul, Minn.

Riley, B. M., from 518 N. 19th St. to St. Joseph's Hospital, Omaha, Neb.

Reitz, W. M., from Waterville to Bremen, Kan.

Snow, H. O., from Abbeville to Douglas, Ga.

Smith, E. A., from 1928 Archer Ave., to 1910 State St., Chicago.

Speelman, G. T., from Kelly, Ga., to Hamilton, Texas.

Thill, D. P., from 705 Smith St. to 1101 North Ave., Milwaukee, Wis.

Waller, E. E., from Alleghen to Markleton, Pa.

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Original Articles.

THE PRESENT STATUS OF OPERATIONS FOR CANCEROUS UTERI.*

BY HOWARD A. KELLY, M.D.

BALTIMORE, MD.

We are one and all curious creatures of habit and victims of fancy. For example, if a little epidemic of smallpox claims a dozen victims or so, everybody is horror-stricken and large numbers of people are vaccinated as a precautionary measure. This is because smallpox is associated with a horrible disfiguring eruption. Thousands of victims die year by year of typhoid fever, in many of our large cities—notably in Philadelphia, through a long series of years—at a time in the world's history when it has long been shown that about one in a hundred thousand is what may be considered an average death-rate in well-regulated communities, and the most public interest that can be aroused is an occasional little spasmodic flutter in the newspapers. And this goes on indefinitely when every child knows that pure water will stop the disease, and when the pure water is within reach. The same is true of the awful scourge, tuberculosis, when we know that clean streets and good sanitation, all within easy reach of communities already spending sums vastly in excess of those abroad of equal size, will largely tend to check the disease. Let us not blame the politicians, degraded as most of them are, but let us blame the low moral standard of the whole body politic of which we are a component part and in which we ourselves bear our due share of the odium. The same is true of that terrible scourge, cancer. What systematic, thorough-going, persistent efforts are we making to get at the root of the matter, to make a notable reduction in the number of its victims? Are we not all of us simply treating the few cases that come into our hands without reference to the enormous crop which goes on increasing year by year.

Welch has collected statistics which show the frightful prevalence of cancer in civilized countries. He gives these data:

PRIMARY CANCERS.	STOMACH.	UTERUS.
11,131 in Vienna.....	10 per cent.	31 per cent.
7,150 in New York.....	25.7 per cent.	24.2 per cent.
9,118 in Paris (Tanchou).....	25.2 per cent.	32.8 per cent.
1,378 in Paris (Salle).....	31.9 per cent.	32 per cent.
587 in Berlin.....	35.8 per cent.	25 per cent.
183 in Wurzburg.....	34.9 per cent.	19 per cent.
1,046 in Prague.....	37.6 per cent.	33.3 per cent.
889 in Geneva.....	45 per cent.	15.6 per cent.
31,482 Total.....	21.4 per cent.	29.5 per cent.

Commenting on this large group of cases he says: "From this table it appears that in some collections of cases the uterus is the most frequent seat of primary

cancer, while in other collections the stomach takes the first rank. If the sum total of all the cases be taken, the conclusion would be that about one-fifth of primary cancers are seated in the stomach and somewhat less than one-third in the uterus. Even if allowance be made for the apparently too low percentage of cases of gastric cancer in the large Vienna statistics, I should still be inclined to place the uterus first in the list of organs most frequently affected with primary cancer and to estimate the frequency of gastric cancer compared with that of primary cancer elsewhere as not over 25 per cent."

Who that has never been affected by the disease can even begin to estimate the awful sum total of misery suffered by one patient as the disease progresses to its dreadful end.

It would, therefore, seem not unfitting that we should gather from time to time: 1. To discuss our individual results in the treatment of cancer. 2. To criticize each other and to inquire as to the best methods of treatment. 3. To forecast as nearly as may be the best lines of investigation for the immediate future.

In the first place I will lay down the dictum long since accepted but still needing reiteration in our country, that *in every case of cancerous uterus the entire organ must be removed.*

All well know that an epithelioma of the cervix tends in its upward progress to respect in a remarkable way the line of demarcation between the cervix and the body of the uterus, and that an adenocarcinoma of the body in like manner shows a remarkable tendency to limitation at the internal os uteri. There is, therefore, a temptation, particularly in the early stages of these diseases, to do a lesser operation, amputating the cervix, or removing the body.

Let me emphatically declare again that all such partial operations are wholly unjustifiable, as, speaking on the basis of 176 cases of my own, studied most minutely, I find that the exceptions are so numerous that they must for practical purposes be reckoned as the rule. In one instance, many years ago, I left in the vaginal end of the cervix, in a case of carcinoma of the body, and several years later the poor woman returned with the cervix thoroughly diseased and an extensive involvement of the rectum as well. In other cases of cancer of the cervix I have found the disease repeatedly in the body and in one it missed the body but was in the tubes!

The great opprobrium of all our operations lies in the fact that we often leave some of the disease behind. It is essential, therefore, to an intelligent discussion as to the best methods of attacking the disease, that we shall agree as to the methods by which it extends into the neighboring tissues. We have just seen that the entire uterus must be regarded as suspected and therefore removed. With the uterus *we must remove the uterine tubes in all cases of cancer of the body.*

The next great danger area is the vaginal vault. Cer-

* Read before the New York County Medical Association, April 16, 1900.

vical cancer in many instances extends down the vagina in an invisible form under the mucosa, without at first causing any perceptible infiltration or blush of color to excite suspicion. Every operator has seen, at one time or another, a distressingly early recurrence in the scar at the vaginal vault, due to the rapid growth of foci which ought to have been exterminated at the radical operation. It is therefore a necessary precaution to give the disease a wide berth on the vaginal side, cutting at least 2 or 2.5 cm. away from it.

Anteriorly the disease often involves the base of the bladder before it has extended far in any other direction; here good surgery will readily sacrifice and repair the entire affected vesical area, leaving it sticking to the cervix uteri.

The posterior extension of the cancer, in the earlier operable stages of the disease, is fortunately rare, as it is peculiarly difficult to meet this complication with anything like a real radical operation.

Almost all cases of involvement of the bowel are also associated with an extensive lateral involvement.

The lateral extensions of cancer of the cervix to the right and to the left, out through the bases of the broad ligaments, surrounding the ureters, reaching to the pelvic walls, involving the pelvic and the iliac glands, are by far the most important because the most frequent and the most difficult to meet therapeutically.

I think we have all agreed so far, and my dicta will have aroused no opposition, but here we meet our first crux, here opinions are widely divergent. What is the mode of this lateral extension? Is it *per continuitatem*, or is it *per saltum*? Is there a direct steady progression of the disease from the cervix out into the neighboring and from there into the contiguous tissues? Or should we expect to find beyond the manifest disease, a zone of sound tissue, and then isolated foci of disease in the tissues or in the glands? It is at once manifest that according as we hold one or the other of these opposing views, our surgical procedures will vary widely. For the sake of comparison let me cite the operations for cancer of the breast. Under the old idea that the disease was localized in the breast the surgical measures were limited to its amputation. Now the knowledge that the disease jumps from the breast into the axilla and from the axilla into the neck has completely transformed the surgery of this region.

Attracted by an apparent analogy between cancer of the breast and cancer of the uterus, and believing that the frequent recurrences were due in large measure to glandular metastases, there was worked out in my clinic several years ago, by Dr. S. G. Clark, a most ingenious operation, in which the uterine artery was tied back at its origin and the tissues between this and the cervix, together with the glands, were all removed, in addition to dissecting out and removing pelvic and iliac glands. This operation was radical to an extent that no operation had ever been before, and for a time we hoped for great things from the change in our methods, but the close sifting of my material, which immediately followed this change, together with the careful microscopic study of all the glands removed, showed that there was but one case—an adenocarcinoma of the cervix—in which there was an early glandular involvement, while in numerous others, in which I had removed enlarged glands and in which I felt sure from the gross appearance that I was removing cancerous foci, the microscopic study showed nothing but an infiltration with mononuclear and polymorphonuclear leucocytes. Winter has found but two

cases of glandular involvement in 44 operable cases examined.

Allow me therefore to state, further, these two dicta: *Cancer of the cervix usually extends by direct involvement of the contiguous tissue. Extension by glandular metastases per saltum is unusual in the earlier operable stages of the disease.*

If these statistics are borne out by further investigations, then practical deductions of enormous import flow directly as corollaries from these dicta. The operator must concentrate his whole efforts in giving the diseased cervix the widest possible berth, and if he enucleates well out in sound tissues he need not concern himself about the tissues beyond.

One more consideration of the utmost importance, which is bound to have great weight in determining the best mode of operating: What is the danger of implanting cancerous germs and starting fresh foci in the sound tissues in the course of an operation in which the uterus with all the diseased tissues has been enucleated? Experiments from the time of von Langenbeck have shown that it is possible to inoculate cancer either by injecting bits of cancerous tissue into the circulation, when the particles form cancerous emboli which may continue to grow, or by implanting them under the skin, or in the peritoneal cavity. These implantations are much more apt to flourish if they are taken from an animal of the same species and if the transfer is carried out aseptically.

The clinical evidence of the implantation of carcinoma in women is abundant in all cases of peritoneal cancer where the rapid dissemination of the growth is manifestly due to the lodgment of small particles here and there and their continued growth in the new region.

In one of my cases of (Gyn. 3323) extensive ovarian papillomata, seen in February, 1895, there was an extension of the papillary disease from the peritoneal surface out through the abdominal wall to within 2 mm. of the skin surface, through the track of an old trocar puncture. The papillary growth in this unusual situation preserved its ordinary characteristics and many of the little cavities containing the dendroid masses were also filled with desquamated epithelium and polymorphonuclear leucocytes.

A case which I believe was without doubt one of auto-implantation from adenocarcinoma of the body of the uterus into the vagina was that of a patient seen in November, 1895, and illustrated (Nos. 174 and 175) in the first volume of my book (pp. 256, 257). The vaginal affection retained all the characteristics of the uterine growth, which, however, was not suspected to exist at the time the isolated patches of the vaginal disease were removed.

Positive evidence that the cancerous particles can be sown into the abraded epithelial surfaces or into the cellular tissues in the course of an operation for cancer is not abundant, but such evidence as there is is significant; for example: in 1891 Schoff reported a case in which, owing to the narrowness of the vagina, he was obliged to make incisions on each side in order to get at the diseased uterus. Three months later cancerous nodules were found in the scars in both sides of the vagina, without any evidence of a return of the growth in the pelvis above.

Hofmeier had a similar case in 1895, and in less than a year an ulcerated nodule was found below in the left vaginal scar, with no return of the vault. Both the original disease and the implantation were adenocarcinoma. Leopold noted the implantation of a squamous-

celled carcinoma on an abrasion produced by the leg holder, observed at the operation. The nodule appeared within a year and was as large as a walnut.

It is a little difficult to estimate the practical value of such observations and to decide how far they are entitled to influence our technique. The implantations in the vagina below the field of operation are, everyone will acknowledge, rare accidents. The question may be fairly raised whether there is even a small liability of a successful inoculation of the disease in the loose parametric cellular tissue when drainage is used and the wound heals slowly by granulation.

Having in this way cleared the field for the discussion, I will give in the briefest possible manner the practical results of my own work, and a résumé and a critique of various methods of operating.

First and foremost is it not worth while to operate at all on a cancerous uterus? Do not all patients thus affected sooner or later die of a return of the disease? There is a widespread conviction through the entire medical profession, a conviction which, if I mistake not, has found utterance even here in New York through prominent specialists, that the radical operation is really of no lasting benefit, and is one of those things specialists do because they are specialists, but which they would really better leave undone.

The periods of time in which these patients have remained well are as follows:

ADENOCARCINOMA OF THE BODY.		
Gyn. No.	Gyn. Path. No.	Time since operation. Years. Months.
2436	100	6 0
2417	321	5 6
2832	345	5 6
2934	392	5 4
Sanitarium.	944	4 0
422	1133 and 1137	3 8
Dr. Eccles.	1154 and 1192	3 8
Sanitarium.	1349	3 7
Sanitarium.	1350	3 5
4745	1353	3 0
4746	1359	3 2
Sanitarium.	1412 and 1414	2 9
4922	1473	1 11
3876	2161 and 2183	1 10
5958	2233	1 9
6008	2279 and 2283	1 8
6535	2291 and 2750	1 1
6584	2797	0 11
6659	2897	0 11

If we take it for granted that the two patients whose subsequent history could not be obtained, are dead, we still have 19 out of the 30, or 63 per cent., showing no evidence of a return of the growth at the present time.

Of the patients with adenocarcinoma of the cervix who are well at the present time, one was operated on

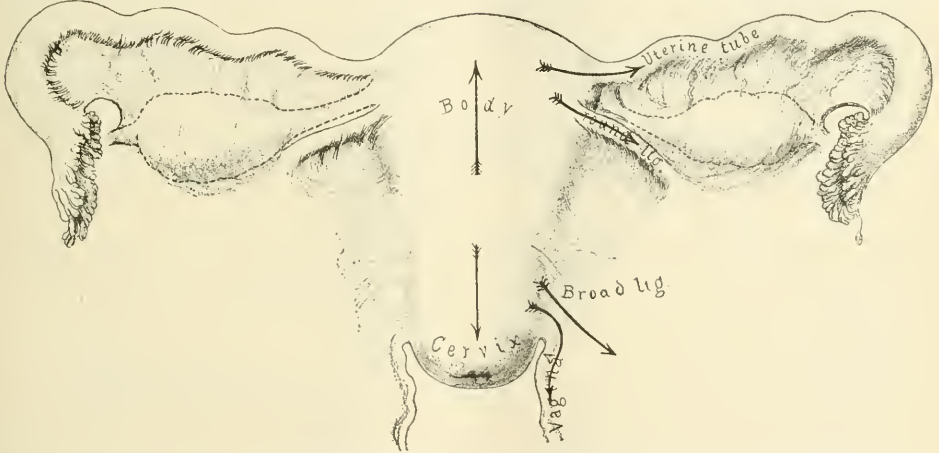


Fig. 1.—Cervical section of the uterus showing the directions in which a cancerous form in the cervix may spread down the vagina, up into the uterine body and out into the broad ligament, following the direction of the arrows. A cancer of the body in its advanced stage often follows the direction of the upper arrows out into the tube or down the broad ligament as well as down toward the cervix.

In citing my statistics in answer to this query let me say that I have included only those cases in which the uterus has been subjected to a rigid microscopic examination at the hands of Dr. T. S. Cullen, my associate professor of gynecology. I know of others still older and in perfect health where there was no doubt as to the diagnosis, but I have not included them, as the entire group of cases operated on at that time has not been rigidly criticised microscopically.

Of this special group of my cases so examined there are 103 operated on and divided as follows: well, without relapse, Jan. 1, 1900—squamous-celled carcinoma of the cervix, 61 cases, 13 in all living or 21 per cent.; adenocarcinoma of the cervix, 12 cases, 2 in all living or 16 per cent.; adenocarcinoma of the body, 30 cases, 19 in all living or 63 per cent.

five years and seven months, the other five years and three months ago.

SQUAMOUS CARCINOMA OF THE CERVIX.

Gyn. No.	Gyn. Path. No.	Time since operation. Years. Months.
2294	78	6 2
2452	109	6 0
4489	1244	3 6
4306	1384 and 1396	3 6
5286	1764	3 1
5577	1936	2 6
5853	2142 and 2152	2 3
5959	2263	1 10
6368	2611	1 9
6492	2705	1 3
Sanitarium.	2771	1 0
6590	2782 and 2794	1 11
6656	2890	1 0

I advance no other argument than the bare presentation of these facts: 17 out of 84 patients are well without any sign of a recurrence, at periods extending from three to six years, and 8 over five years since operation—an eloquent tribute to the success of the radical operation, which would still be justifiable if only a far smaller

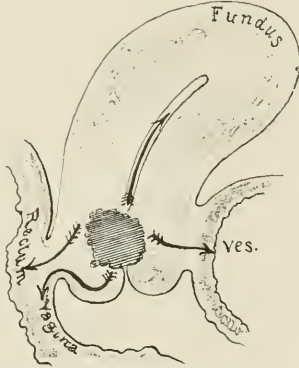


Fig. 2.—Shows the lines of possible progress of the disease in a sagittal section of the uterus forward into the bladder, down into the vagina, up into the body, and back into the rectum.

percentage of the number could be saved from a life of such dreadful suffering with its inevitable outcome.

Granted then that an operation is justifiable, what

Distasteful as my pertinacity on the next head may be to many who care nothing for cystoscopic work or its methods, I must insist on the supreme importance of catheterizing the ureters, as I have done in all these cases, in order to mark them out during the operation and to enable the operator to work boldly instead of timidly in the parametric tissue.

It is true that it is possible to distinguish the ureters without the bougies, during an abdominal operation, but it can not be done with the same facility, or indeed with any facility whatever; the operation is delayed and the ureter can not be pushed aside as it can when it is splinted by the bougie. In a vaginal operation the difficulties of recognizing the ureter are sometimes almost insurmountable if it is not catheterized. This plan, first put into practice by Pawlik, by slipping a bougie into the ureter through a director and through the water-distended bladder, has for the first time been generally practicable as a routine procedure by my aërocystoscopic method.

Further, the disease must be given a wide berth by ligating far out in the parametrium and, if necessary, dissecting out the ureters, and on the vaginal side by cutting far below the manifestly affected area.

I have now gone as far as I am able to go with assurance; if these principles are borne in mind any operative procedure whatever, which is based upon them, will give results vastly better than those we have secured hitherto. Clark's operation, so thorough in its wide dissection, must receive a most careful consideration.

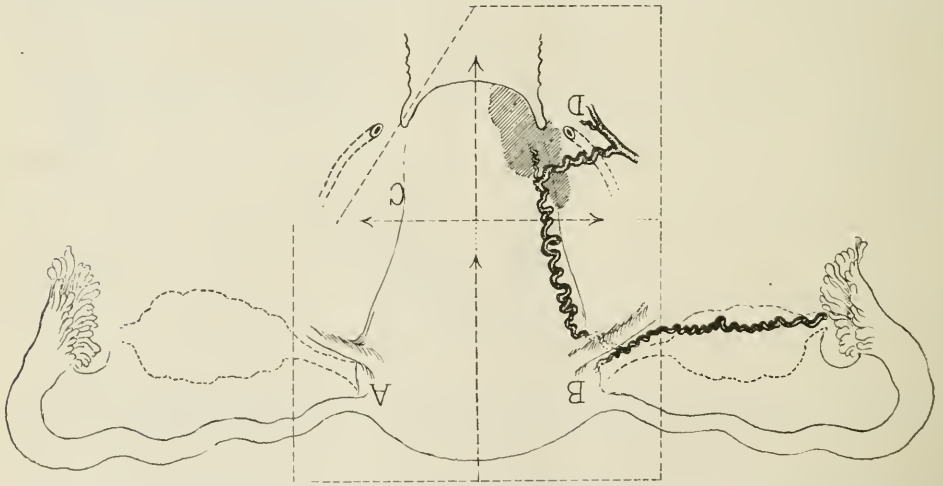


Fig. 3—Shows the method of extirpating the disease by quadrisection of the uterus. The uterus is first bisected vertically, and segments A and B are removed by cutting out into the broad ligaments, controlling the uterine vessels, the pulling them up in turn and catching the ovarian vessels, removing the entire uterine body in this way. Segment C is next removed, keeping the ureter under touch and giving the cervix a wide berth in tying out into the broad ligament. The real operation begins, however, with the removal of the last segment D. In the side of the infiltration of the broad ligament, and this is done with the sacrifice of all the tissue out to the pelvic wall, including the ureter if necessary.

particular form of operation gives us the best chance of success? Manifestly that procedure which, with the least immediate risk, enables us to give the diseased area the widest possible berth.

Let me then lay down the following dicta, which have been my guiding principles, for your consideration:

The old plan of skinning or shelling out the bare uterus is of all methods the most liable to be followed by a recurrence, and must be abandoned.

A large series of statistics must show us just how often glandular metastases are to be found in operable cases, then by comparing this fact with the increased risk to life from the more prolonged difficult abdominal operation, we will be in a position to decide whether the immediate danger incurred is or is not less than the risks of recurrence of the disease in the glands.

Having in mind the risks of inoculation of the cancer in the cellular tissues, X. O. Werder, of Pittsburg,

Pa., has devised an admirable operation which is at present being extensively tried by Dr. W. W. Russell, my associate professor of gynecology in the Johns Hopkins University. This consists in a combined abdominal and vaginal enucleation, opening the abdomen and ligating and freeing the uterus on all sides, together with the upper part of the vagina. The removal is then affected *via* the vagina, by simply pulling the cervix well down to the vulva and cutting through the vagina at the lower limit of its detachment. In this way there is the least possible contamination. I have tried this operation and am greatly impressed by it.

My most earnest efforts have, however, been turned in another direction, and I will close by briefly describing the operation which I have recently devised and practiced in the cases cited at the end of this paper.

There are two major steps in the procedure:

1. The removal of the tissue down to the side where the infiltration extends deepest.

2. The concentration of all the energies of the operator to the completest possible removal of this last segment.

The steps of the operation are these: Thorough

broad ligament and exposing in this way the uterine artery, which is clamped. The upper half, the body, is now grasped afresh on the cervical side and pulled upward until first the round ligament then the ovarian vessels come into view and are clamped, when this quadrant of the uterus is removed. The opposite quadrant, that is to say the other half of the uterine body, is next removed in the same way. The uterine vessels are now ligated, and the ovaries and tubes are removed after ligating the ovarian vessels near the pelvic brim. The side of the cervix least affected, and there is generally a marked difference, is now removed, carefully tying the vessels as they are exposed and keeping the finger constantly on the ureter.

The steps of the operation thus far described have as a rule been easily and rapidly carried out. Three-quarters of the uterus have been removed and the remaining quadrant, that side of the cervix where the infiltration is most marked, now remains to be extirpated also, completing the operation.

In reality so important is this last step that the operation—*sensu strictiori*—may at this point be looked upon as only having just begun. All the skill and dexterity of the operator must now be concentrated on the effort to

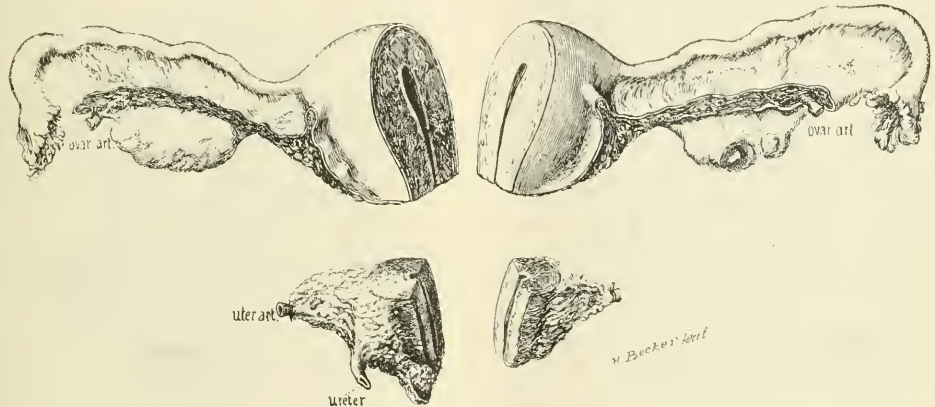


Fig. 4—Shows the four pieces of a cancerous uterus extirpated by quadrisection. On the right side a large section of the ureter has been removed with the cervix.

curettage with a serrated spoon curette, division of the vagina on all sides an inch below the diseased area; separation of the vagina from the bladder up to the vesico-uterine peritoneal fold, which is widely opened; a wide opening of the posterior cul-de-sac. The uterus, now hinged by its broad ligaments, is brought out through the anterior opening as in Martin's operation on the adnexa. This is easily done by pushing back the cervix and climbing up the anterior face of the uterus, step by step until the fundus is reached, with stout-toothed forceps. The peritoneum posteriorly is well protected by an abundant loose gauze pack. The next step is the sagittal bisection of the uterus from the fundus through the cervix and the attached vagina, with scalpel and scissors. As the uterus is cut in halves in this way, each median surface is grasped and held down by a strong-toothed forceps. One half, the most affected, is now allowed to retract into the vagina, while half of the body of the uterus of the other side is removed by bisecting it horizontally at the cervical junction, cutting from the median cut surface out into the

secure the most thorough, wide extirpation of the remaining nodule. In order to meet this supreme indication and to fight the disease in the only stronghold where its invasion has given it a firm hold on the tissues, the extirpation of the three portions of the uterus, that is to say, the entire body and half the cervix, has afforded a maximum space, while the bisection allows the remaining mass to be rotated downward and outward within easier reach.

It is a question with me whether ligature or cautery offers the best chance to go deepest into the tissues in meeting this supreme indication. The ureter will as a rule be bared, and if it is clearly involved in the disease it should be sacrificed without compunction, cut off and reanastomosed into the base of the bladder farther back. The operation may then proceed just as if the ureter did not exist, and the enucleation may be extended all the way out to the pelvic wall. It is my practice, after the completion of the enucleation, to close the wound in the middle and draw down both sides. In simpler cases I close the peritoneum without a drain.

The following cases have been operated on in this way:

CASES TREATED BY QUADRISECTION OF THE UTERUS.

		Gyn.	No.
F. J.,	Nov. 7, 1899,		7351
S. S.,	Nov. 14, 1899,		7370
E. J.,	Nov. 14, 1899,		7371
S. T.,	Nov. 18, 1899,		7384
E. M.,	Nov. 29, 1899,		7405
K. H.,	Nov. 30, 1899,		7411
M. J.,	Dec. 21, 1899,		7428
M. H.,	Jan. 10, 1900,		7495
I. B.,	Feb. 24, 1900,		7582
C. H.,	Mch. 28, 1900,		7674
M. W.,	Apr. 2, 1900,		7564

All recovered.

I have frankly and without reservation put before you all my own work and my own thoughts on this subject, and I shall be abundantly rewarded if I succeed in inducing some of those present to express their views and throw some light from their large experiences on what is still one of the darkest chapters in surgery.

1414-1418 Eutaw Place.

DISCUSSION.

DR. HENRY C. COE said that he had met with much disappointment when doing the old operation of skinning out the uterus. He believes the radical operation of the future will be an abdominal hysterectomy, as this is the most scientific cutting operation known to-day. The great difficulty is to decide, at the time of operation, between simple inflammatory tissue, and that the seat of malignant degeneration. Dr. Byrne's method of treatment by the application of the electrocautery seemed thoroughly rational, and more than this, is supported by a series of brilliant results achieved by Dr. Byrne himself. Regarding the mode of extension, he does not feel sure that cancer of the uterus always extends by continuity. For example, when the radical removal of a small circumscribed malignant adenoma by abdominal hysterectomy is quickly followed by recurrence in the scar, the explanation, on that basis, is difficult.

DR. EGBERT H. GRANDIN spoke of his personal experience with cancer of the uterus. Although that with the diseases of women has been large, he has seen comparatively few cases of carcinoma uteri—only 48. In 30 of these the bladder, rectum and broad ligaments were involved, and he did not feel justified in resorting to a major operation; he is disposed to believe that, in these advanced cases, the less done the better. Of the 48 cases, 18 were suitable for operation. For carcinoma of the body, total hysterectomy has been the operation of election, and was done in 12. He has been able to trace 7 of these, and has found them free from recurrence. The longest time since operation in these is six years. Vaginal hysterectomy was done on 6 patients in whom the portio vaginalis was implicated, and of the 4 he has been able to follow up, only 1 has remained free from recurrence. Vaginal hysterectomy, whether by clamp or ligature, should be rejected in cases of cancer of the uterus, because more thorough work can be done by the abdominal route. The method of the future will probably be a combination of knife and cautery.

DR. WILLIAM R. PRYOR expressed himself as opposed to the vaginal operation for these cases, nor does he look favorably on Dr. Kelly's method of doing morcellment by the vaginal route in cases of cancer of the cervix. Vaginal hysterectomy is little better than a palliative operation, yet it is attended by a mortality of from 5 to 10 per cent. His preference is for abdominal hysterectomy, and hemostasis by the ligation of the internal iliac arteries.

DR. P. H. INGALLS, of Hartford, Conn., said that most of the cases coming to him were far advanced. A partial operation, as with the cautery, seems to him to rather aggravate than alleviate the condition. Operations for cancer of the body have done better in his hands than those for cancer of the cervix.

(To be continued.)

CLEFT PALATE.

A NEW URANO-STAPHYLORRHAPHY.

BY ALEXANDER HUGH FERGUSON, M.D.

Professor of Surgery, Chicago Post-Graduate Medical School;
Surgeon-in-Chief, Chicago Hospital.
CHICAGO.

STAPHYLORRHAPHY.

In 1764 a French dentist, named Le Monier, proposed for the first time to close the cleft in the soft palate by paring the edges and stitching them together, which was successfully carried out by the elder Roux of Paris in 1819. In 1820, Warren of Boston, and independently of Roux, brought before the profession a similar but somewhat better operation, which he had successfully performed. So closely do the two resemble each other in principle and technique that it might well be called the Roux-Warren staphylorrhaphy. This operation was followed by the best surgeons of that time, for about a quarter of a century by such men as Stevens of New York, Mettauer of Virginia, Wells of South Carolina,



Fig. 1.—Mouth Gag.

Gibson of Philadelphia, Hossack, the younger Warren, Mütter, and Pancoast in this country. Among the surgeons abroad who performed this operation may be mentioned Graefe, Dieffenbach, Sédillot, Liston, Fergusson and Polloch. Fifty-six years ago Sir William Fergusson of London made the first marked improvement on the simple vivification and suture operation. He recognized that the tension on the ligatures was a great cause of failure, and decided that this tension was due to the contraction of the levator palati, palatopharyngei and palatoglossi muscles. To relieve this tension he divided these on either side. He devised a hoe-shaped knife, with which he severed the levator palati muscles by passing it behind the soft palate and cutting from behind forward. In this connection Fergusson was the first to make careful dissections of cleft palates on cadavers. The excellent results obtained by him were also secured by other surgeons who had followed him. His operation super-

seded the Roux-Warren one for several years. The next improvement recorded was in 1860, by Dr. Agnew, of Philadelphia, who pointed out that the tension of the soft palate is in a measure dependent on the contraction of the tensor palati muscles, and these he cut by making an anterior incision close to the hamular process of the sphenoid bone, and thereby obtained marked relaxation. About the same time Dr. Polloch of London carried out a similar procedure. From the case with which the anterior incision could be made and the fact that it cut the lowermost fibers of the levator palati muscles as well, it soon became a favorite. With the exception of a flap-splitting of the soft palate, carried out by many surgeons, nothing new appeared on this subject until Dr. T. W. Brophy, of Chicago, introduced the application of lead plates to the soft palate, which bear the strain of the sutures, thus preventing muscular contractility and tension. He finds it unnecessary to cut the muscles on either side, and maintains that it is harmful to sever them.

URANOPLASTY.

Staphylorrhaphy was an established procedure in surgery before the closure of the cleft in the hard palate was attempted. Before fifty-seven years ago obturators were freely used. Dr. J. Mason Warren, of Boston, in 1843,

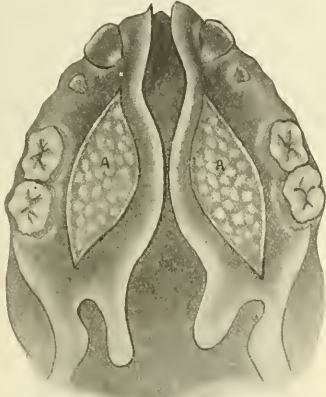


Fig. 2.—Crowding procedure for a wide cleft. A, A, gauze crowding the muco periosteal flaps toward the center.

published his method, which consisted in paring away the mucous membrane of each side, raising the flaps of mucous membrane from the bones and suturing them together. Langenbeck effected an improvement by raising the periosteum with the flaps and by making two lateral incisions, one along each alveolar process. In 1873 Sir William Fergusson came on the scene again with his ingenious osteotomy of the hard palate in its entirety, paring the edges of the segments of both hard and soft palate, and brought them together at one sitting, thus completing his urano-staphylorrhaphy. Mason, in 1874, suggested some slight improvements in Fergusson's operation. Garretson of Philadelphia applied to the jaws a horseshoe-shaped clamp, and with it forced the jaws together by means of a screw similar to that of Hainsby. Billroth frequently crushed the hamular processes together, and Wolff utilizes the alveolar processes to close the cleft. Lannelongue constructed a flap, in unilateral cases, from the mucous membrane of the contiguous surface of the nasal septum.

The Davies-Colley method I have performed a good

many times, and like it very much. The cleft is bridged across by means of two flaps. One flap is raised laterally, its outer border being free, while it is left attached at the margin of the cleft. It is then turned upward into the cleft, its mucous surface looking toward the nasal cavity. The flap on the other side is raised like a tongue, its anterior end being free, and is brought across to the opposite side underneath the first flap, raw surface to raw surface, and there fastened with a few sutures. It is an excellent plastic operation.

Brophy's Method (Park's Surgery).—This consists in forcing the two superior maxillæ together with stout silver wire fastened to a lead plate, one placed on the outside of each alveolar process. The approximation is effected by twisting the wire over one of the lead plates. The usual vivification of the segments is made, and sutures applied in the ordinary manner. In infants this operation is feasible. Its author claims but little shock, and excellent results. C. B. Porter, when patients have teeth, uses a vulcanite plate in the mouth to protect the soft palate (Warren-Gould's Surgery, Vol. ii,

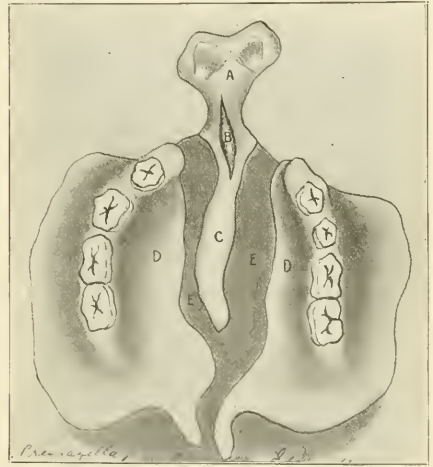


Fig. 3.—Os incisivum. A, premaxilla; b, incision to the bone; c, ethmo-vomerine septum.

p. 26). Fillebrown makes an incision along the alveolar processes, raises two muco-periosteal flaps, turns them toward the center of the cleft, and there fastens them together with mattress sutures of silver wire, the edges being vivified and sutured with fine silk.

Instruments.—The only new instrument I wish to present is a mouth-gag (Fig. 1), which I devised and find suitable for all cases. It is small, strong, opens widely, is easily inserted into the mouth, quickly closes, does not strike against the shoulder and lies close to the cheek.

Preparation of Patient.—Adenoids, enlarged tonsils, nasal catarrh, bronchitis, malnutrition, etc., should be treated first. The child should be in the best attainable condition locally and constitutionally before an operation is advised. The day before the operation a dose of castor-oil and a few doses of strychnia should be administered. Irritating the mouth with antiseptic lotions for several days previously is contraindicated.

Age.—In my opinion, all operative procedures on harelip and cleft palate should be completed before the

child begins to talk. The earlier the congenital deformity of the palate is rectified, the less defective will be the speech. In infants a few weeks old the mouth is small, the tissues are friable, and there is a tendency for the flaps to slough. Should the cleft be wider than half an inch, the complete closure of it is not undertaken at the first sitting, but one or more crowding operations can be done to lessen it. (Fig. II.) In this case Langenbeck incisions are made, and iodoform gauze firmly packed into the wounds and beneath the muco-periosteal flaps in such a manner as to crowd them toward the center until they touch. When this is properly done the gauze will remain in place for a week or more. It is not removed until it begins to loosen, after which a second packing may be inserted, but usually this is not necessary, for the new granulation tissue is sufficient to hold the soft structures in their altered positions. Three or four weeks should now elapse before operating again. The palate bones are allowed to become covered over with firm fibrous tissue segments. The crowding operation is most suitable in a class of cases otherwise very difficult to treat, that is, when the segments are horizon-

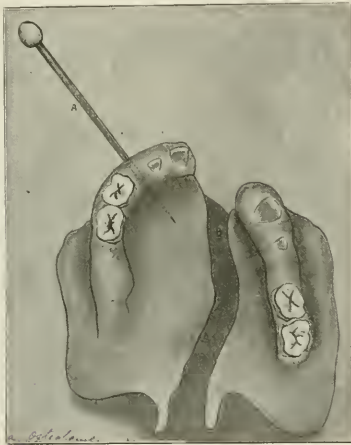


Fig. 4.—Supra-maxillary osteotomy. A. osteotome; b. cleft on one side.

tal, and the roof is like a Norman rather than a Gothic arch. The flaps in this class of cases are shorter, and by the older methods great traction is employed to bring the pared edges in apposition, hence the frequent cause of failure. When the bony edge of each segment is not well covered by mucous membrane, even though the cleft is narrow, a crowding operation is done as preparatory to the final closure of the cleft in order to obtain flaps sufficiently thick and well nourished to insure success. The more vertical the slope of the palatal segments, the more favorable the case is for operation by old methods.

Os Incisivum and Harelip.—The os incisivum, also called the premaxilla and intermaxilla, protrudes in the center in double harelip, and in single it often protrudes to one side, where it is attached, thus raising the nostril on that side far above the level of its fellow. This deformity has been dealt with in various ways. When met with in infants it is my practice to deal with it before operating on the cleft palate, but in older cases nothing is gained thereby, and then I repair the palate first. When possible, the intermaxillary bone is preserved. A V-

shaped section is removed from the vomer subperiosteally (Fig. III), through a longitudinal incision, the bone nicely fitted in between the superior maxilla, and held there by means of a strong silver wire, taking care to pare off the edges on each side so as to obtain bony union if possible. If, however, the harelip operation is



Fig. 5.—Position of surgeon and patient.

done early, it may not be necessary to perform any operation on the vomer, for in some cases it will be found that the os incisivum has receded to nearly its normal position. When the deformity is one-sided, it is easier to lower one nostril than to raise the other. This is done



Fig. 6.—First step.—A, A flaps hinged by the mucus membrane on the nasal aspect.

by making a supramaxillary osteotomy, as represented in Fig. IV. Here, too, when the harelip is closed in the infant, the deformity is greatly improved and the osteotomy may be obviated. In the development of the child the union of these bones naturally takes place from before backward, so that by repairing the harelip and wait-

ing a few months the alveolar cleft is very much lessened.

Ethmoverine Septum.—The ethmoverine septum is frequently very deficient or entirely absent. When present it materially facilitates the execution of plastic work in the roof of the mouth, by utilizing its mucous membrane.



Fig. 7.—Second step.—A, A, flaps coapted by three sutures and fourth one being inserted.

A NEW URANO-STAPHYLORRHAPHY.

The operation which I now wish to describe has been carefully studied and practically developed. It was done on fifty-three patients, extending over a period of eleven years. In 1889 I successfully performed it on three sisters. In one the defect extended through the soft palate alone, and in the other two the hard palate was involved, but not the alveolar process. Since then I have managed to prepare my patients so that finally in nearly all of them I could perform my operation, resorting to the crowding operation to this end.



Fig. 8.—Third step.—a, a, flaps inserted into nostril; B, last stitch of first row; C, C, C, second row of sutures being inserted.

Wrap the child in a sterile sheet with its arms extended along its sides; fasten a towel wrung out of a bichlorid solution around the head, or put on a rubber cap; place it on a table with a headpiece that can be raised or lowered; administer chloroform drop by drop; mop its face, mouth and throat with equal parts of alcohol and water; with a 4 per cent. cocain solution on cotton, touch the palate and pharynx; if secretion is profuse, give a hypodermic of atropia, the dose to suit

the age of the patient; insert the mouth-gag; sit at the end of the operating-table, with the patient's head well thrown back (Fig. V), and you are ready for work.

The anesthetizer has a difficult task to keep the patient well under the influence of the chloroform, and also allow the surgeon sufficient time to work. It necessitates a wide range of the degree of narcosis, thus coming to and going under alternately, but this fluctuation in the administration of the chloroform is much safer than keeping the patient constantly in a state of surgical anesthesia by spraying the chloroform through a nostril.

OPERATION.

1. *Making the Flaps.*—With a slender, slightly curved, narrow-bladed knife, cut through the mucous membrane of the mouth about one-sixteenth inch from the edge of each segment, and divide all the soft structures to the mucous membrane on the nasal aspect of the palate, but not through it. (Fig. VI.)

2. *First Row of Sutures.*—With a small, round, fully curved needle, not larger than one-half inch between the eye and the point, held in a suitable needle-holder, and threaded with fine silk, closely insert inter-

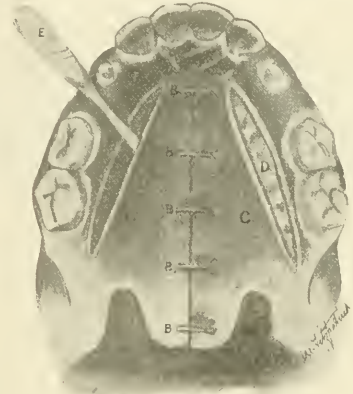


Fig. 9.—Fourth step.—B, B, B, B, etc., second row of sutures tied; C, C, muco-periosteal flaps; D, gauze packing; E, periosteal elevator; (a), the flaps and first row of sutures are no longer to be seen.

rupted sutures by passing the needle through the free borders of the flaps from the mucous surface to the raw, and from the raw to the mucous surface, and tie them as you proceed from before backward, all the knots being situated on the nasal side. (Fig. VII.)

3. *Second Row of Sutures.*—Take the same needle and needle-holder and complete a row of interrupted stitches of horsehair on the buccal surface of the palate from the tip of the uvula forward, and tie them where apposition is possible without tension. The soft structures of the hard palate can not usually be brought together until the next step of the operation is taken. (Fig. VIII.)

4. *Muco-Periosteal Flaps.*—Place the forefinger of the left hand on the hamular process; take a short, strong, slightly curved, narrow-bladed knife, and make a curvilinear incision on one side, beginning just behind the hamular process, cutting down to the bone and extending forward along the alveolar process, as far as desired; prevent hemorrhage by pressure with the finger and gauze; rapidly raise the muco-periosteal flap, with a strong periosteal elevator, from the segments of the hard palate, and immediately pack the wound firmly

with iodoform gauze. Repeat this performance on the opposite side, and tie the horsehair stitches not already secured. The soft structures of the hard and soft palate are beautifully held in apposition without tension on the stitches. (Fig. IX.)

In packing the iodoform gauze in the wounds, fixation points are obtained by forcing some of it into the bone, also between the teeth and under the mucous membrane. If this is properly carried out, the gauze will remain in place for a week, and sometimes longer. It is removed when it becomes loosened, by which time it has generally fulfilled its usefulness. A second and occasionally a third packing may have to be inserted.

It will be observed that this is not a flap-splitting but a flap-formation operation, the flaps carrying with them two narrow strips of the firm, strong, buccal mucous membrane of the palate, which holds sutures securely, and when they are turned upward and held in coaptation by means of the first row of sutures they form an ideal protecting roof to the raw surfaces beneath them, and afford twice the width of denuded tissues for apposition, and the nasal mucopurulent discharge is shed off to either side. (Fig. X.)

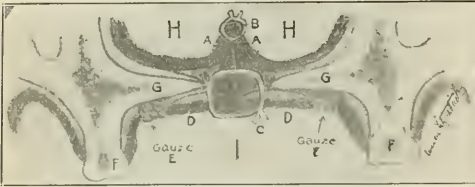


Fig. 10.—Supposed transverse section when operation is finished. A, A, flaps made and turned into nostril; B, first row of sutures; C, second row of sutures; D, muco-periosteal flaps coapted by C; E, E, gauze; F, F, Garth; G, G, Segments of bone (palate); H, H, nasal cavities; I, mouth.

After-Treatment.—Every two or three hours the mouth is to be cleansed with a feeble antiseptic solution, such as boric acid, etc. The child readily takes to whisky and water, which is given after taking nourishment, to wash the liquid food off the area operated on. Nutrient enemata are to be administered if deemed necessary, and the stitches removed not earlier than the twelfth day. If the patient cries much, we should keep it quiet with an opiate. A special nurse, experienced in caring for cases of this nature, should be employed.

Cases Suitable for the Operation.—1. The cleft in the hard palate must not be wider than half an inch, but if it is, a preparatory crowding operation is done first. 2. The mucous membrane covering the inner edge of each bony segment should be thick and well nourished; if not, the crowding operation is resorted to primarily. 3. It is suitable for all clefts in the soft palate.

Commendable Features.—1. The results are vastly better than I have been able to obtain by any other method. I have had only one primary failure. 2. No tissue is removed. 3. Very broad raw surfaces are coapted. 4. The danger from sepsis is minimized by turning the flaps upward, as described.

Disadvantage.—It is more difficult to perform.

ONE OF the features of the Paris daily, the *Figaro*, is a column each week devoted to a summary of the leading articles in the principal medical journals. It is written over a pseudonym by M. de Fleury, a well-known physician and contributor to medical literature, and presents, in popular style, the latest medical achievements.

A CASE OF HYSTERICAL HIP-JOINT.

BY JOHN LINCOLN PORTER, M.D.

Instructor of Orthopedic Surgery, College of Physicians and Surgeons. CHICAGO.

Miss E. H., a schoolgirl, 11 years old, came under observation Jan. 24, 1898, with the following history: She had had measles, chicken-pox and whooping-cough in childhood, and scarlet fever three years before I saw her. After this she had severe headaches, pain in the upper dorsal region and "trouble with her stomach." The gastric disturbance consisted of attacks or crises, occurring at quite regular intervals of about a month, with headache, eructations, sometimes vomiting, and pain of an intermittent character in the abdomen; and



FIGURE 1.

with this was extreme nervousness amounting at times to nervous storms. These attacks lasted for two or three days, and rapidly passed off, leaving the patient in good health. She had never menstruated. In September, 1897, she began to complain of pain in the right hip, and these pains recurred, with intervals of perfect comfort, for six months; then a slight limp developed, which had been gradually getting worse, though she had been up and about as usual all the time.

Family History.—There was no history of tuberculosis, syphilis or insanity in either branch of the family as far back as, and including, the grandparents. Both parents were living, also five other children, all of whom were in apparent good health. The mother and her four sisters were all of very nervous temperament and subject to severe headaches.

Condition on Examination.—The patient was a red-haired, blond girl of fairly good development for a girl of 11 years, and apparently anemic. She had large, full eyes, with a restless expression, was alert and quick-motivated, looked at every one and all approaches with suspicion, and clung to her mother in a timid manner. She would not talk, but answered direct questions with a shake or nod of her head. Her standing position and gait at once attracted attention (Figs. 1 and 2), for she stood with the right thigh flexed and rotated outward, and only the toes touching the floor. In walking the same position was maintained, the weight being carried on the toes, but the flexion increased each time the weight was borne by the right leg. On inspection, the affected hip and leg seemed perfectly normal, there be-

ing no swelling. The length of the two legs was the same, but the circumference of the right thigh was one-half inch greater than that of the left one. The latter was easily flexed, rotated and put through the normal motions, but as soon as any motion was attempted in the affected leg a resistance was felt. This resistance was vibratory in character and corresponded exactly to the amount of force exerted by the examiner; for if the leg was forcibly flexed and suddenly released it assumed extension without any evidence of pain. Fig. 3 shows the amount of flexion secured after repeated examinations, through coaxing the patient to help and using a little force. If the forcible flexion was continued until all resistance was overcome, the thigh went up into normal flexion on the trunk and could be rotated freely. Though she covered her face with her arms and cried a little, she did not shed tears or give indications of pain.

Dr. Ridlon and myself have forcibly flexed the thigh on the pelvis several times, and if flexion was maintained until she found that resistance was useless, it ceased. No acute symptoms whatever followed the forcible manipulations. Fig. 4 shows the affected leg completely extended in Thomas' position. The foregoing examinations, together with the absence of any objective indication of intra- or para-articular disease, such as swelling, thickening of the tissues or local elevation of temperature, gave the findings on which a diagnosis of hysterical hip-joint was made.

In discussing the differentiation and the later developments that proved the diagnosis, I shall consider only tubercular hip disease and hysterical hip. The chronic nature of the case, persisting for more than a year, with no history of injury, or of any acute inflammatory symptoms, will exclude traumatism or acute infectious arthritis. The measurements, the symmetry of the two hips and the gait exclude coxa vara. In making a differential diagnosis we must consider chiefly the etiology, symptomatology and, in certain cases, the result of treatment. The symptoms have been brought out in the foregoing examination, and as to etiology, the absence of any tubercular predisposition, inherited or acquired, such as is found in a large percentage of tubercular joint cases, and also the lack of any traumatism, must be noted. But on the other hand, she is a young girl of marked neurotic temperament, as evinced by her every action: and where there is added to this a family history which is decidedly of this type, we have a combination that more than suggests a strong neuropathic



FIGURE 2.

element. I have been unable to make any satisfactory examination for anesthetic areas in her, she would not keep her eyes closed a moment, and when blindfolded, the nervous tension and lack of control was so great that she was twisting and writhing about continually, and no definite information could be obtained, but her whole behavior was such that this element was clearly shown. In a tubercular joint where the disease has not progressed far enough to produce any fullness, thickening, or other objective signs about the joint, some passive motion is usually possible and often quite free in some direction, and the resistance which is encountered is a muscular rigidity, that is peculiar and is felt suddenly when the limit of painless motion is reached, but here there is no true rigidity, only a resistance of a vibratory character, to all passive motions, that corresponds in power exactly to the force exerted by the examiner. In true hip disease the limp often appears before any pain is felt, while here the pain, of an intermittent type, was noticed six months before the limp. Then, too, the limp in early hip disease is due to incomplete extension of the thigh on the pelvis as the body is carried forward, and the patient walks on the sole of the foot; while in this case, the patient stands with the leg flexed and abducted with only the toes on the floor, and limps because the leg is shortened by the flexion. Furthermore, I believe no hip disease ever progresses to a flexion deformity of 40 degrees without some abnormality being evident about the joint. When asked if she had any pain, she nodded and put her hand on the anterior outer surface of the thigh and calf, the very places where muscular fatigue would be felt from constantly maintaining the flexed position and constrained gait. In 90 per cent. of cases of early hip disease the pain is either in the joint or referred to the inner surface of the knee. Firm pressure over the trochanter, driving the head of the femur into the acetabulum, produced no pain in this case, as it usually does in hip disease.

Atrophy of the thigh and calf muscles, which is always an early accompaniment of hip disease, was not only lacking, but, as noticed above, the circumference of the affected thigh was one-half inch greater than that of the other. This was confirmed by measurements made by others at different times.

The above differences would be sufficient to exclude hip disease, but out of curiosity I tried the following trick maneuvers: with the patient standing, I asked her to flex the affected thigh so as to lift the toes off the floor; she made a few feeble attempts, lifted the knee an inch or so, and stopped. Then I asked her to sit on the table, and she did so with the thighs flexed to a right angle without any apparent discomfort, and perfectly unconscious of the significance of the change of position. Again, with her lying supine on the table, and maintaining the constant slight flexion of the thigh, I made an effort to slowly increase the flexion, asking her to help by bringing the leg up, but she resisted and whimpered and said she could not. I at once asked her to sit up, and she did so easily, with her legs straight and before her, thus producing a voluntary flexion of nearly 100 degrees. Then I put my pencil just beyond her heel and asked her to pick it up, and she did so quickly and easily, thus bringing the thigh into complete flexion against the chest.

Another incident shows the inconsistency of these cases. Convinced that the attitude was not due to true joint disease, I tried in every way to get the patient to put the entire sole of the foot on the floor when walking,

thinking that the additional comfort thus obtained would gradually result in abolishing the flexion at the thigh, but although motion at the ankle-joint was perfectly free when she was sitting or lying down, she could not be induced to flex the ankle enough to bring the heel down on the floor when standing. Out of curiosity, I put a plaster cast on the leg from ankle to groin, at the

me again, the foot and leg were still held in the same position. As the cast was somewhat broken, I removed it, and the original flexion at the hip and knee immediately reappeared, and, just as quickly, the rigidity and inversion at the ankle disappeared.

As a final test in my examination of the patient, I took occasion to see her when she was asleep. In a



FIGURE 3.

same time correcting the flexion at the knee, knowing that with the latter extended she would either have to extend the thigh normally or flex the foot, as she could not walk on the tips of her toes with the thigh flexed. The cast was applied while she was lying on the table, and she took an active interest in the proceeding, not knowing why it was done. When she was allowed to get

diseased joint, the muscular rigidity and spasm persist during sleep and are only abolished by deep anesthesia, but when I reached her bedside she was lying on her side, soundly asleep, with both knees drawn up to perhaps 80 or 90 degrees. While I was estimating the amount of flexion, she turned on her face, and straightened both legs out into complete extension. Her mother



FIGURE 4.

off the table she stood momentarily on the entire sole of her foot, and her surprise, when she could not bend the knee, was almost ludicrous. She said she could not walk, but when told that she would have to wear the cast home, finally left the room, pushing the stiffened leg before her with the toes kept persistently on the floor and the ankle rigid. I realized that she would probably discover that by tilting the pelvis and straightening the thigh she could walk on her toes; and when she came back a week later that was the attitude, except that the flexion at the thigh was not entirely abolished, and the foot was inverted, making her walk on the outside of the foot and toes. She would not voluntarily correct the position of the foot, and attempts to do so passively elicited the same kind of resistance that had been found at the hip. Later she was noticed standing on the sole of the foot, her attention being diverted to something else. During the next week she passed through one of her gastrointestinal attacks, and, when she returned to

then turned her on her back, and I began making passive motion with the affected leg, finding rotation free. Here she woke up and, seeing me standing by the bed, hid her face in the pillow and went through all sorts of restless movements, drawing her knees nearly up to her chin, and then extending the legs out to their fullest extent, manifesting no difference whatever between the two extremities. I did not see her again for several months; and when I did, December, 1898, some flexion and limp still persisted, but in April, 1899, her mother brought her to me to show how perfectly she had recovered; then gait and position were normal, and about the leg or hip there was no indication of any previous trouble whatever. Her mother remarked that she had taken nothing but the medicine I had first prescribed, which was a bitter tonic—I think tinctura nux vomice and tinctura cinchona comp.—that I had given the first time I saw her, with the positive assurance that she would get well.

EUSTACHIAN CATHETERIZATION.*

BY STEPHEN OLIN RICHEY, M.D.

WASHINGTON, D.C.

To quote Politzer, "Most emphatically, it frequently happens that catheterism of the tube, as a diagnostic and therapeutic agent; can not be replaced by any other method." Gruber calls it "an indispensable aid to both the diagnosis and treatment of many aural affections." In agreement with these veteran otologists, I think, of the many methods of reaching and influencing diseases of the middle ear, which form the vast majority of those for which the aurist^t is consulted, that no one is so important as, or has the precision and efficiency of, the catheter. This is so true, though not generally accepted, that I venture to suggest that no man should claim to do the best character of aural work unless he possesses skill and dexterity in its use; the skill to enter the Eustachian orifice with reasonable promptness, fully appreciating the effect he is producing with and through it on the middle ear and the contiguous tissues; the dexterity to do this without harm and with comparative freedom from pain, as the performance appears formidable to the patient, and lacks no element of an operation save the destruction of tissue.

In proportion as it is the more difficult to the surgeon than the Politzer and Valsalvan methods of *inflation*, is it the more precise, conservative and effective. The Politzer and Valsalvan methods, like the use of Eustachian bougies, have always seemed to me a kind of veterinary surgery; unscientific, and worthy only of indolence and incompetency. They are replete with possibilities of unavoidable mischief, though Politzerizing in modified form is justifiable with some children, in some conditions; but its explosive effects are alarming even to adults. The Valsalvan method can fortunately rarely be practiced by children, and should never be a resort, except in the presence of the surgeon, and while he is removing secretion from the middle ear through a perforated drum membrane.

In neither method can the effect be addressed to one ear alone; each method selects the ear least affected, and air with unmeasured force passes in the direction of least resistance. The effect of each is chiefly mechanical, exerting no therapeutic influence beyond temporarily overcoming a tubal stenosis, and proportionately temporarily relieving local venous stasis, *if the air does pass through the tube*.

That the force of Politzerization is often unknown is illustrated by the experience of an aurist, related by him to me some years ago. In his attempt, by this means, to free a stenosed tube, the drum membrane of the unaffected ear was ruptured.

The frequent repetition of either method in chronic non-suppurative inflammation of the middle ear often results in a flapping drum membrane, with vertigo when air enters the cavity during the act of blowing the nose, and sometimes with that of swallowing.

In cases of acute middle-ear inflammation these means may clear the tube of secretions trying to find their way into the pharynx, but only by driving them in the direction from which they have come; fortunate if they stop in the cavity, though the risk is great that, loaded with germs, they may be propelled into the antrum to cause disturbance there which might have been avoided. Neither method contributes anything to antisepsis of such secretion, thus started on its way to

the mastoid spaces, into which other applications of the same kind may drive them, and thus excite a mastoiditis. It would seem that this must happen more frequently than formerly, judged by the increasing number of mastoid trephinations deemed necessary, and for which it is not pleasant to think the aurist may in any degree be responsible.

In reading the reports of cases of mastoid involvement as a sequel to otitis media acuta, I have received the impression that often the extension of the malady would not have occurred except for the mediation of this form of inflation. Mastoid complication from acute middle inflammation, even when symptoms of invasion of the antrum existed, has occurred but once in my work; and I have not had a mastoid trouble from chronic suppuration of the middle ear, unless it existed when the case came under my care. My fortune in this respect has been so great that it is not easy to find a reason for such experience unless in the methods of treatment adopted. It varies so much from that of most writers, that I do not find occasion to perform the excisions and trephinations so common now.

I *always* use the catheter in affections of the middle ear, acute or chronic, and have never seen anything but good result from it, and think the danger of introducing germs from the pharynx into the middle ear by means of the catheter, properly used, to be purely visionary. This claim has been made, but I have never seen an instance of it, and do not fear it. It might be done, but with proper precaution it is avoided. The catheter must be sterilized before introduction, and an astringent and antiseptic solution must be blown gently through it into the tube, not necessarily into the cavity the first time; indeed, generally better not. The solution dilutes the secretion it reaches, favoring its more ready escape; it more or less destroys the germs; its astringency increases the caliber of the tube, acting antiphlogistically. At the next sitting the solution may be carried farther up the tube, or into the cavity. If the drum membrane is perforated the solution may be permitted to reach the cavity at the first interview, and it will act in an equally benevolent way there. The dilution and antisepsis of the secretions, *gently done*, is the important feature.

Another purpose served by the catheter, and a wise one, is the *withdrawal* of the secretion from the tube by suction. I have, at times, removed the catheter half-full, with less once or twice more; relieving tension and pain, thus making space and more safety for the solution to follow, and sometimes aborting acute trouble, and avoiding paracentesis.

However, it is the extension of the malady beyond the middle ear which is most important, and my experience coincides with that of Dr. Burnett, of Philadelphia, who says that he "has never seen a case of acute mastoiditis following acute otitis media in which he has had charge of the treatment from the beginning." Such cases may be due either to neglect, or overtreatment; in my judgment chiefly to the practice of the Politzer method.

A number of times I have heard comments by foreign otologists upon the seeming independence of the Eustachian catheter in this country, especially in chronic suppuration.

In stenosis of the Eustachian tube, not due to adhesion, patency of the tube has been secured by means of the catheter, in my experience, without exception, and naturally a resort to bougies seems bungling. Think of a bougie retained in this region for half an hour! Yet this has been advised.

*Read before the Medical Society of the District of Columbia, March 14, 1890.

The catheters I use are made of malleable silver, to facilitate ready adjustment of the curve of the tip to the variation in size of different nares and pharyngeal spaces. A different adjustment is often necessary for the two sides of the same person. The best sizes of the catheters are given in the text-books.

The substitution of a local anesthesia soft rubber bulb for the unwieldy Politzer bag, by requiring but one hand for its manipulation, is an advantage. By the resistance of the bulb to the hand some appreciation of the force being used and of the character of the obstruction may be gained, and the volume of air carried in may be approximated, as is not possible with a large bag.

Clamp and headband are worse than useless, like much other awkward trumpery that has been devised for use in this region. The "modified" catheter is either an attempt to compensate for the possession of thumbs for fingers, or, like the modified pessary, it is designed to record a claim to cheap glory.

ABDOMINAL SURGERY.

FIVE INTERESTING CASES: PANCREATIC CYST; HEPATIC CALCULI; FECAL FISTULAE; COMBINED APPENDECTOMY AND NEPHRORHAPHY.

BY FLOYD WILLCOX MCRAE, M.D.

ATLANTA, GA.

CASE 1.—W. R. Britt, Columbus, Ga., white, male, aged 60 years, farmer, married, was admitted July 17, 1899. His father died, he believes, of some growth in the abdomen. His mother, brothers and sisters are healthy. Sixteen years before, while in Florida, he had chills and fever for a year. About thirty years before, he was taken with sudden, excruciating pain in left lumbar and iliac regions, which persisted three or four hours, i. e., till after the application of mustard plaster. He passed bloody urine at that time. He had similar attacks four to five times a year for the next twenty years, diagnosed renal calculi.

When having an attack he has a constant desire to urinate, but voids only very small amounts. The left side always remained tender. Fifteen or twenty years ago, stepping on the hub of a wagon wheel, he struck his left side on the rim of the wheel, causing severe pain for about an hour. For the last twenty years, on considerable exertion and getting warm, as in ploughing, he has become completely exhausted, weak and nervous. During the past few years he has had a burning sensation in the upper part of the abdomen, and could not eat as much as formerly because of a sensation of fulness; no vomiting, but occasional pyrosis. No abnormal appetite nor dislike for food was present, but he has always had a tendency to constipation, and for the past year or two this has been worse, the bowels seldom moving without a cathartic. There has been no diarrhea since 1860.

When in the hospital, two years ago, he became aware that something was wrong in his abdomen, by the sensation of a moving and contraction of the bowels. Two months before admission, he noticed a mass about the size of his hand, just below the right ribs, and about the median line, above the umbilicus. He had no pain, but an uneasy feeling in the abdomen, and lost seven to eight pounds in the last four or five weeks.

After some medication, six weeks before, he had a good appetite, but food seemed to do him little good. There was a large, hard mass in the left middle abdominal region, firmly fixed, of a slight cystic feel. Diagnosis was in doubt, but malignant disease suspected, and an unfavorable prognosis given.

An exploratory incision was decided on and done the day after admission, July 18, at 9 a.m. A large cyst of the pancreas was revealed on going into the abdomen, the trocar introduced and about three pints of oily, straw-colored fluid obtained. The cyst was firmly adherent to the concavity of the spleen, which latter was slightly enlarged and displaced downward, and formed the left boundary of the tumor, thus greatly enhancing the difficulty of diagnosis. The upper and lower ends of the incision were closed with through-and-through silkworm gut sutures, and peritoneum sutured to the skin for the middle $2\frac{1}{2}$ inches of incision, with fine silk. The cyst was then opened, the edges of the opening sutured to the abdominal wound with fine silk, and a large drainage-tube—rubber—introduced, containing gauze wick; this was held in place by silkworm gut sutures. Absorbent dressing was then applied and the patient put to bed.

Strychnia, gr. 1/30 every three hours, was given, and no trouble was had with nourishment, which was gradually increased from that time on, giving chicken broth, albumin, panopepton and buttermilk, one or the other, every three hours. On the second day his temperature reached 101 F., and on the three succeeding days it ranged from normal to 99.6, and 100 once or twice daily; thereafter it was normal. He was given a light diet on the sixth day. The dressings were changed as necessitated by the amount of discharge, at first twice daily, later daily, and so on.

His recovery was rapid and uneventful, and he was discharged "improved," on August 14.

CASE 2.—Mrs. C., aged 34, gave a negative family history. She had been healthy, except dyspeptic for several years, and subject to attacks of colic, or what she supposed to be acute indigestion. About six weeks prior to operation, she had a severe attack of colic, followed by "bilious fever" (?) for two weeks.

I saw her first in consultation with Dr. G. G. Roy, August 8. Examination revealed a tumor about the size of a fist, occupying the region of the gall-bladder, and extending about two inches below the ribs. There was slight jaundice. The lungs, heart and kidneys were normal. A diagnosis of gall-stone cholecystitis, was made and early operation advised.

Operation, August 9, was under ether. Coming down on the tumor I found what seemed to be an enlarged gall-bladder, but which, on examination, proved to be an enlargement of the liver itself. The growth was very hard and nodular, presenting many of the characteristics of malignancy. Dr. Nicolson, who helped me, and I were in doubt as to just what its character was. Introduction of an aspirating-needle showed that it contained a dark serous fluid, but nothing definite was determined as to its character. I immediately stitched the parietal peritoneum to the surface of the liver, leaving a space as large as a 50-cent piece, uncovered. I then packed the wound with iodoform gauze, closing the two extremities with silkworm gut sutures. The packing was left in three days, when it was removed, leaving the surface of the liver uncovered. I immediately made an opening down to a hard body in the substance of the liver, and, with a curette, removed thirty gall-stones of almost uniform size and shape. A drainage-tube was inserted, and gauze packed around it. August 4th three more stones were removed; the 16th, ten; the 20th, one; the 24th, three; the 26th, two; the 30th, two, and eight have come away since. There is still a discharging sinus, but practically no pain.

The patient has gained flesh rapidly, and weighs fifteen or twenty pounds more than she ever did, and enjoys the very best of health.

CASE 3.—D. S. P., white, male, aged 37, a stair-builder, was admitted August 9, 1898. He had been operated on for appendicitis the preceding March and a suppurating sinus remained and afterward developed into a fecal fistula, which discharged very freely, especially when the bowels were loose. This gave him some pain at times. He had indigestion all summer, but had been able to work. The bowels had been moving about twice daily.

Operation, August 12, at 1:50 p. m. The sinus was packed lightly with iodoform gauze, and an elliptical incision then made outside this tract, through the abdominal wall. The surrounding tissues were carefully dissected and separated from the sinus, which was found to enter the cecum at the base of the appendix. The latter was very large and indurated, and surrounded by a mass of inflammatory deposit. This I dissected out down to the base—"near" cecum—removed it, cauterized with carbolic acid and buried the stump in a fold of the gut with sutures of No. 7 silk, four or five tiers of these being put in. The operation was tedious, occupying two hours and fifteen minutes of uninterrupted work. Iodoform gauze wick, surrounded by a fenestrated rubber-tissue drain, was left in and the wound closed with silkworm gut. The drainage was removed and left out next day, the wound being clean. The temperature went up to 102 F. on the 14th, but came promptly down on administration of quinin bisulphate, gr. v, every four hours to seven doses, and remained normal thereafter. Recovery was uneventful, after removal of the sutures on the 19th, and the patient was discharged cured, Oct. 11, 1898.

CASE 4.—J. B. S., white, male, aged 37, a dairyman, was admitted May 16, 1899. His health was good until four years prior to admission, when, on catching a falling milk vessel, he had severe pain in the right inguinal region. This grew worse and he had to go to bed. The right leg seemed affected, always feeling better when flexed on the thigh. He was in bed three months at this time, and noticed a "lump" in his right side. About Jan. 23, 1899, the iliac region of his right side began to pain him slightly, but he had no general abdominal tenderness, nor vomiting, though the bowels could not be moved for a week. When gas accumulated in the bowels, the mass inside seemed to get larger. The right leg was still more comfortable when flexed. He was admitted with a mass in the right iliac region to the inner side of the crest extending downward—slight tenderness. The temperature was 102.8 F., the pulse 88, the tongue rough and coated. There was no appetite and some diarrhea.

Operation was performed May 18, at 2 p. m. (Dr. Nicolson). The point of tumor in the right iliac region, which would be tympanitic at times, dull at others, was tympanitic while on the table, before operation. Incision over McBurney's point reached an extensive cavity three inches long by two inches deep, which contained an ounce of creamy pus and a concretion about the size and shape of a partridge egg. The inner wall of the cavity was formed by the outer surface of the cecum, in which was a fibrinated opening admitting the index finger. The appendix was not found. The cavity was sponged clean and the wound closed with silkworm gut sutures, an iodoform gauze drain being left at its middle.

The fecal fistula was dressed daily, and oftener when necessary—sometimes four or five times daily;

irrigations at times, then none; packing at times, then none—from the first operation until September 11, when the second was done. The opening in the gut could be easily felt and plainly seen with the light at a proper angle, but it closed very little under all the forms of treatment tried.

A moist gauze (saline) dressing, daily, seemed to exert the best influence over the discharge, amount, odor, absorption, and so on. A cavity holding from two ounces at first down to one-half ounce just before the operation, persisted, the contents of the bowel dropping into it from the opening in the gut and, when the cavity was filled, the dressings becoming saturated. When this cavity was well packed it seemed that the discharge was lessened, probably by pressure on the opening in the bowel.

On September 11, the second operation was performed under chloroform anesthesia by Dr. McKee, Dr. Nicolson assisting. The opening of the old fecal fistula was enlarged—mucous membrane of gut very unhealthy for an area the size of a silver dollar, about the opening in the cecum. Adhesions of the cecum to the abdominal wall were broken up, and the remainder of the appendix—about 1½ inches—also separated from a bed of adhesions. A small portion of cecum at the site of opening and the appendix were resected, and the edges of the gut brought together with a Czerny suture, and four or five layers of Lembert sutures of No. 7 black silk put in, one layer above the other. Cicatricial edges of the wound were then trimmed off and sutured with silkworm gut. Gauze drainage was put in and moist saline dressing applied. This was changed on the third day (13th), when the wound was clean, no odor; moist saline dressing reapplied.

A thin yellowish fluid oozed from the drainage wound for twelve days, necessitating a daily change of dressings. The cavity held from 1 to 1½ drams of fluid when filled. This closed slowly but steadily, and the patient was discharged, cured, on October 7, twenty-six days after the operation.

CASE 5.—Miss L., aged 29, was admitted Oct. 12, 1899. Father died of heart disease, mother of consumption, one brother of rheumatism. The patient was always delicate; subject to cold. She had had very painful menstruation. Tubo-ovarian disease existed for three years and she was in bed five months, prior to removal of the ovaries and tubes, in July, 1895. Floating kidney was found, but nothing done for its relief except directions given as to abdominal support. There was no relief from removal of the tubes and ovaries.

On July 6, 1896, I did a right nephrorrhaphy, with complete relief for fourteen months, when she had a fall down a flight of steps, and partially broke the anchorage loose. This fall was followed by subacute appendicitis, and she was in bed for seven weeks. She rested up and after a few months felt as well as before injury, and resumed nursing one year after her fall, without inconvenience until March, 1898, when she had an attack of appendicitis, with high fever, and was confined to bed for two weeks. She never felt well afterward, but was about till September, 1898, when she had a mild recurring appendicitis, more or less pain all the while.

On admission, the heart and lungs were negative, but the urine showed a few hyaline and granular casts. This cleared up under treatment, till at time of operation, October 17, only two casts were found.

Operation was done under ether, the usual incision along border of rectus for removal of an appendix. Ap-

pendectomy was completed in the usual way, except closure of the abdominal incision: I separated the parietal peritoneum down to the right kidney, which was very readily accomplished. With a full curved Hagedorn needle, three sutures were put in, after incising the perirenal fat. The sutures took a "good bite" of the kidney and were then carried deeply into the muscles and brought out again. They were tied without much difficulty, and held the kidney well in place. Kangaroo tendon was used. Considerable difficulty was experienced in putting in the sutures, but this was finally accomplished in a very satisfactory manner. The abdominal wound was closed in layers and the patient put to bed in excellent condition. In some way the superficial structures were affected—evidently streptococcus infection—and the subsequent fever and prolonged convalescence were due to this cause.

She suffered much pain after operation, morphia being necessary twelve hours after it. Temperature was 101.6 six hours after operation, and the quantity of urine was very small. An enema of normal salt solution was giving on taking her off the table, and the following day alum enemata, followed in two to five hours by saline, were started and kept up daily. Strychnia, gr. 1/30, was given every three hours, and morphia was occasionally necessary. On October 20, diuretin, in 7½-gr. doses, t. i. d., was begun, and 1 gr. of calomel given at bed-time. Lithia water *ad libitum* was started next day, and she was persuaded to drink as much as possible. The quantity of urine steadily increased from day to day, from ten to sixteen ounces after operation to thirty-five to sixty October 28 to 30. No morphia was used after the 23d.

The temperature ran high after operation, going steadily up from day to day until, on the 23d, it reached 103.4. Chloroform was administered and an incision made through a hard mass in the right side over the kidney area, and about three drams of pus and some bloody serum evacuated. This was dressed daily, and temperature declined some, but never reached normal till after an exacerbation on November 8, when it went to 103.6; the high fever here remained only two days, and normal range was reached and held to from November 11.

Case 1 presents several features of especial interest. The history of repeated attacks of renal colic, and the location of the tumor, pointed to hydronephrosis: the general appearance, rapid emaciation, obstipation, age and general characteristics of growth to malignancy. I should have made a positive diagnosis of malignant disease but for the fact that the tumor seemed cystic toward the median line. Dr. Cooper, who saw the patient, made a rather tentative diagnosis of cancer of the stomach. Dr. J. H. McDuffie, the family physician, suspected hydronephrosis. Exploration of the cyst revealed no cause for its development, and the utter impracticability of its complete removal. I have kept up with the case, and while there is still a considerable discharge of pancreatic fluid, the quantity is constantly diminishing. The general condition of the patient is good.

Case 3 puzzled me exceedingly. Quite a number of the stones removed are about the size of large buckshot, highly polished, almost black, and irregularly quadrilateral. They were evidently formed in the gall-bladder, ulcerating through its roof into the liver. The adhesions were such as to make a careful examination of the under surface of the liver impossible.

Cases 3 and 4 illustrated one of the untoward consequences of incomplete operations for appendicitis.

No operation for this condition, that consists in simply opening and draining an abscess without complete removal of the appendix, can be considered curative. A large proportion of such patients will require a subsequent operation to effect cure. The method of closure adopted in these two cases is worthy of further trial. In both there were extensive adhesions, great induration and thickening of the cecum. I do not believe any other method, except a complete resection of the cecum, would have proven curative. I shall in future employ the method with much confidence, in this very troublesome class of cases.

Case 5 represents an entirely new procedure, i. e., that of appendectomy and nephrorrhaphy through the same incision. I did not do the operation as I had originally planned to do it. It was my purpose to remove the appendix, separate the peritoneum, incise the perirenal fat, put my sutures in the kidney with a long, straight needle on each end of each suture, then have my assistant make a lumbar incision through the skin and superficial fascia. I next intended forcing the needles through the lumbar muscles, and tying the sutures, closing the skin and fascia over these, thus burying them. After getting down to the kidney, however, I felt sure that I could accomplish the same result without making another incision, and finally succeeded in doing so. The infection of the wound that followed was a most unfortunate circumstance. I feel sure this was due to an unguarded act of one of my good friends who is a surgical enthusiast. He came in just as I had finished putting in the renal sutures, and after explaining to him what I was doing, he thoughtlessly put his dirty hands on the operating-field. Whether the infection was due to this or some other cause I do not know. I do know, however, that it was only superficial, but very virulent, and showed a tendency to burrow. The operation of appendectomy and nephrorrhaphy is a practicable one.

I am indebted to Dr. Hal Moncrief for the histories of Cases 1, 3, 4 and 5.

ANTITOXIN AND INTUBATION WITH A REPORT OF 100 OPERATIONS.

BY BURT RUSSELL SHURLY, B.S., M.D.

Laryngologist to the Woman's Hospital and Foundlings Home;
Junior Attending Physician, Harper Hospital; Lecturer
on Physiology, Detroit College of Medicine.

DETROIT, MICH.

The results of progress in scientific therapeutics can be most thoroughly demonstrated in the treatment of laryngeal diphtheria. The uncertain pathology of this disease has assumed a clear and definite position under the light of modern bacteriologic research. Arguments on the nature of the causative microbe are past, and the claims of the Klebs-Loeffler bacillus are established. The question has been decided, and the presence of the Klebs-Loeffler bacillus is demonstrated in primary pseudomembranous laryngitis almost without exception.

A careful investigation of the management of diphtheria patients, and a study of the development of new cases from day to day leads to the conclusion that the great mortality can be reduced one-half by early treatment. The great importance of more care in recognizing the causes and enforcing the means of preventing diphtheria are obvious. The causes of the rise and fall in the number of cases in our city require careful scientific study. Local atmospheric conditions, prevailing winds, seasons of the year, personal hygiene, sunlight, overcrowding houses and schools, conditions of cellars, sewers, unpaved streets, drainage of vaults and ventila-

tion are among the factors. A disease which shows in this city 1009 new cases reported in 1896 with 260 deaths, a mortality of 25.76 per cent, demands the use of every prophylactic measure known to science. Municipal attention in the care and control of smallpox is immediate in the outbreak of any epidemic, but diphtheria with a mortality of 25 to 35 per cent., 90 per cent. of whom are under 9 years of age, receives but passing mention.

The general adoption of a prophylactic dose of antitoxin to every child of croup age, viz.: under 10 years, exposed to diphtheria, is the chief remedy advocated to diminish the mortality. The presence of adenoids and enlarged tonsils would especially indicate the use of this preventive measure.

Intubation and antitoxin are now recognized throughout the world as the best methods of treatment in laryngeal diphtheria. Notwithstanding the efforts of some prominent members of our profession to impair the usefulness of these two life-savers, antitoxin and intubation are here to stay. They no longer need argument in their support. It is only necessary to use them intelligently and the results will speak for themselves. We have no more exact demonstration of the interdependence of medicine and surgery than that shown by statistics of intubation without antitoxin, 70 per cent. mortality; with antitoxin, 30 per cent. mortality.

The marvelous curative influence which antitoxin has in laryngeal diphtheria is now a well-accepted fact. As a specific in primary pseudomembranous invasion of the larynx its claim is well supported. The early use of a full dose is of the greatest importance, and a more general recognition of this fact by the profession and the laity will result in a great diminution in the number of cases of secondary laryngeal invasion, at present 16 per cent., and therefore operative interference will become limited. No case of laryngeal diphtheria should receive less than 1500 units, and children over 2 years should have 2000 units, and an additional dose of 1000 units may be repeated every twelve hours according to symptoms. The more concentrated the serum, the more satisfactory for our use. It would seem that many of the unpleasant effects, such as rash, occurring in 5 to 40 per cent., pain and swelling, were increased with the additional quantity of serum injected.

The reported dangerous effects of antitoxin which made such an impression on the laity have proved to be without foundation. Fatal results are due to the disease, not the antitoxin. The fault lies usually in late administration. Serum showing evidence of general turbidity should not be used. The date of issue from the laboratory is stamped on each package and should be noted, as after six months the antitoxic value diminishes.

Additional medicinal treatment is of great value. The continuous inhalation of alkaline steam acts efficiently in softening laryngeal pseudomembrane, and intubated patients expel secretion more easily when moist and liquefied. The more adherent membranes are not so easily affected. Medicinal vapors from combined solutions of eucalyptus, oil of turpentin and carbolic acid are then more beneficial. Fluids should be given in large quantity, with the same object in view. In younger children who do not expectorate properly, a daily dose of calomel is of great importance. Calomel vaporizations are useful in septic cases, and the bichlorid given every hour in doses of 1/60 grain has many enthusiastic supporters. Iron is useless in the acute stage of the purely laryngeal form. Strychnin and alcohol are

given in all cases where a respiratory or cardiac stimulant is needed. Nasal or nasopharyngeal exudates should receive appropriate local treatment.

After the differential diagnosis is made the indications for operation are dependent on many factors which experience only can fully impress upon us. One fatal mistake in judgment in an effort to avoid too early operation will bring one to a full realization of his responsibility. The points for consideration are: 1. Stage of disease. 2. Age of child. 3. Intelligence of parents. 4. Surroundings. 5. Trained nurse. 6. Amount of antitoxin and time when administered. 7. Distance of patient from operator. 8. Amount and character of dyspnea. 9. Complications. Operation in laryngeal diphtheria should not be refused because it is too late. Many can be saved at the last hour, but the mortality rate is necessarily high. Judgment, discrimination and experience show that early surgical interference does the patient no injury. A small frequent pulse, cyanosis, aphonia, marked retraction of chest wall and epigastrium are urgent indications. Mechanical relief is so sure and painless that it seems little short of criminal to allow a child to suffer and struggle for want of it. Where the two methods of surgical interference are possible intubation should always be the primary operation.

The technique of intubation is most minutely described in our various text-books. Particular attention should be paid to the position of the child and the selection of the tube. Ill-fitting tubes injure the larynx. The operation should not be attempted without previous practice on the cadaver. If not skilfully performed the child's life is endangered, or the larynx and surrounding tissue wounded, and the operation brought into serious disrepute. It is remarkable how intubated patients recover with little or no care. Many of these little ones, among the pauper and ignorant classes where this disease thrives, will be found playing around the room on the second day, the tube still in place. Careful directions as to rest, feeding and medication were entirely unheeded.

The Casselberry method of feeding is especially useful for children under 4 years of age, and the catheter method, body horizontal, face down, is more successful with older children. In none of my cases has it been necessary to resort to lavage or nasal feeding. The former argument of difficulty in feeding can be relegated to pre-antitoxin days. Instruction by the attending physician, and the selection of a proper method for each patient is all that is necessary. In many cases practically no medication except antitoxin was given and any tendency to membrane extension was met by an additional dose of serum.

The extraction of the tube is the most difficult part of the operation, and should be performed whenever an intubated child suffers from returning dyspnea. Food or membrane may have obstructed the tube, or the tube may have been swallowed.

The prolonged use of a tube may be required. In four cases reintubation was necessary after extracting the tube at the termination of four days. An additional forty-eight hours was sufficient to permanently relieve two of these patients. The remaining two proved very interesting and illustrate some of the difficulties the operator encounters.

CASE 1.—A girl, aged 1 year and 9 months, a patient of Dr. G. H. Sherman, gave the usual history of a descending type of laryngeal diphtheria with the primary exudate on the tonsils. Dyspnea and cyanosis were

severe and intubation was performed with immediate relief. One thousand units of antitoxin were administered. The tube was removed on the fourth day, dyspnea returning in a few hours, and reinserted six hours after extraction. It was again removed two days later and dyspnea did not return until four days after the second extraction, when intubation was again urgent, a piece of membrane being loosened as the tube was inserted. One thousand five hundred units of antitoxin were given and, although the tube was coughed out twice during the next four days, on extraction the breathing was good and the patient recovered. The conclusions from this case, confirmed by later experience, show that if the tube can not be removed at the end of four days an additional 1500 units of antitoxin should be given. The retained tube was evidently necessary on account of persisting membrane, showing the original dose of 1000 units insufficient for this case. The tube was worn ten days.

CASE 2.—A girl, aged 2 years and 9 months, was seen with Dr. Rodd, Feb. 2, 1897. A glance at the child was sufficient to show that the marked cyanosis and comatose condition promised a speedily fatal termination. A three-year tube was quickly prepared and, with only a nervous woman as assistant, and no one to hold the head, an attempt was made to pass the tube, but the faulty position and large size of the tube made two efforts unsuccessful, and it was at once apparent that one more failure was certain to prove fatal. I exchanged the three-year tube for the one-year size, and at this juncture Dr. Rodd arrived. Our next effort was successful and no more inspiring or delightful sight can greet the eyes of the surgeon than this picture of returning life to the asphyxiated child. An hour later the one-year tube was coughed out, and a two-year replaced it. The case progressed favorably but reintubation was necessary on the fourth, sixth, eighth and tenth days. A loose piece of membrane was removed at one of these operations and 1000 units more given. The tube was finally removed on the seventeenth day, twelve intubations having been performed.

A case which illustrates the possibility of saving life when the patients are moribund was seen with Dr. Geo. Bassett, May 25, 1897. A boy, aged 3 years and 5 months, had been ill with diphtheria involving the tonsils, pillars and larynx for some days and no physician in attendance. On entering the room it seemed that death was a question of only a few minutes. There was no radial pulse and the child was completely comatose. It luckily happened that a three-year tube prepared for another patient was ready for use, and as the tissues were completely relaxed it was quickly passed without disturbing the position of the child on the bed, and artificial respiration resorted to. The tube gave perfect relief and the patient was sent to the hospital for treatment, 1500 units of antitoxin having been given. On the fourth day the tube was extracted, but dyspnea returning next day a second operation was performed and 1000 units administered. He coughed out the tube 2½ days later, and was discharged from the hospital fully recovered fifteen days after admission.

From a study of these cases and general observations in the treatment of diphtheria, we can formulate a series of definite conclusions and rules of procedure which apply to all cases of laryngeal diphtheria.

1. Administer antitoxin early without waiting for a bacteriologic diagnosis.
2. Tonsillar exudate attended by a croupy cough or

partial aphonia is an indication for a full dose of 1500-2000 units of antitoxin.

3. Antitoxin administered twelve hours or more prior to operative interference will reduce the mortality of intubated cases at least 50 per cent.

4. Immunize all exposed children of croup age.

5. Continuous steam inhalations are of great value in all cases.

6. Early operation is most strongly advocated.

SUMMARY OF ONE HUNDRED CASES.

Number of operations, 190; recoveries, 69; deaths, 31; mortality under 3 years, 49 per cent.; mortality over 3 years, 19 per cent.; complicating measles, 3 cases, 5 deaths.

Age of patients operated on: 1 to 2 years, 16, of whom 9 recovered, 56.25 per cent.; 2 to 3 years, 23, with 11 recoveries, 47 per cent.; 3 to 4 years, 20, of whom 16 recovered, 80 per cent.; 4 to 5 years, 15, of whom 12 recovered, 80 per cent.; 5 to 6 years, 11 cases, with 10 recoveries, 90.9 per cent.; 6 to 8 years, 10, of whom 7 recovered, 70 per cent.; 8 to 12 years, 5, of whom 4 recovered, 80 per cent.; number of doses of antitoxin, 160.

Eighty-five per cent. of the cases occurred on streets that were not paved.

USE OF OPIUM IN INFANCY, SEEN IN ADULT LIFE.*

BY T. D. CROTHERS, M.D.

SUPERINTENDENT WALNUT LODGE HOSPITAL.

HARTFORD, CONN.

The danger of opium as a remedy in infancy has only recently been recognized. Many physicians give the drug or its alkaloids without the slightest recognition of its possible injurious effects on the organism in the future. In a recent text-book, a statement is made that the action of opium is transient in infancy, and without danger except in large doses. The prominence of certain proprietary drugs, as soothing syrups for children, and the characteristic effects of opium, with the great injuries noted later, have brought out facts of the damage from these sources.

In current literature little notice is taken of this danger, and yet a great variety of facts are constantly appearing, pointing out the disease and degeneration clearly traceable to this cause. In all probability the largest use of opium in infancy comes from its domestic application. The various tinctures and infusions are household remedies and, in many sections, the gum from the poppy is gathered and put away regularly as a household necessity. It is the most convenient and practical of all remedies in the obscure disturbances of childhood. No doubt, some physicians find it very useful and often give it thoughtlessly. The drug store files show how commonly it is used in infantile therapeutics, and often it is given in a routine way for a long time, particularly for neurotic and intestinal disorders.

My purpose is to call renewed attention to this danger, and show some new facts from the clinical side, that are not uncommon and, no doubt, can be confirmed in the practice of many physicians.

In adult life, opium and its alkaloids, in a general way, are marked excitants or depressants. Either one or the other is most prominent, and both always are in the same person. This is not dependent on the doses, although that is marked in many cases. One will have a long, early stage of stimulation and wakefulness, and

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then depression and sleep. The other will have only slight exhilaration, and rapid marked sedation. In one case recovery from its narcotic action is followed by malaise and much physical discomfort; in the other, rest and a degree of satisfaction resembling that which follows natural sleep. The psychic effects vary: In one, most pleasing mental quietness and satisfaction follow; in the other, unusual buoyancy followed by total oblivion and discomfort and recovery. In the former, the mind falsely reasons that some new, exalted mental condition has been attained, most desirable for the future. In the latter, the discomfort from reaction calls for relief in the removal of the drug. Both classes soon have a reactionary period of discomfort and nerve disturbance. These are general states to which there are almost infinite exceptions and variations. While the sedation from opium falls most markedly on the sensory centers, and nerves of sensation, its localized action on the psychic and organic functions varies widely. In one case profound alterations of the functions appear, and rapidly extend to the mental operations. The organism, after a period of sharp irritation, apparent in nausea and deranged digestion, seems to take on a certain immunity and toleration, or the organism appropriates opium as it does food, and a demand for its continuous use becomes more and more imperative. This is the state of the habitués, and is the result of a long use of it, or appears in some cases at the beginning of its use. It is evident that some unknown states of the organism are more susceptible to its physiologic action than others. It is a common observation that coarse, low organic natures, or imperfectly developed minds and bodies are less susceptible to the sedative effects of opium than high-grade, finely developed, nervous persons. In practice, opium as a medicine varies in its effects very largely from these conditions—the finer the organism, the more pronounced the effects and the smaller the dose required; the coarser the organism, other things being equal, the larger the dose to get its physiologic action. These general facts, with others, are the same in infancy as in adults, only less observed. The child who is given laudanum for some condition, and appears better, has had the pain distress-signals covered up, and at what sacrifice, or organic changes which follow, no one can tell. At all events, the same exhilaration and depression occur as seen in the adult. The former may not be noticed and the latter only seen, but the same conditions follow. In the infant the small power of resistance and the extreme susceptibility to physiologic influence from narcotics is not overcome by dosage. The physiologic action of $\frac{1}{2}$ gr. of opium on an adult, and in $1/40$ gr. on an infant is the same in degree, only in one case there is little or no resisting power. The infant has an unknown and undeveloped organism. The adult is, in some degree, known, and certain physiologic effects may be confidently expected. It is not a single dose or several doses given for certain disorders, although this is often marked in many ways, but it is the long-continued use that is followed by certain degenerations.

Opium given in convulsions, with other drugs, and in intestinal troubles, and for insomnia, nervous irritation and unknown conditions, with apparent good results in temporary relief, is dangerous if continued any length of time.

Opium and its alkaloids seem to have two distinct effects on the nerve-centers and organism of infancy. Its sedative action is of the nature of palsy. Cell functions and growths are slowed up, retarded and finally changed. The changes following long-continued doses

become permanent. The symptoms of dulness and stupor continue in lessened vigor and degrees of imbecility and mental perversion in later life. The freedom from pain and forced sleep with apparent steadiness of nerve force react in increased irritation and instability, with greater sensitiveness to all surroundings.

Nearly all persons who have been injured in infancy and early childhood from these drugs manifest these two characteristics. Increased dulness and stupor, or nervous irritation and instability, often both, may be combined in one. Beyond these are disorders of the nervous system and digestion, with low power of control and subject to morbid impulses that are largely uncontrollable. These various manifestations are better studied in the history of cases, the following of which are illustrations.

In a family of four children, whose parents were strong, healthy persons, living on a farm, one, a boy, was dull, passionate and of a low grade of intellect. He would overeat and drink to excess, water, tea, coffee, or anything he fancied. He was stupid and obstinate, and at times, excessively sensitive and irritable. No one in the family resembled him in any way, but all were healthy and vigorous in mind and body. When 1 year old he had a convulsion and was given opium daily for over a year. Then at long intervals, finally, it was abandoned, and it has not been used since. The parents noticed it was affecting him at the time, changing his mind and habits, and would not permit its use again. This was clearly an example of retarded brain growth with perversion of the functions, and later it will, no doubt, develop into some drug addiction or low form of dementia, disease and death. The history pointed to its use as the most prominent cause of this condition.

In a similarly healthy family, one son became an impulsive inebriate at 18 years of age. The others in the same surroundings and conditions of living are very temperate and well. During the infancy of this boy he was given morphia for intestinal disturbances. At one time it was taken for nearly a year, by advice of the physician. He was stupid and dull much of the time this was taken, and its use was continued as a medicine for years, at long intervals, and in one or two doses a day. He began to use spirits to excess soon after puberty, and is now a periodic inebriate. The clinical study indicated a degree of mental and physical perversion and degeneration, dating from the use of morphia in infancy. A case which came under my observation was that of two children of a distinguished missionary, one, a young woman, who at 24 years of age suddenly began to use opium and spirits to excess and showed much mental disturbance. During infancy she was nursed by a Hindoo woman, and was noted for her stupor and tendency to sleep. In early and later childhood she was extremely nervous and suffered from many hysterical affections. She was an accomplished teacher and a woman of great pride of character and ambition. Her brother, born two years later, was nursed by the same woman, and was noted for his somnolence and general stupor during this time. Later it was found that the nurse was an opium-taker, and that both children had been under the influence of opium from nursing. The boy grew up extremely nervous and irritable. At one time he drank beer to excess, then was a gambler. He was changeable and notional, became a clergyman; then a physician, and finally a speculator. He is now an opium-taker and neurasthenic, and invalid, although not 30 years of age. Two other children of this family, one born before this Hindoo woman became a nurse, and the other after she was discharged, are strong and healthy

and free from any peculiarities of mind or body. The elimination of all other cases leaves the poison of opium the specific central factor in these cases. In my studies of the heredity of all alcoholic and opium inebriety, about 10 per cent. give some history of drugging in infancy. Paregoric and laudanum are the most common. Narcotism from opium by accident has been followed by defects which finally culminated in drug or spirit-taking. A boy, 2 years old, ate a large number of opium and candy lozenges and was narcotized for two days, and with difficulty prevented from dying. He grew up an erratic, unstable, and feeble child. Digestion was impaired and sleep broken, and finally, at 21, he became a spirit-taker and inebriate. Two brothers were healthy and strong. This was probably the result of narcotism. In cases of defective parentage, where nervous degeneration and unsoundness exist, the use of opium in infancy will intensify these states, and make them more pronounced. In children from drug-poisoned families, such as inebriates or those who, from nutritional disorders are suffering from autointoxication, opium may prove a most seductive drug for a time, but in the end be followed by more serious evils. Children of brain-exhausted, worn-out parents are often found to enjoy the effects of opium, and receive great apparent benefits from its use. Later they easily become drug-takers, and are the most incurable. Neurotic infants and children are, no doubt, very susceptible to these drugs, and the physiologic impression is so pronounced as to suggest organic changes.

A few instances are on record of hydrocephalus following the use of opium in children, suggesting serum in the ventricles, ending usually in exhaustion, coma and death. Many parents manifest an unreasoning therapeutic credulity in drugs in infancy, which physicians cultivate and sometimes heartily believe in. In such a case a very strong medical man continued an opium prescription for over a year, and the child grew up feeble-minded and is now an invalid. The next child in the same family is a hearty, vigorous man. He was not treated for any length of time during childhood by drugs. The use of laudanum in infancy was traceable in ten cases of epilepsy associated with spirit drinking and petty criminality. As these patients came from the lower classes and had a defective heredity, the influence of opium could not be separated as a specific cause. Undoubtedly, it was a large contributing one. I have gathered many histories which seem to confirm the impression that opium-taking in infancy and childhood is often an exciting cause of a latent hereditary predisposition to the drink mania. At all events, a large proportion of such persons seek relief from alcohol in the physical strain and stress of life, then take opium when the effects of alcohol become prominent.

Opium and its alkaloids, given to healthy children occasionally for some special purpose, are in all probability without injurious effects. In unhealthy, neurotic children, with defective ancestors, and evident imperfect development, the increased degeneration which follows the use of opium is clearly from this source. Where this drug is combined with other remedies, and given a long time, the effects are the same. They can not be lessened by the action of other drugs. No form of opium should be given to infants or children for more than a day at a time. While the effects of continuous sedation may be overcome by correct living, the cell injury and perversion of function is never repaired. The growth and development of other organs may do much to overcome in part, and cover up the injury, but the defects will appear from

the presence of the slightest exciting cause. The following case has recently come to my notice.

Five children of healthy parents became inebriates, both alcoholic and opium, when about 20 years of age. There was no heredity nor any special exciting causes. The home life and example were good, and both parents were total abstainers. Each one seemed to be nervous and feeble, and lacking in vigor, then without any reason began to use alcohol and opium freely, and finally were addicted to its constant use. It was found that from early infancy and through childhood they had been given laudanum and other forms of opium, for all sorts of ills. The mother had treated them without the aid of a doctor, and opium was used continuously for several months at a time. They all suffered from nutritional and digestive disorders, and were all nervous insomniacs and irritable and dull at times. This domestic treatment was, no doubt, the cause of the degeneration and neurosis in manhood. Three of these persons are decidedly feeble-minded. One is a talented musician, the other an actor of some ability. Two use spirits alone; two use alcohol and opium; one uses opium alone. They are of the imbecile grade of inebriates.

Another case reported to me was that of a very highly cultivated woman who, at 34, began to use morphia without any apparent cause in pain or sickness. She was a philanthropist and on the visiting board of a hospital where such cases were treated, and was acquainted with the dangers of the use of the drug. All the possible causes were eliminated in the study and the remarkable fact appeared that opium was used very freely in the first two years of her life. It was with difficulty removed and she was feeble and very nervous until after puberty, when she became strong. Her own statement was that she found such peace and comfort from its effects that she could not abstain from it.

Several persons using alcohol have given, as a reason for this addiction, the fear of becoming opium-inebriates. They have found opium so seductive and pleasing as to be irresistible; with alcohol they felt safe. Opium-taking in infancy is the common history of many cases, and is generally the domestic use of laudanum at first, for disorders of mind and body.

The presence of nervous dyspepsia, which begins soon after puberty and by early or middle manhood becomes a most distressing disease, is often traceable to the free use of opium in infancy and early life. Early and profound exhaustion from slight overwork or excitement, seen in young persons, indicating low vitality and feeble nervous organism, is the result of opium-taking early in life. Early precocity or failure to sustain the expectations created have been noted in the cases of early addiction. The many constitutional defects and degeneracies which appear after puberty and in early manhood should always create an inquiry concerning the early therapeutics and drugs given in childhood. Where soothing syrups and prescriptions for seductive effects have been used a long time, the suspicion is strong that an opium diathesis has been created. I wish to emphasize that the use of opium and its alkaloids in infancy will, in a large proportion of cases, create a diathesis or predisposition to its use in later life. This predisposition is manifest in irritation and exhaustion, with intense, uncontrollable impulses for relief.

Alcohol, chloroform, chloral and many of the most common narcotics are welcomed and largely used to supply this demand. This opium degeneration may take on sexual and nutrient manias and leave the brain in an infantile condition of vigor and stability. A "Christian

Scientist" who has made some reputation by his delirious theories, was, according to a Boston physician, brought up on opium. His mother was a narcotic, and to protect herself, gave her son opium freely in early life. He grew up undersized, and with a highly sensitive brain, full of delusive dreams and fantasies. This was another form of opium diathesis.

The second fact that I would note is that opium in infancy acting on the most unstable organism, the brain cells and centers, not only retards but prevents healthy physiologic growth. In defective heredity this is permanent, although it may be concealed until later in life. This physiologic action of exaltation and depression, the latter being the principal stage, is manifestly toxic and injurious from the functional derangement which follows. Where no disturbance is recognized, the real danger is concealed. The cell growth and functions suffer, mechanically, nutritionally and psychically, by checking activity, diminishing nutrition and changing direction and purpose of action. This is true of opium in all cases. Sometimes one effect is more prominent than others. In DeQuincy the psychic action was prominent. In some cases the anemia shows in the disturbance of nutrition, and in others the depression and suppression of organic activity is apparent.

The third fact to be remembered is the concealed danger from opium-drugging in infancy. If only neurosis is present, if defects of growth and function exist, opium will of necessity increase this condition. Anemia, exhaustion and perversion of organic activity follow. If some temporary state is present, opium, by covering up the pain-signal is not curative, but may be destructive in many ways not easily recognized until later in life. No one can tell whether this danger begins with the first dose or only after a succession of doses.

Lastly, the magnitude of this danger is not recognized as it will be in the future. Neurotic disturbances, obscure and open, and toxic diseases of many forms, have an early history of opium drugging. The ignorant mother who uses soothing syrups freely, to suppress the irritation of the infant, is not the only offender. The routine, and often thoughtless, physician who uses opium freely in infantile prescriptions is responsible in many ways for the wrecks of later life. The toxic cases under my care are striking illustrations of this evil. Inquiry in others brings out this cause with great frequency. While it is difficult to narrow down the etiology to this one factor, it is clear that the danger from this source has been and is a potent and wide-spread cause. We need more clinical researches and clinical studies in this direction.

THE BUBONIC PLAGUE IN SAN FRANCISCO.*

BY W. H. KELLOGG, M.D.
CITY BACTERIOLOGIST.
SAN FRANCISCO, CAL.

We have always regarded the plague as something very distant and impossible, and have read of its ravages in India and China with much the same feeling of composure and security that we read about an uprising of the natives in Madagascar. Or perhaps we have considered it as a matter of historic interest on account of the fearful epidemics which in pre-sanitary days used to sweep over Europe, devastating countries and hardly leaving enough people behind to keep up the archives and records of the state. Even now that it is among us, and in America for the first time, there seems to be a

tendency to underrate its importance and dismiss it without a thought, as a scare designed for base political motives.

While I do not believe in becoming unduly excited about it, or in publishing far and wide that there is plague in San Francisco, I do not think that we should try to deny among ourselves the very existence of it, but should accept the situation as it is and do our best to stamp it out while it is still within our power. It would be folly to ignore its presence and allow it to increase to such an extent that the national government would be compelled to step in and take from our hands the work of fighting it and perhaps quarantine the whole city with U. S. troops, thus advertising to the world that San Francisco was not only financially negligent in the face of an epidemic of a disease which is guarded against by the U. S. Marine-Hospital Service with more watchfulness and dread than any other.

San Francisco should look at the history of Oporto, and profit by her experience. The bacteriologist who announced the first case, in January, 1899, narrowly escaped being mobbed. The health authorities were hampered by the merchants and the press, who harped on the injury to trade caused by the announcement of the existence of plague which the laymen, in their infinite wisdom, declared did not exist. The health authorities were refused assistance until finally so many cases appeared that the government stepped in, surrounded the city with a cordon of soldiers, absolutely stopping all travel and business, and it was only after the lapse of one year, and after the experience of a partial famine, that the city was released and declared no longer infected. In the meantime its citizens had parted with the small sum of \$7,000,000, a good deal of money, but the probability is that by that time, even the omnipotent and scientifically wise press had arrived at the conclusion that their lives were more valuable than their business.

Just how the disease was introduced into this country is a mystery, as the first case discovered was in a Chinaman who had been in Chinatown sixteen years. The probability is that he was not the first, and this theory is strengthened by the fact that there had been an increased mortality in that district during the months of January and February. During those months there were 97 deaths reported from the Mongolian quarter, and of these 20 were ascribed to lobar pneumonia, 5 to bronchopneumonia, 4 to typhoid fever, and 7 to acute miliary tuberculosis. Now all of these diseases, in the beginning of an epidemic of plague, should be regarded with suspicion, and examined bacteriologically, for they are simulated very closely by the pest.

The assistant city physician, whose duty it is to inspect all dead Chinese who have died without attendance by a regular physician, is at a great disadvantage in arriving at the cause of death. He simply sees the body after death, and by questioning the relatives or undertaker, who are ignorant and use very broken English, he makes a guess at the cause of death, taking into account the appearance of the body. According to the Caucasian statistics of San Francisco, the number of deaths from pneumonia, typhoid, and miliary tuberculosis, to every 97 deaths, would be 12.3, whereas the assistant city physician, with the means at his command, has been forced to consider that there were 36 of these cases out of a total of 97 deaths for the two months. Since the plague can readily be mistaken for these diseases, we are justified in the suspicion that some of these cases were plague. Nor is the fact that we have not now a wide-

*Read before the San Francisco County Medical Society.

spread epidemic proof to the contrary, for it has been the history in other parts of the world that the plague gets a foothold very slowly and insidiously. There is a first case, and then it may be a couple of weeks before the second, and they may appear occasionally and at intervals of several days or weeks, until the houses and the quarter become infected, and then the real epidemic breaks out, and hundreds of cases occur. I will commence the account of the recent occurrences by history of the first case as supplied by the Chinese Consul. We have found that the only way we can get histories of these cases is by turning them over to the police department, and by means known to the detectives they find out a few items.

CASE 1.—Wing Chuc Ging, aged 41, in Chinatown sixteen years, died March 6, 1900, in the basement of 1001 Dupont Street. He worked in a woodyard on Pacific Street, and stated to Wing Ging, his brother, that he had been sick for six months. On February 7 he called at the office of Dr. Chung Bu Bing, 309 Dupont Street, complaining of headache, tired feeling, pain in the head, back and chest and fever. The symptoms and pain in urinating had been present in the bladder for two or three days. A diagnosis of inflammation of the bladder was made and medicine given for this. On February 14, the patient consulted Dr. Wong Wo, 766 Clay Street, and told him he had contracted gonorrhoea. He had no fever and no pain except in the genitals, complained of a lump in the right groin and was somewhat lame on that side. He also stated that he had a urethral discharge, but would not allow a special examination. He was given some medicine to relieve the difficult and painful urination, and a plaster to apply to the lump. No surgery was instituted and no further medical treatment. He was in bed two weeks, but would not tell his brother of his trouble. A few days before he took some Chinese medicine which he obtained from Dr. Wong Wo. This caused vomiting, profuse diarrhoea, and collapse, followed by death.

From the history this was evidently an ambulant case, in which an exacerbation occurred, marked by the vomiting, diarrhoea, and collapse ending in death. I saw this patient with Dr. Wilson, in the basement of the Globe Hotel, on March 6. I observed that there was a swelling of the inguinal lymphatic glands on the right side. There was no suppuration and the skin was unbroken. The glands about the saphenous opening were enlarged, and in this situation there was an open sore, which was dried and partially healed over. As a mere matter of routine I removed some of the glandular tissue, not expecting to find anything in it. No autopsy was performed. Smear preparations from the interior of the gland showed large numbers of a small short bacillus resembling the bacillus of bubonic plague. Isolation of the organism was commenced by culture methods. The next day a rat, guinea-pig and monkey were inoculated with an emulsion made from the gland removed from the Chinaman. The following is the account of the results obtained:

(The municipal laboratory being short of animals, and short of funds, and as it was deemed unsafe to conduct experiments with plague inside the city limits, the invitation of Dr. Kinyoun to use his laboratory was accepted and the inoculation experiments detailed below were performed in the Government Laboratory at Angel Island, by Dr. Kinyoun of the U. S. Marine-Hospital Service, assisted by Dr. Agnes Walker and myself.)

March 7, 1900, 2 guinea-pigs—each 700 grams—1 half-grown white rat, and 1 monkey, were inoculated with an emulsion made from a piece of glandular tissue removed from the body of Wing Chuc Ging on March 6, 1900. The animals were

placed in appropriate cages, protected in the usual manner. Cover-slip preparations were made from the glandular tissue, in which were found a number of micro-organisms, suspiciously like the bacillus of plague both as to their morphology and staining. Cultures were made from a portion of the tissue. March 8, the animals were in good health. March 9 and 10, there was no change and the animals ate well. March 11, one guinea-pig was found dead at 8:30 A.M., the other quite sick, the white rat dying, the monkey dull, listless, and would not eat; at 11 a.m., both the rat and sick guinea-pig were dead.

Post-mortem examination of guinea-pig No. 1.—On section there was an extensive edematous area on the left side extending from the axilla to the groin, the center of which contained a large quantity of exudate. The tissues about the site of inoculation were necrosed. The inguinal glands were considerably enlarged and reddened. Cover-slip preparations made from the exudate, at the point of inoculation, showed almost a pure culture of a short bacillus with a tendency to bipolar staining. The groupings of these organisms was quite characteristic. The peritoneal cavity contained a small quantity of bloody serum. The spleen was enormously enlarged, fully three times its normal size; the surface was very much reddened and covered with small yellowish dots; the spleen was also very friable. Cover-slip preparations made from the spleen showed an enormous number of a short diplobacillus, quite rounded, with a marked tendency to bipolar staining. The liver was enlarged and contained several yellow spots similar to those observed on the spleen. The mesenteric glands were not appreciably enlarged. The pericardium contained a considerable quantity of pale, straw-colored serum. The heart's blood was fluid and contained large numbers of the same organism as that found in the spleen, and at the point of inoculation. The lungs showed no evidence of change. The pleura contained about 3 c.c. of bloody serum. Cultivations on agar and in bouillon tubes were made from the spleen and heart's blood.

Post-mortem examination of guinea-pig No. 2.—The body was well nourished. On section the whole left side of the abdominal wall was in a state of coagulation necrosis, more intense at the point of inoculation, and extending from the axilla to the groin. The axillary and inguinal glands were much enlarged and reddened. A small hemorrhage was noticed in the inguinal region. The peritoneal cavity contained a small quantity of bloody serum. The spleen was very much enlarged, fully as much as that observed in guinea-pig No. 1; it, however, did not contain the yellow spots. The liver was engorged and contained several yellow spots on its anterior surface. Cover-slip preparations made from the spleen showed the same short bacillus, with rounded ends, presenting the same poles as those found in the first pig. The pericardium contained a considerable quantity of bloody serum. The heart's blood was fluid, and contained great numbers of the same short bacillus, which took the characteristic stain. The lungs were to all appearances normal. The pleural cavity contained a small quantity of bloody serum. A cultivation on sugar and in bouillon was made from the spleen and heart's blood.

Post-mortem examination of white rat.—Dead about two hours. At the point of inoculation there was a small area of coagulation necrosis, surrounded by a considerable area of edema. The peritoneal cavity was dry. The spleen was enlarged to about four times its natural size, very dark in color, and friable. Cover-slip preparations made of splenic pulp and stained with aniline colors, particularly thionin, demonstrated enormous numbers of a short bacillus with rounded ends, staining more deeply at the poles. The heart's blood contained the same organism in large numbers.

Post-mortem examination of monkey (March 13).—It had been dead about six or eight hours, having been inoculated on March 7, with an emulsion made from a piece of glandular tissue removed from the groin of the dead Chinaman, and having died on the morning of the 13th, after showing signs of illness for two days. At the point of inoculation, which was in the left breast, there was considerable coagulation necrosis. Subcutaneous edema was well marked, especially on the left side over the abdomen. The axillary lymphatic glands on the left

side were enormously enlarged, forming a mass as large as a walnut. There was no enlargement on the opposite side. On section the gland showed congestion and hemorrhages into the gland substance. Cover-slip preparations were made from the interior of the gland and stained with thionin. They showed the presence, in large numbers, of a short coccobacillus, with rounded ends, staining more deeply at the poles. The spleen was greatly enlarged, dark and friable and contained the same organism in enormous numbers. The pericardium contained a considerable amount of turbid fluid. The heart's blood was fluid and contained great numbers of the organism described above. The lungs showed the presence of a well marked pneumonia.

The organism which was present in pure culture in the lymphatic gland of the Chinaman and which was the cause of death of these animals I have obtained in pure culture from all these sources, first from the gland of the Chinaman, and from the heart's blood and spleen of the inoculated animals. I found that it had the following characteristics and have compared it with a culture from Bombay isolated by Pozzi.

Bacillus Pestis, San Francisco.—A small, short, thick bacillus, with rounded ends, frequently occurring in pairs, and in agar and bouillon cultures in short chains. They are non-motile and no spore formation was observed. Colonies on agar plates, in seventy-two hours at 35 C., were .5 to 1 mm. in diameter, round, semitranslucent, with a bluish or opalescent tinge. The surface is rounded, smooth and moist looking, and the consistency in older cultures tough and stringy. The bacillus was a facultative anaerobe and did not liquify gelatin, and was pathogenic to white rats. It stains readily with the aniline dyes, frequently taking the stain more deeply at the ends, the so-called pole staining. This peculiarity was more marked with the carbol fuchsin, but thionin seemed to give the most satisfactory results. In old cultures there were many swollen and rounded forms, which showed the bipolar staining in an exaggerated manner, causing them to almost have the appearance of little circles and crescents. It deodorized by Gram's method. Bouillon was not clouded, and a film formed on the surface, and settled downward in a fine cloud when the tube was jarred. Bouillon cultures answered to Widal's test with Yersin's serum in a most typical and satisfactory manner.

In addition to the above-described case, I have assisted Dr. Wilson in the post-mortem examination of three other Chinese, two of whom I feel positive were plague cases, but I have been unable to prove this for the following reasons:

The cases were in such an advanced state of decomposition when I saw them that there were many organisms present in the blood and organs in addition to one which resembled the bacillus pestis. The animals which were inoculated from the tissues of these cases all died, but of a mixed infection. I succeeded in obtaining a tube of nearly a pure culture of what was morphologically the bacillus pestis from Case 3, and a rat was given the entire tube at one dose, with the result that it died in thirty-six hours. The post-mortem did not show sufficient bacilli in the organs to clinch the diagnosis of plague. My theory is that there were enough toxins present in the culture to kill the rat before the organism had time to multiply in its body. A guinea-pig was inoculated from this rat, but it died of pneumococcus infection, the plague organism having totally disappeared in the passage through the bodies of the two animals. As I have no more material nor cultures from this case I will never be able to prove it was plague, by inoculation experiments, although the post-mortem appearances and the presence of the organism in the blood would ordinarily be considered sufficient evidence. The results obtained in the other two cases were practically the same as in the one just described.

I am of the opinion that the thorough disinfection and cleaning up of the Mongolian quarter, which the San Francisco Board of Health has been carrying out with considerable vigor, has been of invaluable service in checking the spread of the disease before it had fairly gained a foothold. Vigilance should not yet be relaxed in the least, for it would not be surprising if other cases were discovered in the near future. In such event the measures taken will have to be most radical, for the re-appearance of the pest will be evidence that a focus of infection has been established which nothing short of fire will obliterate.

VESICORECTAL ANASTOMOSIS.

WITH SPECIAL REFERENCE TO THE TREATMENT OF EX-STROPHY OF THE BLADDER.

BY JACOB FRANK, M.D.

Surgeon to the German Hospital; Consulting Surgeon to the St. Elizabeth Hospital; Jewish Orphan Home and Home for Aged Jews, Chicago; Corresponding Member of the Sociedad Médica "Pedro Escobedo"; Member of the Pan-American Congress, International Medical Congress, AMERICAN MEDICAL ASSOCIATION, etc. CHICAGO.

(Concluded from page 1178).

EXPERIMENT 4.—A male pug cur, weight 22 pounds, was operated on May 6, 1899, and killed May 21. At the post-mortem the abdominal incision was found firmly united. The omentum was partly adherent around the site of the anastomosis. The bladder was empty and greatly contracted. On opening the bladder no appreciable changes were noticed, and the opening between the bladder and rectum admitted the tip of a finger. The rectal mucosa below and a slight distance above the fistulous opening was reddened, probably by the urine. Both kidneys looked bluish, not enlarged, nor thickened; the capsule stripped easily and was not thickened. On cut section the pelvis was found undilated, perfectly smooth and to all appearances normal. The proportion of cortex to medulla was normal. All other organs were found to be perfectly healthy.

Bacteriologic Examination.—A blood-serum and a glycerin-agar tube were inoculated from the pelvis of each kidney. Of these four culture-media, three remained permanently sterile. One blood-serum tube on the third day showed a moist, shiny, whitish growth which liquefied the culture-soil. The growth consisted of very small bacilli, the character of which was not studied any further. They were not colon bacilli, and their appearance was probably due to contamination. At the site where the anastomosis was made the tissue appeared perfectly smooth and normal. No redness nor swelling was noticeable to the naked eye. Microscopic sections made from this part included both the bladder and rectum.

Microscopic Examination. (Figs. 5 and 6.)—In the rectum the following conditions were noted: The intestinal and bladder walls were completely united, and blended in such a manner that the two tissues formed an acute angle of about 80 degrees, which projected into the bladder. The intestinal surface was lined by mucous membrane, the bladder surface by stratified epithelium. Both these tissues presented a normal appearance. They did not come completely together. On one side the intestinal mucous membrane was thinned out; on the other, layers of epithelial cells lining the bladder were gradually reduced to a single layer. It appeared as if from here the epithelial cells were in the act of growing over to reach the rectal mucous membrane, although a small strip of tissue had not yet been covered by epithelial cells. Here connective tissue laid free to the surface. This tissue consisted of cells of an embryonal type and of fibroblasts. The union between the bladder and rectal walls was complete throughout its entire thickness. One could not distinguish—at the line of the union—what was originally bladder and what was intestinal tissue. The mucous membrane of the rectum, and the epithelial lining of the bladder entirely disappeared at the line of

union. Still, one could see the lymphoid tissue of the rectum at the site of the union, although the lymph follicles varied from the normal in that they showed a diffuse infiltration of polymorphonuclear leucocytes. So numerous were the latter that they predominated over the cells of a lymphoid character.

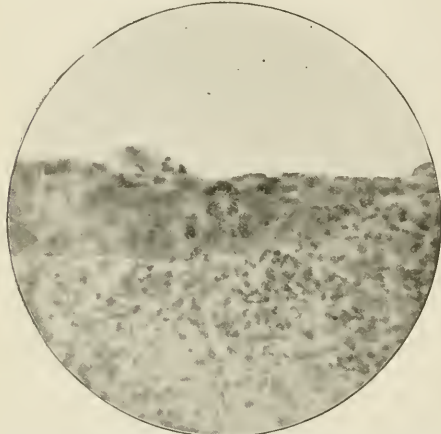


Fig. 5.—From dog No. 4, operated on May 6, 1899; killed May 21, 1899. Section of anastomosis (high magnification). The line of union is to the right, it is not seen in the photomicrograph. The latter shows the vesical epithelium; in it a cell with a karyokinetic figure, indicating a regeneration of the epithelium.

Gram's stain showed, in the tissues of the anastomosis around the line of union, short bacilli with rounded ends, which had kept the stain poorly. These micro-organisms were probably colon bacilli. The examination of the kidney tissue—cortex, medulla and pelvis—showed normal conditions, with no evidence of inflammation or degeneration.

EXPERIMENT 5.—A male dog, weight 30 pounds, was operated on May 11, 1899, killed May 12, and the bladder and rectum removed *en masse*, both ends of the latter tied, as well as the urethra, and water injected into the rectum by means of a syringe. The parts were distended to their maximum without any leakage. The bladder showed a slight redness, although the rectum did not.

EXPERIMENT 6.—A small bitch fox-terrier, weight 15 pounds, operated on May 11, 1899, was killed May 12. The same conditions prevailed as in Experiment 5.

EXPERIMENT 7.—A male black and tan cur, weight 14 pounds, operated on May 16, 1899, died May 20. The post-mortem did not reveal the exact cause of death. The external wound was in good condition, with no peritonitis, and no fluid in the peritoneal cavity. The bladder was empty and contracted and, on opening, showed signs of inflammation. The coupler was still in place and softened. Both kidneys were of the same size and not enlarged, but slightly congested. All other organs were normal except the liver, which was very much congested.

EXPERIMENT 8.—A large Dane bitch, weight 65 pounds, operated on May 18, 1899, died May 21. The autopsy showed the abdominal cavity to be full of a serohemorrhagic effusion which escaped in large quantities. The omentum was engorged with dark blood, and adherent to the abdominal wall at the site of the operative incision as well as to the place of the anastomosis. Peritonitis was absent and all the internal organs, including the bladder, kidney and ureters, were normal.

The macroscopic condition of these does not point to a cause of death in consequence of the operation. The dog had an enlarged thyroid gland, with more or less detached masses growing into the mediastinum, which proved to be a struma colloidea, on microscopic examination. No further microscopic or bacteriologic examinations were made.

EXPERIMENT 9.—A male spaniel, weight 25 pounds, operated on May 21, 1899, died June 9. Several days after the operation a paraphimosis and gangrene of the penis developed. On opening the abdominal cavity, it was found to be empty, with no signs of peritonitis, which was also true of the pelvic cavity. The bladder was contracted and the internal surface somewhat dark red in color. The anastomosis was firm and admitted the tip of the index finger. The bladder surface and rectal mucous membrane about the anastomosis appeared normal. The kidneys were slightly swollen and pale, and the capsules stripped easily. The relation of the cortex to the medulla was normal, and the cortical markings distinct. The pelvis were normal, not enlarged and the mucous membrane smooth. They contained no fluid. The ureters were normal and not dilated. All the internal organs were normal excepting the spleen, which was soft and of a dark color.

Microscopic Examination.—Pieces were taken, for microscopic examination, from the cortex and medulla of both kidneys. The latter pieces included the mucous membrane of the pelvis. The tissue of both kidneys was found to be normal and free from inflammatory and degenerative changes except as to one point. In the medullary portion of the right kidney, near the pelvis, two small foci of round-cell infiltration were found. The infiltrating cells consisted of lymphocytes and polymorphonuclear leucocytes. Bacteria could not be demonstrated in these two small inflammatory areas. The possibility that these foci were due to micro-organisms having migrated from the rectum through the ureters into the kidney can probably be excluded. The round-cell infiltration probably owed its origin to hematogenous influences, possibly from some toxins circulating in the blood.

From the results of the post-mortem and the microscopic examinations, it appears that the death of the dog was not due directly or indirectly to the operation, nor was anything found that pointed to an infection of the kidneys from the intestines.

EXPERIMENT 10.—A male fox-terrier pup, operated on May 27, 1899, died May 29. The autopsy revealed the fact that the dog died of a general peritonitis. The abdomen was full of a sanguinous fluid and the omentum engorged with blood. The

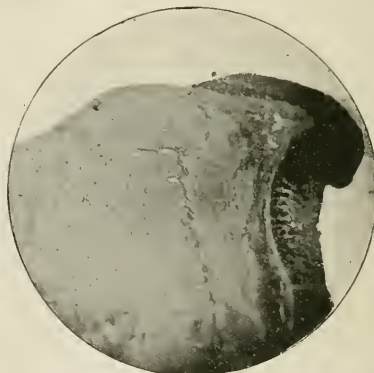


Fig. 6.—Dog No. 4, operated on May 6, 1899; killed May 21, 1899. Section of anastomosis (low magnification). The line of anastomosis is shown in the middle of the field, running from above downward. To the left is the vesical, to the right the intestinal tissue.

bladder was contracted and empty, and the mucous membrane, on cut section, showed signs of inflammation. The site of anastomosis was firm and showed no leakage. The coupler was still in place and retained its shape. The right kidney was slightly congested, but not enlarged. The capsule stripped easily and the cortical markings were not well defined. The pelvis contained no fluid and the ureters were not enlarged. A similar condition was found on the left side. There was no microscopic nor bacteriologic examination made.

EXPERIMENT 11.—A large black, male Gordon cur, weight 85 pounds, was operated on May 30, 1899, and killed June 5. The post-mortem showed the external wound suppurating and the abdomen empty. The bladder was contracted and thickened and the mucous membrane of both bladder and rectum appeared reddened on cut section. The site of anastomosis was firmly united and, on distending the bladder and rectum with water, no leakage occurred. Both the kidneys and ureters appeared normal, with the exception that the vessels of the capsule were slightly congested. No further examination was made.

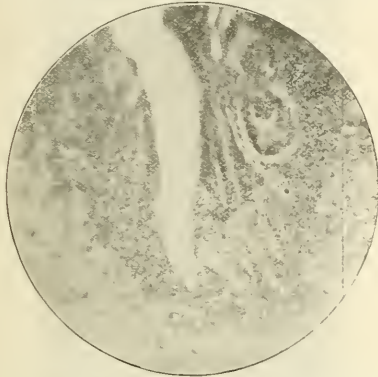


Fig. 7.—Dog No. 13, operated on June 1, 1899; killed June 28, 1899. Section of anastomosis (high magnification). On the left of the field the vesical tissue, on the right side the intestinal mucosa. The columnar epithelium of the intestinal mucosa has grown toward the vesical side and lines to some extent the vesical surface.

EXPERIMENT 12.—A male dog, weight 30 pounds, operated on June 1, 1899, was found dead June 3. A post-mortem revealed the abdomen empty, with an absence of peritonitis and the omentum adherent to the line of operative incision. The bladder was thickened, well-contracted and showed signs of inflammation, but it did not extend below the sphincter vesicæ. The mucous membrane was swollen and reddish-brown in color. Under hydraulic pressure there was no leakage at the site of anastomosis. The coupler was still hard and in place. The kidneys were of normal size, but bluish in color, and on stripping off the capsule the surface vessels were found enlarged. On cut section the cortex, as well as the medulla, was of a dark reddish-brown color with the cortical markings ill-defined and the pelvis smooth and containing no fluid. The ureters were to all appearances normal. All the other organs were normal excepting the liver, which was greatly congested. A further examination was not conducted.

EXPERIMENT 13.—A bitch, weight 40 pounds, operated on June 1, 1899, was killed June 28. The animal was well nourished, in perfect health, very playful and lively, and killed by chloroform narcosis. Externally the abdomen presented, in the median line, beginning about an inch above the symphysis pubis and extending upward for a distance of about $2\frac{1}{2}$ inches, a healed, smooth, linear cicatrix. On opening the abdomen by a long median incision, the large omentum was found very slightly adherent to the internal surface of the abdominal parieties at the site of the cicatrix. The extent of these adhesions was very small. The omentum showed no signs of inflammation. The abdominal and pelvic cavities did not contain any fluid. The peritoneum was smooth and shining, and showed no redness nor evidence of inflammation. The bladder was well contracted, firmly united to the rectum, and the place of union everywhere covered by an uninterrupted coat of smooth peritoneum. An inspection of the intestines showed them to be normal.

The kidneys were of normal size and appearance, but, like all the internal organs, were congested in consequence of the death by chloroform. The cortex and medulla showed

normal relation and appearance. The pelvis did not contain any appreciable amount of fluid. The mucous membrane of the pelvis was smooth and pale, and presented no signs of inflammation. The ureters were not enlarged. The internal surface of the bladder, which contained some fecal matter, was thrown into rugæ. In color, this organ was pale pink, and showed no inflammatory changes microscopically. The anastomosis was firm, and admitted the tip of the index finger. The anterior aspect of the ring was lined by bladder tissue, the posterior by rectal mucous membrane, which appeared perfectly normal. Where the tissues from the bladder and the rectum met there was a slight depression which ran along the whole opening. The rectal mucous membrane in the neighborhood of the anastomosis appeared normal. All internal organs, such as the spleen, liver, lungs, heart, etc., were normal.

Anastomosis (Figs. 7 and 8).—The union between the wall of the rectum and that of the bladder was perfect. There was no doubling up of either intestinal or vesical tissue, and the line of union contained very little newly-formed connective—cicatricial—tissue. No evidence of inflammation was found in the line of union. The rectum presented a normal histologic appearance. The internal surface of the bladder, however, showed some marked changes. The lining epithelium at and near the point of union was missing, and the tissue forming the surface had the character of granulation tissue. It consisted of a vascular tissue formed of round cells imbedded in a matrix of fusiform cells and connective-tissue fibers. It appeared, therefore, that the presence of the fecal matter with its numerous bacteria had set up an inflammatory reaction on the internal surface of the bladder. Bacteria, however, were not found in the granulation tissue, nor in the tissue forming the line of union between the bladder and rectum. The following very interesting observation was made at the line of union: In some places the columnar epithelium of the rectal mucous membrane had grown from the rectal tissue over the bladder surface. This covering of the bladder surface by intestinal epithelium was not yet very extensive, but there undoubtedly existed a marked tendency of the intestinal epithelium to grow by extension over the bladder surface and cover it, as in consequence of irritation it had lost its own epithelium. In neither kidney did the pelvis, medulla nor cortex pre-



Fig. 8.—Dog No. 13, operated on June 1, 1899; killed June 28, 1899. Section of anastomosis (low magnification). The left side of the field shows the vesical, the right side the intestinal tissue.

sent appreciable histologic changes, and there were no signs of inflammation or degeneration. There were found, however, a few micro-organisms in both organs, as follows: In the right kidney, in tissue near the surface of the pelvis, were bacilli, a few diplococci and some deeply staining round bodies, which looked like either torula saccharomyces or protozoic bodies; in the cortex, a few bacilli in the convoluted tubules and in Bowman's capsules. In the left kidney, in tissue near the surface

of the pelvis were a few bacilli; in the cortex, likewise a few bacilli. These micro-organisms were nowhere found in large numbers, but only seen sparingly here and there.

Bacteriologic Examination.—Two glycerin-agar tubes were inoculated from the pelvis of each kidney. Of each of the two groups one developed a growth, consisting in each instance of a mixture of bacilli—colon as it appeared—and diplococci.

It must be conceded that both kidneys in this case had become infected, but it appeared, moreover, that the infection must have only recently occurred. The number of micro-organisms found in the kidney was not large, and there were not yet present any appreciable histologic changes. The mucous membrane of the bladder, it seems, in consequence of the irritation from the fecal matter, had lost its epithelium, in part at least, and had developed signs of a reactionary inflammation. It is not unreasonable to suppose that the infection which had occurred might have been prevented by regularly washing out the bladder, which, in the case of a dog, can not be well done, but which could be done with a human patient.

EXPERIMENT 14 (Fig. 11).—A black bitch, weight 23 pounds, operated on June 5, 1899, was killed November 22, before the Chicago Medical Society. On opening the abdominal cavity, the peritoneum, including the omentum and all the abdominal structures, appeared normal and free from any inflammatory changes of reaction. The anastomosis between the bladder and rectum was firm and covered by normal peritoneum. Before cepting as to an infection *in situ*, the kidneys were freed and disturbing the relation of the anastomosis any further, ex-lifted out of their normal position, and inoculations made from the pelvis of each, into glycerin-agar tubes, in the usual way. The kidneys and ureters were normal in color and size, and the substance of the kidneys was also found to be normal on cut section. The bladder was firmly contracted and the mucous membrane of both bladder and rectum looked perfectly normal. The fistulous opening between the bladder and rectum was small, and the tissues forming it corrugated and healthy. The other organs were found normal.

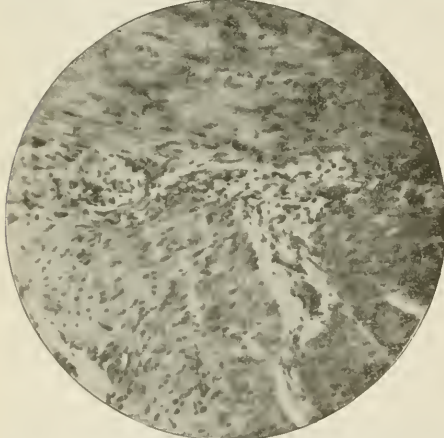


Fig. 9.—From dog No. 15, operated on June 10, 1899; killed September 11, 1899. Section of anastomosis. Spencer prof. $\frac{1}{4}$ in.; Leitz. oc. No. 3. The upper part of the field shows the intestinal, the lower part of the field the vesical mucularia.

Bacteriologic Examination.—The four test-tubes inoculated from the pelvis of the kidneys were kept in the incubator, at blood temperature for six days, and remained absolutely sterile, no growth of any kind developing.

Histologic Examination.—The tissues of the cortex and medulla of both kidneys were normal. The pelvis of the kid-

ney on either side was lined by normal epithelium and the subepithelial tissue of the pelvis showed a moderate amount of round-cell infiltration. The cells forming this infiltration

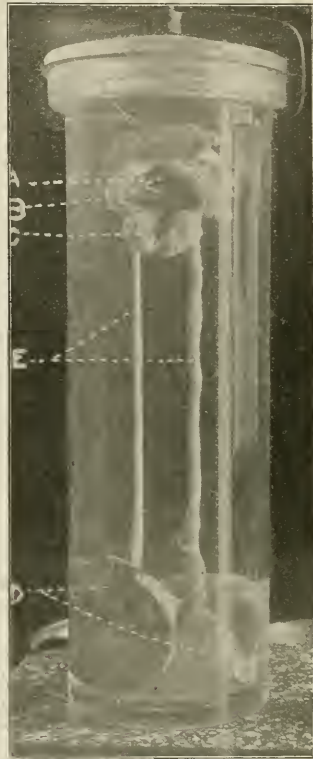


Fig. 10.—Experiment No. 3.—A. Opening between bladder and rectum. B. Bladder. C. Prostate. D. Kidneys. E. Ureters.

were of the type of young connective-tissue cells and lymphocytes. Polynuclear leucocytes were not seen anywhere in the subepithelial tissue. No bacteria of any kind could be demonstrated, either in the pelvis, the medulla or the cortex of either kidney.

From the above results it is safe to say that the kidneys in this dog were free from any infection and, to all appearances, the canine was in perfect health.

EXPERIMENT 15.—A large male, Gordon cur, weight 50 pounds, operated on June 10, 1899, was killed September 11. This dog suffered from the red mange, but otherwise was apparently healthy. The post-mortem showed the external operative wound completely healed, with the exception of a small stitch-hole abscess. There were slight adhesions of the omentum at the site of the abdominal incision, and it was also slightly adherent to the left side of the anastomosis, at which place a loop of intestine was likewise fastened by small bands of fibrous tissue. There were no other evidences of peritonitis. The anastomosis was firm and covered by smooth peritoneum with the bladder well contracted. The right kidney and ureter appeared normal in color and size, but the left kidney showed injected vessels and was of a darker color than the right. The left ureter was increased to double the size of the right. All other organs looked normal. Inoculations were made from the pelvis of both kidneys and the colon bacillus developed from both groups.

Histologic Examination (Fig. 9).—The subepithelial tissue of the pelvis of both kidneys showed granulation tissue densely

infiltrated with round cells. In this were also demonstrable short plump bacilli with rounded ends (colon bacilli) and staphylococci. The kidney substance proper, of the right kidney, did not show any marked changes, but in the interstitial connective tissue there were found a very few bacilli of the

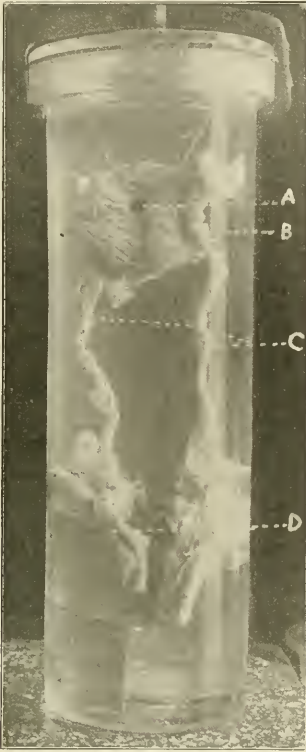


Fig. 11.—Experiment No. 14.—A. Opening between rectum and bladder. B. Rectum. C. Ureters. D. Kidneys.

type described above. The left kidney showed interstitial foci of small round-cell infiltration, and these areas also contained many colon bacilli and a few staphylococci. Numerous bacilli were likewise found in the glomeruli.

The line of union at the site of the anastomosis demonstrated a very intimate blending. There was practically no connective-tissue scar, the muscularis of the rectum and that of the bladder being in the closest apposition. The rectum was covered by normal mucosa with a normal epithelial lining. The internal surface of the bladder was void of epithelium, but there was present granulation tissue containing many young embryonal connective-tissue cells and lymphocytes as well as colon bacilli and a few staphylococci.

The results of this examination unquestionably showed that an infection had occurred of both the bladder wall and kidneys, although the changes in the right kidney were comparatively slight.

CONCLUSIONS.

From the careful histologic and bacteriologic examination which was conducted in a number of the cases operated on, it appears beyond a doubt that vesicorectal anastomosis may be performed on a dog without leading to an infection of the kidneys. In two instances both the histologic and bacteriologic examinations showed a

total absence of infection, and one of these cases was that of a dog killed six months after the operation. If the results on dogs, which naturally can not be kept under the best hygienic conditions and where no after-treatment could be instituted, furnished results like the above, it is not unreasonable to expect far better terminations in the human patient where after-treatment such as washing out the bladder could be commanded.

The advantages of vesicorectal anastomosis may be summarized as follows: 1. Simplicity and shortness of time required for the operation. 2. No danger of ureteral constriction by the bowel scar, nor sloughing of an implanted trigone, as in Maydl's operation. 3. Comparatively little danger of infection. 4. It is not only applicable in extrophy of the bladder, but also in other pathologic conditions of that organ rendering life a burden.

In concluding this paper I desire to extend my thanks to Dr. Sylvan Kunz, Dr. Mortimer Frank and Mr. Richard Espig, for their valuable assistance.

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ARGUMENT AGAINST SENATE BILL 34, FIFTY-SIXTH CONGRESS, FIRST SESSION, GENERALLY KNOWN AS THE "ANTIVIVISECTION BILL."

BY WILLIAM H. WELCH, M.D.

PROFESSOR OF PATHOLOGY, JOHNS HOPKINS UNIVERSITY, BALTIMORE, MD.

On February 21, 1900, the Senate Committee on the District of Columbia, with Senator Gallinger in the chair, gave to advocates and opponents of the "antivivisection bill" a public hearing, at which I presented in its main features the following argument. After this hearing, on March 9, 1900, an amended or substitute bill, still designated S. Bill 34, was printed for the committee. The principal changes from the original bill, in brief, are as follows: 1. The title now reads: "A bill for the regulation of vivisection in the District of Columbia." 2. The restrictions apply for the most part only to experiments on warm-blooded animals instead of to those on all vertebrates. 3. Experiments to acquire "surgical experience" are now allowed. 4. The class of officers of the United States Government who may experiment without a license from the District Commissioners is defined. 5. The use of other anesthetics besides ether and chloroform is allowed. 6. "Tests of foods" and "experiments relating to the communicability of disease" are added to the small list of experiments in which the animal need not be anesthetized nor killed afterward. 7. The permission to illustrate lectures in hospitals by animal experiments is withdrawn. 8. The requirements for special certificates by act from licensees—to experiment on a dog, or cat, on a horse, ass, or mule, are omitted. 9. The acquirement of physiologic knowledge is omitted as a permissible purpose of demonstrative experiments in lectures to medical students. 10. Licenses may be granted to any qualified person over 21 years of age. 11. All places where experiments are performed must be approved and registered. 12. The reports on the methods, the number and species of animals used, and the results of experiments must be made on January 1 and July 1, to the Commissioners, a delay not exceeding six months for unapproved or unfinished experiments being granted. These reports must be published.

The only concessions of importance made by these changes relate to the exclusion of cold-blooded animals, the omission of two classes of special certificates, and a wider choice in the selection of diseases. In several particulars the restrictions are made more severe, and in general the worst features of the bill remain unchanged.

In the following argument I have taken into consideration the changes made by the substitute bill, so that in some respects it differs from that presented at the public hearing on February 21.

It is most significant that, notwithstanding the chairman's suggestion at the outset of this hearing, that time might be saved by the omission of a detailed presentation of the benefits of vivisection, inasmuch as this bill, it was said, is not intended to hinder useful experimentation on animals, so large a part of the remarks of the previous speakers on both sides has been devoted to a discussion of this very subject. In truth, it could not be otherwise, for the principal line of division between the advocates and the opponents of this bill is marked by their opinions on the utility of animal experimentation. However much the advocates of the bill may assert that its enactment will not interfere with the proper uses of such experimentation and is designed only to check abuses, it is to be noted that the main part of their argument is an attack on the practically unanimous opinion of well-informed scientific and medical men that experimentation on animals is essential to the advancement of physiology and medicine and has conferred inestimable benefits on mankind. Nor is it surprising that antivivisectionists should cling tenaciously to this position, indefensible as it has become, for it is apparent that those who are convinced of the great value of experiments on animals, to science and humanity, will hesitate long before approving any legislation likely to check the progress of scientific and practical medicine.

Men who hold this conviction are not likely to give any favorable consideration to legislative proposals intended to restrict the use of an important method of scientific research until it has been demonstrated that its possible abuses are in fact common and great and uncontrollable by existing legislation and by public opinion, including that of the medical profession. They will inquire carefully whether the proposed legislation will actually reach the abuses, if these should be shown to exist, and, even if it should do so, whether it may not do more harm than good by obstacles put in the way of proper and useful experimentation. They may even pause to consider whether there may not be some inequality in singling out for penal legislation the infliction of pain on the lower animals for the purposes of biologic and medical science, while leaving untouched an immeasurably greater amount of suffering inflicted on animals by man for his food, his adornment, his amusement and other objects which it would be difficult to show are higher and more worthy than those of the physiologist and the physician.

I have sometimes wondered at the attitude of mind of professed humanitarians who are so eager to collect all testimony, even the most obscure, trivial and discredited, which may make the public believe that some new remedy or improved method of treatment, such as antitoxin or antiseptic surgery, demonstrated to the satisfaction of most physicians to be a price-

less boon in saving human lives and relieving suffering, is of no value whatever. Still, it must be admitted that for the sake of their cause the antivivisectionists do well to ransack, as they do, medical journals and books for statements which may minimize the effects on the public of the constantly increasing evidences of the benefits to mankind, and indeed to animals also, derived from the results of animal experimentation. Of course, they can find statements in contradiction of almost any generally accepted truth in medicine, as they could in any science, but in view of the proverbial disagreements of doctors, and of the little interest which most of those who apply scientific discoveries have in informing themselves of the sources of their knowledge, it is on the whole surprising that the familiar list of medical quotations, which has so long done duty in antivivisectionist publications in opposition to the great value of experimentation on animals, should be so meagre, in contrast with the enormous preponderance of testimony on the other side, and should be representative of so few names of eminence, I believe scarcely one which would be generally recognized by physicians as of a writer especially competent to speak on this subject, however distinguished in other lines. So rapid have been the advances of medicine and surgery in recent years, attributable to knowledge gained from experiments on animals, that it may be urged that an adverse opinion expressed even a decade ago would be reversed to-day, but I am not sure that the exceptional physician who was blind to this source of light at any time since the days of Harvey would see it to-day, notwithstanding its greatly increased brilliancy.

It has seemed to me appropriate to say this much in explanation of the emphasis laid by previous speakers on the subject of the utility of vivisection, but it is not my purpose to set forth the actual benefits secured by this method of investigation. This has already been done by Dr. W. W. Keen, Dr. H. A. Hare and other speakers, although none of these gentlemen would claim that he had been able to present a tithe of the debt which physiology and the healing art owe to the results of animal experimentation. Those of the public who wish fuller knowledge on this subject, and who care to read a larger part of the evidence which has led the vast majority of the most humane of professions to approve of vivisection I would refer to the recent book by Stephen Paget, F.R.C.S. Eng.—"Experiments on Animals. With an introduction by Lord Lister." (London, 1900.)

One other point before I pass to the examination of the bill before us: I shall be so bold as to remind the distinguished lawyers on the other side, who have to-day so recklessly charged those with cruelty who experiment on animals, that the legal definition of cruelty given by the "Century Dictionary" is: "An act inflicting severe pain and done with wilfulness and malice." Judge Hoar, in a Massachusetts case, says: "Pain inflicted for a lawful purpose and with a justifiable intent, though severe, does not come within the statute meaning of cruelty." (James M. Beck, of the Philadelphia Bar: *The Legal Aspects of Vivisection*, *Medical News*, 1890, lvi, p. 280.) While I do not deny that cruel experiments, in the sense of heedless causing of pain, have been made, I am convinced that they are very exceptional. The accusation of cruelty, when made, as it often is by our opponents, and has been made to-day, against experimenters on animals, as a class, is false and slanderous. In no other group of cases in which animals are made to suffer for the benefit of man is equal care exercised to avoid the infliction of needless pain. The difference is simply immeasurable between the solicitude in this regard and the quantity of actual suffering inflicted in scientific experiments on the one hand and, on the other, the heedlessness and the vast unnecessary amount of pain inflicted in the slaughtering, the sexual mutilation, the transportation, the poisoning, and the hunting, trapping and shooting of animals. On the one side hundreds, on the other millions of animals are concerned annually; on the one side a serious purpose to advance scientific knowledge and directly promote the healing art, on the other the satisfaction of appetite, often in a luxurious way, the exercise of some convenience or economy, the gratification of the desire for sport or of some whim; on the one side insensibility to pain secured by anesthetics, as a rule, whenever practicable, and this is so in the great majority of cases, on the other very little regard to the avoidance or reduction of unnecessary suffering.

In speaking on a former occasion of the self-sacrifice and benevolence of the members of the medical profession, your chairman justly said that no legislation should be enacted that would unnecessarily hamper them in their pursuit of useful knowledge, and he has to-day very properly asked that it shall be pointed out in what way the proposed legisla-

tion would interfere with useful experiments, with such experiments, for example, as those cited by Dr. Keen, Dr. Hare, and other speakers. It is asserted with much insistence by its advocates, that this bill is "moderate," "reasonable and wise," "restrictive and not prohibitive," "not an antivivisection measure," "does not impede in any way the proper use of animal experimentation," "goes to the farthest extreme of concession in the anxiety of its framers to yield to the wishes of scientific men so far as may be consistent with the principle of legal supervision," "concedes everything of utility." It is my especial purpose to examine these contentions in the light of the specific provisions of the bill, and I hope to be able to demonstrate to the satisfaction of the members of this Committee that this bill is unnecessary, is vague and contradictory in some of its provisions, places the entire control of a scientific method of investigation in the hands of laymen not qualified to exercise such arbitrary powers, absolutely prohibits important and useful experiments and can be administered so as to prohibit all experiments, surrounds the practice of animal experimentation with absurd and vexatious restrictions, and, if enacted into law, would inflict serious injury on the progress of science and medicine.

I have already traversed much of this ground in my letter to a former member of this Committee, the Hon. Arthur P. Gorman, printed as Senate Document No. 104, 55th Congress, Second Session, (also in THE JOURNAL, Feb. 15, 1898, p. 285), which I beg leave to offer for your consideration. I would also call your attention to other documents of similar purport, especially the letter of the Secretary of Agriculture, the Hon. James Wilson, printed as Senate Document No. 112, 55th Congress, First Session, that of Dr. Dabney, President of the University of Tennessee and former Acting Secretary of Agriculture, to the Chairman of the Committee on the District of Columbia, the Hon. James McMillan, and the recent letter of Dr. Woodward (THE JOURNAL, February 10, p. 381), the Health Officer of the District of Columbia, to the Commissioners of the District.

As Dr. Salmon has pointed out at this hearing, and as Dr. Woodward has shown in his letter, just referred to, there is no need for additional legislation restricting the practice of animal experimentation in the District of Columbia. The existing law permits only "properly conducted scientific experiments or investigations, which experiments shall be performed only under the authority of the faculty of some regularly incorporated medical college, university or scientific society." The bill before us attempts to define with considerable detail, what constitutes a properly conducted experiment, and with what success I propose presently to show. A commission of scientific experts would find it difficult, if not impossible, to prescribe with similar detail the proper conduct of all scientific experiments on animals, and most assuredly such experts have had no hand in the drafting of this bill. If it be asked, Who shall be the judge of the proper conduct of the experiments? I reply: In the first instance the scientific men who act "under the authority of the faculty of some regularly incorporated medical college, university or scientific society," then the governing bodies of these incorporated institutions, and in the final decision the courts, as provided by the existing law, and most certainly not, as proposed in this bill, the Commissioners of the District of Columbia, who have no special qualifications to judge of such a matter.

There is not a particle of evidence that abuse of animal experimentation has ever existed or is likely to arise in the District of Columbia or, if it should occur, of the inability of the present law to cope with it. I know that one can conjure up in his imagination horrible possibilities, to meet which no law would seem too severe, and that charges of atrocious cruelty are spread before the public by antivivisectionists with reckless disregard of the facts, but we court the fullest investigation, by any impartial body of men, of the actual conditions of animal experimentation in this District and in this country, and we are confident that such an investigation would show the groundlessness of these imaginings and the wantonness of these accusations. Before any such legislation as that embodied in this bill is recommended, in the face of the unanimous protests of the scientific and medical societies and of the great body of physicians of this country, it surely seems incumbent upon your honorable body to make such an official investigation as we have often asked for.

Although we are here to discuss this particular bill, and not the general subject of legislative restriction of experimentation on animals, I am free to confess that, I consider the public opinion of the medical profession, which is as sensitive to actual cruelty as that of any "humane society," an efficient safeguard in this matter, and amply sufficient when combined, as it is here, with an adequate law. As has been said: "Probably

the members of antivivisectionist societies do not believe that there is any such professional public opinion; but there is, and it is an effectual, though quiet, check on the few who need it. But if any influence from the outside could injure it, it would be the constant ignoring and denying of its existence. It is not generally found an incentive to honesty to tell a man: "you would be a thief if you could, and therefore I shall keep all my goods under lock and key when you are about, and have my eye on you when you don't expect it." Weak honesty grows strong when leaned upon; but even strong humanity, insulted and disbelieved in, may hear itself called callousness until it ceases to care for the charge. (Physiological Cruelty: or, Fact v. Fancy. An inquiry into the Vivisection Question. By Philanthropos. P. 100. London. 1883. This is the best book with which I am acquainted on the general subject of vivisection.)

If all that could be said against the legislation proposed in this bill were its needlessness, it might be allowed to cumber the statute books, with no charge against it more serious than meddlesomeness, albeit, to my thinking, that is not a slight charge. But this legislation is very far from being harmless. While it must be difficult for those unfamiliar with the methods and results of scientific inquiry and practical work in the directions touched by this bill to realize fully all of the ways in which the provisions of this complicated measure would hamper investigations of importance to mankind, enough can be made clear to any reasonable man to show that neither this bill nor anything like it should ever be enacted into law.

Of the many faults of this bill there is none more serious in principle or likely to be more hurtful in the actual working of the proposed legislation than that this bill puts in the hands of men, who need not be and are not likely to be physicians or men of science, arbitrary powers, requiring skilled knowledge in their use, concerning matters of the highest importance to medicine and biologic science and to the welfare of mankind. To the Commissioners of the District of Columbia, of whom two make a majority, is given uncontrolled power to determine by whom and where experiments shall be made, to disallow or suspend at any time permission once granted, to demand at stated times reports in any desired form or detail concerning the methods and results of experiments, which reports shall be published, and to be, in the last resort, the supreme judges as to whether a certain experiment will advance physiologic knowledge or knowledge "useful for saving or prolonging life or alleviating suffering," or will aid in the acquirement of "surgical experience." No provision is made for an appeal or a hearing on the part of any applicant or experimenter who may consider himself aggrieved. Of the partial exemption of officers of the Government and of division of authority with the President of the United States I shall speak later.

Nobody can foretell in what manner the commissioners will exercise these extraordinary powers if conferred on them. It lies entirely in their discretion to grant all licenses and certificates or to refuse all and thereby prohibit all animal experimentation in the District, except that conducted under severe restriction by officers of the Government. It can be confidently predicted that the antivivisectionists will use every political and other influence in their power to secure the appointment of commissioners committed to a policy hostile to animal experimentation. Physicians have other matters to attend to and rarely engage in political agitation. I know of no reason why either of the two eminent lawyers who have spoken to-day for our opponents should not be considered qualified for the office of Commissioner of the District of Columbia, but, entertaining the opinions on vivisection which they have expressed, how could they conscientiously grant a single license to experiment on animals? In whatever way the commissioners might exercise their uncontrolled discretion, whether they made the law mean much or little, one thing is certain: In matters requiring expert knowledge and of high importance to mankind, those who do not know would be put in supreme authority over those who know. This is a monstrously false and dangerous principle to embody in law. It needs knowledge, often a great deal of it, to do good, but none to hinder it.

It has been said that there is no more reason to object to the requirement of a license to experiment on animals than to that of a license to practice medicine. There are differences between the two cases, which I shall not pause to discuss, for this bill is not a simple licensing measure. To make the conditions of the two cases analogous, in accordance with the provisions of this bill, the law to license practitioners of medicine should provide that a body of laymen should determine the qualifications of applicants and grant the license to practice, that the practice of each licensee must be limited to certain specified localities, that the permitted manner of treatment

should be prescribed with some detail, that certain therapeutic procedures should be prohibited, that each practitioner must report at stated times his methods and results, and the number of patients treated to the licensing body, which shall publish the reports, and that a body of inspectors with no statement as to their qualifications should keep the licensed practitioners under surveillance and should report from time to time the results of their observations. Manifestly absurd as such requirements as these would be if applied to the regulation of medical practice, they are scarcely less absurd when applied, as proposed in this bill, to the legal regulation of animal experimentation.

If I were to enter into a criticism of the smaller details of this complicated bill. I should inquire, among other things, why only certain professors in a medical school are accorded the privilege of signing an application for a license, why, for example, the professors of pathology and of physiologic chemistry are excluded, but it seems to me more important for my present argument to take up the larger defects of the measure.

The bill "for the further prevention of cruelty to animals in the District of Columbia," originally introduced in the Fifty-fourth Congress, placed the officers of the United States Government completely under the control of the Commissioners of the District in respect to animal experimentation, although the experimental work of the United States Bureau of Animal Industry concerns itself with the agricultural and stock-raising interests of the entire country. The subjection of Government officers to the authority of the District Commissioners in a matter of this kind is so manifestly improper that the bill, after several modifications, now exempts from the necessity of securing a license from the commissioners any "medical or scientific officer of the United States Government duly authorized by the head of a department." But the bill still provides that those officers of the Government who engage in animal experimentation must report to the District Commissioners twice a year on "the methods employed, the number and species of animals used, and the results of their experiments, in such form and with such further details as the said commissioners may require," and all these reports must be published. It is not the head of a department who is to make these reports, but such of his subordinates as may be engaged in experimental work. All of the other restrictions of the bill, some of which will require interpretation by the administrators of the law, also apply to the experimental work of the officers of the general Government, which work is therefore still placed to a considerable degree under the control of officials of the District of Columbia.

The present bill, in its recently amended form, requires "that every place for the performance of experiments on living animals shall first be approved by the Commissioners of the District and shall be registered in such manner as the said Commissioners may direct." In the previous bill the provision as regards registration of places was mandatory only for places of medical instruction. It will be noted that this provision applies to experiments on any living animal, invertebrate as well as vertebrate. This bill is the first which has ever taken under its protection mollusks, worms, insects and other invertebrates. This is really so absurd that it may be presumed to be the result of inadvertence, but, if so, it illustrates the lack of care in the construction of the bill.

The requirement that no experiment shall under any circumstances be made except in a place previously approved and registered is a very injurious one. A number of instances might be cited of the ways in which this requirement may interfere with useful experimentations and even involve some danger to human beings and animals. An emergency may readily arise in which some inoculation test for diagnostic or other purposes can most advantageously be performed where the material obtained directly at autopsy or from a patient or sick animal is directly at hand. In some instances absolutely fresh material, possibly inoculation directly from one animal to another, or from a human being to an animal, is essential for the success of an experiment. There may be considerable danger involved in the transportation of some highly virulent material, perhaps for a considerable distance, to a registered place, and there may be good reason for not taking infectious material away from a locality already infected and introducing it into an uninfected registered place. To confine the work of an experimenter absolutely and under all circumstances to the particular place for which he has secured a ticket of registration is a hard and unnecessary restriction, and in introducing this provision the new bill has gone beyond its predecessors and beyond the British law.

Undoubtedly the provision of this bill, as of all antivivisection bills, which is dearest to the heart of the antivivisectionist, is that for the official inspection of experiments on

animals. The bill provides (Section 6): "That the President of the United States shall cause all places where experiments on living warm-blooded animals are carried on in the District of Columbia to be, from time to time, visited and inspected without previous notice for the purpose of securing compliance with the provisions of this Act; and to that end shall appoint four inspectors, who shall serve without compensation and who shall have authority to visit and inspect the places aforesaid, and who shall report to the President of the United States from time to time the results of their observations therein, which shall be made public by him."

It will be observed that this section introduces a second authority in the administration of this law. The Commissioners of the District grant the licenses of persons and places, while the President of the United States appoints the inspectors and receives their official reports. This division of authority would not seem conducive to the smooth working of the law and might readily lead to serious conflicts in its two-headed administration, especially if one head be friendly and the other hostile to experimental investigations.

But the monstrous evil of the provision regarding inspectors is that not a word is said as to the need of any special qualifications on the part of those who are to scrutinize and report on the experimental work of physicians and scientific men. The duties of these inspectors, according to the law, will require them to base their reports on such matters as whether animals are completely anesthetized, whether movements of an animal are manifestations of conscious pain or only of reflex action whether experiments are conducted by competent persons and in a proper manner, and whether they are useful for the particular purposes specified in this bill, and fall under the categories of permitted experiments. Surely some knowledge of physiology and some appreciation of the needs of medicine and surgery are required for the performance of the remarkable and responsible functions of these inspectors.

The bill originally introduced provided that this inspection should be by an agent of the Washington Humane Society, a notoriously antivivisectionist society, which claims the responsibility for this bill. It can not be doubted that this Society and antivivisectionists in general will claim and in all probability will secure representation among the inspectors. It would be quite within the power of even one energetic and officious inspector, without physiologic knowledge and opposed, as most antivivisectionists are, to all investigations requiring experimentation on animals, to make the conditions of experimental work simply intolerable. Anybody who has serious and legitimate business to attend to has a right to object to constant intrusion and disturbance, and work requiring delicate manipulations and undivided attention can not go on under such interruptions. When to this nuisance is to be added the publication of official statements concerning difficult matters of which the observer is not qualified to judge, I submit that before you impose on experimenters this system of inspection you should be convinced that very great abuses are to be corrected and can be corrected by no procedure of a less drastic nature.

It is utterly misleading to draw any analogy between this sort of inspection and the inspection of banks and insurance companies, and it is a libel on common sense to assert, as is done by advocates of this measure, that fear of the exposure of wanton cruelties moves experimenters to object to any such system of inspection as that proposed in this bill. It is not true that secrecy surrounds the practice of animal experimentation. Reports of experiments are published in detail. Any qualified person has free access to the laboratories where such experiments are made, but to throw them wide open to the public is open to the same kind of objections as would be similar publicity for surgical operations. The antivivisectionists are fond of quoting from an address by Dr. Parvin, delivered in 1891, but I have never known them to cite in their writings, except in garbled form, the following sentences from this address: "Should the law restrict the performance of vivisection? I think it ought, chiefly as an expression of public sentiment and for the moral effect, for violations of its provisions could usually only be discovered by a system of espionage, by the employment of detectives, of spies and informers, utterly alien to our system of government, and who are as a rule abominable." This quotation in antivivisectionist publications always, I believe, stops short with the first third of the last sentence.

(To be continued.)

FIVE MEDICAL professors at the Moscow University have served their quota of 25 years and now retire.

Therapeutics.

Quinin in Malaria.

The following clinical note is from Dr. Ballard, health officer of Natchez, Miss:

In the simple intermittent fever quinin is undoubtedly a specific; but when cured, and no change is made in the environments—as with the cotton planter of the lowlands on both sides of the river—re-infection is certain to take place, and in these cases quinin, in usual doses, is extremely dangerous. All cases of hematuria of malarial origin occurring under my observation (in whites) have been due to re-infection and followed the protracted use of quinin. One or two grains dissolved in half a dram of dilute phosphoric acid is a benefit in preventing a second invasion, and is a tonic of superb power. I use something like the following:

- R. Quinæ sulph. ʒiii
- Tinct. ferri chloridi ʒi
- Acidi phosphorici ʒiv
- Spts. frumenti, q. s., ad ʒviii
- M. Sig. Teaspoonful in one-third glass of water at meals.

Now as to the treatment of hematuria, when found. I use ergot in half-dram doses every three or four hours, and strychnin hypodermically in full doses. I flush the bowels with the hyposulphite of sodium, and I have found an emulsion of turpentin of service in some cases. If the patient is restless and fretful, an enema of sixty grains of potassium bromid is of unquestioned utility.

The so-called typhomalarial fever is a malarial fever in which quinin is entirely useless, save in small doses as a tonic. I have never seen a case of intermittent fever that would not yield to an acid solution of quinin, if a cathartic is used to begin treatment. For this I use:

- R. Hydrarg. chloridi mitis gr. x
- Podophyllin
- Ipecac, āā gr. i
- Ext. nucis vomicæ gr. ʒss
- Ext. hyoscyami gr. iv
- Sodii bicarb. gr. xi

M. The solution is left for some minutes in contact with the ear. The treatment induces desquamation of the tympanum and of the meatus, which calls for frequent cleansings. This action of picric acid contraindicates its use in cholesteatoma.

Experimentia docet. We do not use quinin in the hemorrhagic forms of malarial fever, and are now successful, whereas we were failures with quinin. —*Therap. Gazette.*

Suppuration of the Ear.

Lanoix, in *Rev. Medicale*, states that picric acid, being not only analgesic and antiseptic, but also keratoplastic, he was led to employ it in suppuration of the ear, when it is sought especially to cauterize the secreting membrane of the tympanum. He has attained unhoped-for benefits from its use. He uses the following solution:

- R. Acidi picrici gr. ii
- Alcoholis—90 per cent. m. xlʒ
- Aquæ destil. ʒʒv

M. The solution is left for some minutes in contact with the ear. The treatment induces desquamation of the tympanum and of the meatus, which calls for frequent cleansings. This action of picric acid contraindicates its use in cholesteatoma. —*N. Y. Med. Jour.*

Treatment of Migraine.

Lyon (*Revue de Therapie*, February 1; *British Medical Journal*, March 24, "Epitome") treats the attack of migraine with antipyrin—unless there is some coexisting renal disease—given in Vichy water or in cachets with an equal quantity of sodium bicarbonate or in the granular effervescent form. If there is gastric intolerance the drug may be given in solution as an enema. Sometimes a combination of acetanilid, phenacetin and quinin valerianate is more efficacious. Sodium salicylate, methylene-blue and caffeine, either alone or combined with sodium benzoate may be recommended. If caffeine be rejected by the stomach it may be given hypodermically. Aconitin may be tried in minute doses. The prophylactic treatment is both dietetic and hygienic. The patient should eat moderately and abstain from all alcoholic drinks, in fact, should take water only. He should avoid all indigestible articles of diet and live principally on milk and vegetables. Tobacco should be interdicted and a sedentary life avoided. Errors of refraction should be corrected and massage with suitable baths tried. Alkaline

baths are of especial value for the rheumatic and the gouty. For the neurasthenic the use of phosphates alternating with arsenic, either with or without iron, is a promising plan of treatment.

Syphilitic Alopecia.

Gaucher, in *Riforma Medica*, recommends the following: The hair should be kept short, and frequent applications of the following lotion made to the head:

- R. Hydrarg. chloridi corrosivi gr. iiii
- Chloralis gr. lx
- Resorcin gr. xxx
- Olei ricini gr. xv
- Alcohol (at 90 degrees) ʒl

M. At the same time friction should be made with the following ointment:

- R. Calomel gr. xlv
- Vaselini ʒxv
- Acidi salicylici gr. iv

Or, the following:

- R. Precipitated sulphur gr. xlv
- Vaselini ʒxv

This latter ointment is to be prepared when the alopecia is accompanied by seborrhea and pityriasis of the hairy scalp.

—*N. Y. Med. Jour.*

Treatment of Burns.

According to the *Jour. de Méd. de Paris* of Nov. 19, 1899, the following treatment may be instituted in cases of burns:

Compresses saturated with a solution of potassium nitrate may be applied, the solution being of the strength of 5 per cent. This preparation relieves the pain, and prevents a rise of temperature. The patients may be placed in a warm bath containing this material. If the well-known carron-oil or linimentum calcis is employed, it is suggested that carbolic acid in the strength of 1 per cent. should be added to it, or that thymol in the strength of 5 per cent. should be applied; or vaselin containing 10 per cent. of boric acid may be used. The following formula is said to be employed by Réclus.

- R. Vaselini ʒiii
- Acidi borici ʒi
- Antipyrin ʒi
- Iodoformi gr. xiii

Another one is:

- R. Vaselini ʒiii
- Essence of thyme
- Essence of granium
- Essence of origanum, āā gr. iv
- Sodium naphtholate gr. xv to xlv

Other formulæ are as follows:

- R. Mentholi
- Iodoformi, āā gr. xv
- Glycerini ʒiii
- R. Cocaini gr. iv
- Salol ʒi
- Vaselini ʒi
- R. Europhen gr. xxx
- Lanolini
- Vaselini, āā ʒii
- R. Orthoform gr. xlv
- Vaselini ʒi

All these ointments are intended to prevent suppuration and to relieve pain and burning.

Another method of treatment is to apply bismuth subnitrate and other drying materials in powdered form, particularly where the burn is wet and bleeding.

Still another application which is excellent where it is desired to favor cicatrization in burns which have existed for some little time is the following prescription:

- R. Ichthyol gr. xv—xxx
- Magnesii carbonatis ʒiii
- Zinci oxid. ʒvi
- Thiol
- Talc.
- Bismuthi subnitratis, āā ʒi

M.

So far as general treatment is concerned, the patient should receive opium to relieve the pain, and if necessary subcutaneous injections of morphin in small doses, and during the period

of suppuration, if it occurs, the system should be supported by means of tonics, such as quinin, kola, and iron.

—*Therap. Gazette.*

Treatment of Hemorrhoids.

The following prescriptions are given in *La Presse Médicale*:

- R. Chrysarobin gr. i
- Iodoformi gr. ss
- Extract belladonnæ gr. 1/8
- Cacao butter gr. xxx

M. ft. One suppository.

Two or three of these suppositories are to be inserted into the bowel each day, or, instead of these suppositories, the following ointment may be used:

- R. Chrysarobin gr. xii
- Iodoformi gr. v
- Ext. belladonnæ gr. x
- Vaselini ʒss

M. Sig. Apply locally several times a day.

If small indurated projections of skin and mucous membrane are present, with a good deal of induration around the part, the following may be employed:

- R. Potassii iodidi gr. xv
- Iodini gr. ii
- Glycerini ʒi

M.

This is to act as a local alterative. Later, if irritation is absent, a stronger solution may be employed, composed of:

- R. Potassii iodidi gr. lxxx
- Iodini gr. xv
- Glycerini ʒiss

M.

Small doses of distilled extract of hamamelis may also be given internally with each, and continued for several months.

Sciatica.

Siegrist, of Zurich, has found the application of hot moist compresses to afford striking relief in this affection, says the *New York Med. Jour.* A piece of flannel is placed in very hot water, then wrung out so that it does not drip. This can be done conveniently by wringing it inside a towel in such a way as to protect the hands. The flannel is then laid along the thigh of the patient—if the skin is very sensitive a layer of flannel is placed under the compress—and the whole covered with several thick layers of dry flannel. The compress is changed in about ten minutes, and the process kept up for an hour or two at a time, and repeated several times a day. The value of these fomentations in many painful affections is well known to students of hydrotherapy, but is not sufficiently recognized by physicians in general. The treatment demands considerable time, and must be skilfully executed in order to gain the desired results.

Alterative.

- R. Arsenici chloridi m. i
 - Ammon. chloridi ʒi
 - Tinct. ferri chloridi ʒiv
 - Hydrarg. chloridi corrosivi gr. iss
 - Syrupi ʒiiss
 - Aque, q. s. ft. ʒvi
- M. Sig. One teaspoonful three times a day.

Syphilis.

- R. Hydrarg. protoiod gr. v to x
 - Strych. sulph. gr. ss
 - Ferri sulph. gr. xx
 - Pepsin pulv. gr. xl
- M. ft. in cap. No. xx. Sig. One capsule after each meal.
- Dr. J. D. Thomas: Intern Med. Mag.*

Sporadic Dysentery.

- R. Pulv. ipecac et opii gr. xxx 2|
 - Bismuthi subnitratiss ʒiv 16|
 - Salol gr. xxx 2|
- M. et ft. Chart No. xii. Sig. One every hour or two.

—*J. M. Anders.*

Ointment for Gonorrhœal Rheumatism.

- R. Salol ʒ parts
 - Menthol ʒ parts
 - Ether ʒ parts
 - Lanolin 60 parts
- M.

Nephritis in Children.

- R. Liq. ammon. acetatis ʒi
 - Tinct. digitalis
 - Spiritus chloroformi, aa ʒi et m. xx
 - Aque dest., q. s., ad ʒviii
- M. Sig. Tablespoonful three times a day to children from 6 to 10 years old.
- Ashby: Med. Record.*

Gastralgia.

Dr. Saundby, of Mason College, Birmingham, recommends the following method: The patient is put to bed, receives for sole nourishment 1 fluid ounce of a mixture, in equal parts, of milk and lime water every hour, the quantity to be gradually increased to 4 fluid ounces every hour as the symptoms disappear. At the same time, two tablespoonfuls of the following mixture are given three times a day:

- R. Magnesii sulphatis ʒvi
- Ferri sulphatis gr. xv
- Acidi sulphurici diluti ʒiiss
- Aque menthae pip. ʒviii

The rapid improvement under this régime soon permits the use of a small quantity of bread and scraped meat, then solid foods, and finally recovery ensues.

—*Merck's Archiv.*

Medicolegal.

Dying Declarations Touching Accidents.—The Supreme Court of Louisiana points out, in the case of Marler vs. the Texas Pacific Railway Company, that the circumstances under which dying declarations are made, with a view to testimony in criminal cases, differ greatly from those where they are made with reference to future civil proceedings for damages occasioned by the injury causing death. In the one case the party making the declaration has no personal interest in making a false statement, and would be actuated in doing so only by hatred or malice, while in the other relief for the family he is leaving behind him might furnish a strong motive for giving a wrong version of the facts of the occurrence. Hence the court holds that such declarations are not admissible in evidence in a civil action brought to recover damages, though made under a sense of impending death or even if made to the physician called in to minister to the party particularly when not elicited to aid him in treating the case.

Statements of Experts are Advisory Only.—This is the view taken by the Supreme Court of Missouri. For example, in the malpractice case of Hoyberg vs. Henske, the jury was told, in effect, that in determining the question as to whether or not the defendant exercised such skill and care of the plaintiff's broken arm as, under the law, he should have exercised, it was not bound by the opinion of expert witnesses, but had the right to disregard all or any part of such opinions as appeared to it to be unreasonable. In this instruction the supreme court says that it fails to recognize the vice which counsel sought to point out. It is the established law, as declared by this court, it goes on to state, that, where experts are called to testify, their statements are not to be considered as evidence of facts, but are of an advisory nature, and they are permitted to express opinions because of the peculiar knowledge they possess. But, the court continues, juries are in no wise bound to blindly accept their ideas, but, after receiving the advice of experts, are permitted to use their own judgment in passing on the things concerning which the opinions are given, and they are necessarily permitted to disregard the testimony of such experts as may appear to them unreasonable. Were it not so, the court thinks that, because of the widely diversified notions and wholly different results arrived at by separate individuals, even when forming conclusions on the same facts and circumstances, juries would be wholly at sea, and to refuse to permit them to be their own judges of what is reasonable and what is unreasonable would operate as a failure of the purposes for which they are called in this class of cases. Nor does the court appreciate the force of the criticism that the instruction under discussion was defective in that it failed to tell the jury that, in order to disregard the opinions of the experts presented to them, they must do so solely on some other

facts and circumstances in the case drawn out by the testimony. It maintains that the right of a jury to reject the mere opinion of an expert or experts is not more restricted than the right to reject the testimony of a nonexpert upon a question of fact. Juries are required, in cases of this character, to apply their own experience, knowledge, and judgment, and the issue is to be determined, not merely by the opinion of experts, but, further, by the exercise of their own judgment of the facts on which the opinions are given. Finally, a verdict of \$5500, the court holds not excessive for malpractice, where a child 4 years of age broke one of the bones of the left arm, just above the elbow, by a fall from a lounge, and the treatment was such that the arm festered and parts of the flesh came out and then left the arm without strength from the elbow down.

Communication About Medical Examiner.—Omitting here the names, a medical director of a life insurance association wrote this letter to an agent at a certain place, with reference to the medical examiner there: "I have before me the application of ——. This application shows on the face of it to be a forgery of his signature, and it is written by Dr. — instead of the applicant. He has fallen down in his undertaking to imitate the handwriting of the applicant, by his misspelling the name. We have returned the application to the doctor, and given him to understand that it must be corrected at once; and you are hereby notified that in the future no more examinations will be accepted, when made by Dr. —. We will appoint another physician at that place, and will notify you of the appointment of same. We have no longer any confidence in Dr. —, and, as above stated, we can not accept any more examinations made by him." The doctor referred to in some way learned of the letter, and sued the medical director and association for libel. On the trial the action was dismissed as to the medical director, and the doctor obtained a verdict and judgment for \$2300 against the association. But the judgment of the district court is reversed by the Supreme Court of Iowa. The jury was instructed that the letter of communication, made and published in the manner and under the circumstances under which the same was made and published, was not a privileged communication, and the circumstances under which the same was made and published did not justify the association in so making and publishing the same. More than that, it was instructed that the letter was libelous in and of itself, and that the only matter to be considered was the amount of damages. Not so, however, thinks the supreme court. It holds that the addressee, as soliciting agent, was entitled to know who was the accredited medical examiner of the association at the town where he was making applications. The company also had the right to inform its soliciting agent of the discharge of its medical examiner in the locality where the soliciting agent was operating. The occasion, it therefore holds, *Nichols vs. Eaton*, was undoubtedly privileged, and it was the duty of the court to so instruct the jury. That being established—that the occasion was privileged, and that the publication was about a matter in which both parties had an interest, excess of statement the supreme court pronounces material only as bearing on the question of malice—a **question of fact** for the consideration of the jury.

Who May Testify as to Insanity.—The Court of Appeals of Kentucky says, in the case of *Abbott vs. Commonwealth*, that it is well settled in that state that persons who are not experts, but by association and observation have had an opportunity to form an opinion as to the sanity of a person, may testify to that opinion; giving, also, the facts on which the opinion is based, so that the jury may judge for themselves what weight the opinion is entitled to. The reason it gives is that insanity if often shown by a flash of the eye, an expression of the face, a movement of the muscles, or a number of slight circumstances which, while they may produce a conviction in the mind of the observer, can not, in many cases, be reproduced before the jury as they were exhibited to the eye of the witness, so that, if testimony of this sort were not allowed, great injustice would in many cases be done. The judgment of a person's intimate friends and acquaintances as to his soundness of mind it holds is therefore always competent in

cases where the insanity is pleaded as a defense to crime. Moreover, the courts says that it is not necessary that a medical witness should claim to be an expert on the subject of insanity to entitle him to give an opinion as an expert on a hypothetical case. Any practicing physician, doing a general practice, who has studied the subject of diseases of the mind, with other forms of disease, it holds, may testify on the hypothetical case, on the ground that, as insanity is a disease, one who is skilled in detecting and treating diseases is competent to give an opinion, the extent of his learning and experience going alone to his credibility. Yet it manifestly does not consider every physician competent to give an opinion as an expert on the question of insanity, as it holds, right in this connection, that the testimony of a certain doctor was properly rejected, as it did not appear that he had given the subject of insanity a sufficient study to entitle him to speak as an expert on the hypothetical case put to him, though it does not explain any further just what his qualification or disqualification was.

Both May Testify in Abortion Case.—A husband sued a physician for damages for producing an abortion on his, the plaintiff's, wife. This was in Missouri, where the statute modifying the general rule of the common law prohibiting a married woman in testifying in behalf of her husband could not be said to include a case of this character. There, too, a physician or surgeon is prohibited from testifying concerning any information which he may have acquired from any patient while attending him or her in a professional character, and which information is necessary to enable him to prescribe for such patient as a physician, or to do anything for such patient as a surgeon. Naturally, therefore, there was objection made to the wife being allowed to testify in behalf of her husband. Likewise, objection was made, on the other side, to the physician testifying, in his own behalf, concerning information which he acquired from the wife of the plaintiff while attending her in a professional character, by an examination of her body, and from conversation with her, which was necessary, according to his testimony, in order to enable him to treat her; as well, also, as to the conversations had between himself and her with respect to her condition, and the treatment necessary in her condition—what he said to her, etc. Taking up this last objection first, the Supreme Court of Missouri, Division No. 2, points out, *Cramer vs. Hurt*, that the facts with respect to the condition of the wife, the doctor's treatment of her, and the facts obtained from her with respect to her condition, were within the exclusive knowledge of her and himself. No other person knew, of his own personal knowledge, anything about them. Hence, while it must be understood that such evidence can not be admitted, merely because other evidence of the facts can not be obtained, in a suit against a physician by the husband for damages, the court holds that, where it is clear that no other person besides the physician and the wife knows anything personally about the facts, and the proof of such facts is necessary in sustenance of his defense, it is no error to permit him to testify to such facts in order to prevent injustice being done. But it must, the court continues, for the same reason, follow that the wife is a competent witness for her husband, notwithstanding at common law, as a general rule, a married woman is incompetent to testify in behalf of her husband, and the state statutes may not have removed the disability as to such a case as this. Moreover, the court thinks that the wife is a competent witness in such a case on general grounds of public policy, for, it says, if it be known that a married woman is a competent witness for her husband in a suit for damages by him against a physician who produces an abortion on her without the consent of her husband, in consequence of which her health is injured, and he is deprived of her services, to which he is entitled by law, and expenses are entailed on him in her nursing and for medical treatment, it might, to some extent, put a stop to such revolting and unnatural practices. However, the court does not consider that the privilege, which belonged to the wife personally, was waived by her being offered as a witness by her husband, nor by his bringing an action of this kind.

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

Medical Record (N. Y.), May 5.

- 1.—*Perforating Duodenal Ulcers. Robert F. Weir.
- 2.—Preliminary Report on New and Simple Method of Sterilizing Catgut. Charles A. Elsberg.

Medical News (N. Y.), May 5.

- 3.—*Medical School of the Future. H. P. Bowditch.
- 4.—Truth in Medicine. E. G. Janeway.
- 5.—*Perforating Duodenal Ulcers. (Continued.) Robert F. Weir.
- 6.—*Present Status of Rectal Surgery. Joseph M. Mathews.

Philadelphia Medical Journal, May 5.

- 7.—*Medical School of Future. H. P. Bowditch.
- 8.—*Adaptation of Pathogenic Bacteria to Different Species of Animals. Theobald Smith.
- 9.—*Some Physiologic Methods and Means Employed by Animal Organism in its Continual Struggle Against Bacteria for Maintenance of Life and Health. S. J. Meltzer.
- 10.—*Relation of Bacteriology to Medicine. Richard C. Cabot.
- 11.—*Bacterio-Therapeutics, with Especial Reference to Tuberculosis. Edward R. Baldwin.
- 12.—*Sociologic Status of the Physician. Clarence John Blake.
- 13.—*Nephrectomy for Large Aneurysm of Right Renal Artery, with Résumé of Twelve Formerly Reported Cases of Renal Aneurysm. W. W. Keen.
- 14.—*President's Address at Decennial Convention for Revision of U. S. Pharmacopeia. H. C. Wood.
- 15.—*Recent Advances in Knowledge Concerning Etiology of Malarial Fever. William Sydney Thayer.

Boston Medical and Surgical Journal, May 3.

- 16.—*Medical School of the Future. H. P. Bowditch.
- 17.—*Perforating Ulcer of Duodenum. Robert F. Weir.
- 18.—*Ideal Ration for Army in Tropics. (Continued.) Edward L. Munson.

New York Medical Journal, May 5.

- 19.—*General Remarks on Pathology and Treatment of Stricture of Urethra. Charles Greene Cunston.
- 20.—*Nitrous Oxid; Ether; Chloroform. (Continued.) S. Ormond Golden.
- 21.—*What is Basis of Modern Medical Conception? J. Homer Coulter.
- 22.—*Appeal for Systematic Treatment of Consumptive Poor. John F. Russell.
- 23.—*Management of Hair Dying and After Fevers. George Thomas Jackson.
- 24.—*Effeminate Men and Masculine Women. William Lee Howard.
- 25.—*Practical Points in Ether Anesthesia. C. Floyd Burrows.
- 26.—In Memoriam. John A. Murphy.
- 27.—*Ophthalmic Memoranda. David DeBeck.

Medical Review (St. Louis, Mo.), May 5.

- 28.—*Occurrence of Mould in Stomach and Its Probable Significance. Max Einhorn.
- 29.—*Christophy, Bibliopathy and Christian Science. C. H. Hughes.
- 30.—*Report of Librarian of St. Louis Medical Library Association for Year Ending April 25, 1900. F. J. Lutz.

Medical Age (Detroit, Mich.), April 25.

- 31.—*Tricuspid Regurgitation. W. C. Huntington.
- 32.—*Treatment of Venereal Ulcers. N. E. Aronstam.
- 33.—*Relation of Eye-Strain to Epilepsy, Insanity and Allied Conditions. Thomas P. Satterwhite.

Pediatrics (N. Y.), April 15.

- 34.—*Nephritis in Childhood, Especially that Occurring in the Course of Malaria. Dr. Moncorvo.
- 35.—*Care of Premature and Feeble Infants. S. W. Ransom.
- 36.—*Some Reasons why Tuberculosis Spreads More Rapidly among Cats than in Human Race. Walter W. Gardiner.

Medical Fortnightly (St. Louis, Mo.), April 10.

- 37.—*Short Clinic on External Urethrotomy. Reginald Harrison.
- 38.—*Etiology of Beri-beri. Albert S. Ashmead.
- 39.—*Treatment of Venereal Lesions. Mayer Shoyer.

Virginia Medical Semi-Monthly (Richmond), March.

- 40.—*Some Recent Cases of Mastoiditis with Remarks. Joseph A. White.
- 41.—*Gonorrhoeal Urethritis in Male. Chas. A. Labenberg.
- 42.—*Medico-Religious Society. W. T. Parker.
- 43.—*Puerceral Oculoplia. William Hoskins.
- 44.—*Normal Saline Solution of Buffalo Lithia Water Used by Rectal and Subcutaneous Injection. Benj. K. Hays.

Columbus Medical Journal, April.

- 45.—*Obstipation-Hypertrophy of Rectal Valve. Thos. Charles Martin.
- 46.—*Examination and Treatment of Ulceration of Abdominal Rectum and Sigmoid Flexura, with Comparison of Old and Modern Methods. Sterling B. Taylor.

American Journal of the Medical Sciences (Philadelphia), May.

- 47.—*Analysis of Fifty-one Cases of Pneumothorax. John Lovett Morse.
- 48.—*Acute Pneumonic Form of Tuberculosis. Arthur W. Elting.
- 49.—*Senile Bronchitis. Reynold Webb Wilcox.
- 50.—*Case of Multiple Neuro-Fibromata of the Ulnar Nerve. W. W. Keen and William G. Spiller.
- 51.—*Differential Diagnosis of Ectopic Gestation. With Report of Cases. Edward P. Davis.
- 52.—*Two Cases of Tabes Dorsalis in Negroes—Hasbaid and Wife. Albert P. Francine.

- 53.—*Clinical Aspect of Plagues, with Illustrative Cases. (Continued.) Frank G. Clewlow.

- 54.—*Critical Summary of Literature on Surgery of Stomach. Charles H. Frazier.

Toledo Medical and Surgical Reporter, May.

- 55.—*Pure Food, Pure Drugs—How They May be Obtained. C. H. Reed.
- 56.—*Fads and Fancies. Herbert E. Smead.
- 57.—*How Electricity Becomes a Remedy. H. L. Hall.
- 58.—*Treatment of Chronic Urethritis with Clinical Reports. Eugene C. Underwood.

Post-Graduate (N. Y.), April.

- 59.—*Case of Restoration of Base of Bladder and Urethra, by Plastic Surgery. Baehc McE. Emmet.
- 60.—*Ante-partum Diagnosis. George L. Brodhead.
- 61.—*Clinical Value of Newer Methods in Treatment of Psuaperal Sepais. John O. Polak.
- 62.—*Palliative Treatment of Carcinoma Uteri. Hermann J. Boldt.
- 63.—*Cystitis in Female and its Management. Abram Brothers.
- 64.—*Retrospect of Forty Cases of Operative Gynecology. George G. Ward, Jr.
- 65.—*Obstetric Aphorisms. C. A. Von Ramdohr.
- 66.—*History of Case of Mild Tetanus Following a Slight Operation for Fissures of Anus. Baehc McE. Emmet.
- 67.—*Clinical Notes on Reflexes of Uterine Disease. Baehc McE. Emmet.
- 68.—*Douglas' Cut-de-acc Lacerated during Labor. Stepha P. Troax.
- 69.—*Lap-Sutures to Abdominal Surgery. William E. Butler.
- 70.—*Intrauterine Implantations of Ovary. A. Palmer Dudley.

Clinical Review (Chicago), May.

- 71.—*Effect of Strong Heat in Prunitas—Its Use by Napoleon and Others in Domestic Practice. Edmund Andrews.
- 72.—*Spastic Spinal Paralysis; Secondary Descending Sclerosis. Henry M. Lyman.
- 73.—*Clinical Lectures on Etiology, Pathology, Diagnosis and Treatment of Tumors. A. H. Levings.
- 74.—*Deformities of Infantile Paralysis. John Lincoln Porter.
- 75.—*Gastric Ulcer and Uterine Retroversio; Hematoecae; Uterine Fibroid; Biliary Calculi; Prosalpax; Removal of Tubes; Rectal Fistula; Carcinoma of Uterus. A. J. Ochsner.
- 76.—*Clinical Lecture on Obstetrics and Gynecology; Concealed Hemorrhage. Denslow Lewis.

Providence Medical Journal, April.

- 77.—*Effects of Chemical and Physical Influences on Development of Embryo. A. D. Mead.
- 78.—*Résumé of Six Months' Service in Infants' Department of Providence Lying-in Hospital. H. G. Partridge.
- 79.—*Headache. George Carroll Smith.
- 80.—*Brief Description of New Wing at Rhode Island Hospital. John M. Peters.
- 81.—*Gunshot Wounds of Orbit. V. L. Reia.
- 82.—*Case of Empyema of Frontal Sinus. F. T. Rogers.
- 83.—*Fatigue in School Children. Alfred M. Merriman.

Pennsylvania Medical Journal (Pittsburg), April.

- 84.—*Some Drugs in Enteric Fever. A Therapeutic Study. J. C. Wilson.
- 85.—*The Allaghanies for Our Tuberculous. Chas. F. Spangler.
- 86.—*Prophylaxis and Management of Phthisis. Joseph Forrester.
- 87.—*Neurasthenia. Thomas Wray Grayson.
- 88.—*Valvular Disease of Heart. A. M. Miller.
- 89.—*How I Treat an Ordinary Fracture. John C. Sallivan.
- 90.—*Case of Intussusception of Bowel. Ellis Phillips.
- 91.—*Special Inflammation of Uterus and Adnexa." John Milton Duff.

Kansas City Medical Index-Lancet, April.

- 92.—*Surgical Technique. Milo B. Ward.
- 93.—*Formaldehyde. Virginia W. Gagle.
- 94.—*Relation of Uric Acid to Migraine. John A. Lichty.
- 95.—*Tissue Building and Nerve Toning in Tuberculosis. William J. Maybury.
- 96.—*Relative Curability of Nervous Diseases. John Punton.

Southern Practitioner (Los Angeles), April.

- 97.—*Report of Second Operation for Tubal Pregnancy on Same Patient within a Year. E. R. Smith.
- 98.—*Ligature versus Clamp and Cautey in Treatment of Internal Hemorrhoids. Wellington Burke.
- 99.—*Ancient and Modern Therapeutics. E. Henderson.
- 100.—*Review of Mrs. Eddy's Book on Science and Health. P. J. Parker.

Interstate Medical Journal (St. Louis, Mo.), April.

- 101.—*President's Address before Tri-State Medical Society at St. Louis, Mo., April 4, 1900. O. Beverly Campbell.
- 102.—*Treatment of Acute Articular Rheumatism at Mt. Sinai Hospital, New York City. L. A. S. Bodine.
- 103.—*Diagnosis of Pneumonia, with Report of Unusual Cases. Louis H. Behrens.
- 104.—*Treatment of Arm Presentation. Denslow Lewis.
- 105.—*Analytic Diagnosis of Abdominal Tumors. (Continued.) Byron Robinson.
- 106.—*Antiseptic Serum in Treatment of Case of Acute Traumatic Tetanus. David C. McVail.

Texas Medical News (Austin), April.

- 107.—*Maasles; Value of Koplik's Sign. J. S. Lankford.
- 108.—*Report of Cases. O. L. Norsworthy.
- 109.—*Infant Feeding. R. W. Knox.

Journal of Tuberculosis (Asheville, N. C.), April.

- 110.—*Necessity for Isolation and Hospital Care for Poor Consumptives. J. C. Wilson.
- 111.—*Work Being Done Through Private Charity in Case of Consumptive Poor. W. N. Ashman.

- 112.—*Latency or Cure of Pulmonary Tuberculosis. Karl von Ruck. *Memphis Lancet*, April.
- 113.—Case of Advanced Extruterine Pregnancy. Operation Seven Weeks after Completion of Term. R. B. Maury.
- 114.—Why I Use Pepsin-Mangan "Guda." An Experimental Demonstration. Wm. Krauss.
- 115.—Report of Five Cases of Typhoid Fever in Infancy and Early Childhood. Edward D. Mitchell.
- 116.—Chronic Abscess of Liver, with Report of Case. M. Goltman.
- 117.—Two Cases of Hysteria with Prominent Eye Symptoms. E. C. Ebbett.
- Medical Register (Richmond, Va.), March.**
- 118.—Arthritis Deformans. John D. Thomas.
- 119.—*Further Report on Diaphoresis in Pneumonia. Clifton M. Miller.
- 120.—Report of Case of Fracture of Skull. Frank M. Cunningham.
- 121.—The Druggist. F. M. Reade.
- 122.—Report of Eight Cases Demonstrating Improvement in Hearing Obtained by Removal of Portion of Middle Turbinate Bone. J. P. Davidson.
- 123.—Aseptic Confinement. Charles R. Robins.
- Southern Practitioner (Nashville, Tenn.), May.**
- 124.—Address to Graduating Class of Medical Department of University of Tennessee. William D. Haggard, Jr.
- 125.—Intestinal Obstruction. (*Continued*). Richard Douglas.
- 126.—Suggestions of Causative Relationship Between Uricacidemia and Urticaria, with Report. Halcyon A. Wilbur.
- University Medical Gazette (Philadelphia), April.**
- 127.—*Plantar or Toe Reflex. Babinski's Symptom. Horatio C. Wood.
- 128.—*Dermoid Cystoma Developing in Pelvic Connective Tissue, with Report of Case. Henry D. Bayea.
- 129.—Hernia of Vermiform Appendix. John H. Jopson.
- 130.—Case of Large Aneurysm of Left Common Carotid Artery and of Aorta Treated by Distal Ligation and by Tuffnell Method. E. R. Edson.
- 131.—Diagnosis of Chlorosis and Chloro-Anemia. Alfred Stengel.
- 132.—Large Dermoid Cyst of Ovary in Child of Seven Years. James Herbert McKee.
- 133.—Recovery of Vision by Iridectomy, with Removal of Lens-Capsule and Lens-Debris in Case of Blindness of More than Thirteen Years' Duration. Charles A. Oliver.
- Kingston Medical Quarterly (Kingston, Ont.), April.**
- 134.—Clinical Report of Case of Infective Endocarditis. Geo. Hodge.
- 135.—Rotunda Hospital. Jeanie G. Drennan.
- 136.—Eubonic Pagos. W. T. Connell.
- 137.—Case of Appendicitis. E. Ryan.
- 138.—Eye Lesions in Paranoia and Paratic Dementia. J. C. Connell.
- Seaboard Medical and Surgical Journal (Norfolk, Va.), April.**
- 139.—Christian Science from Scholarly Standpoint. C. A. F. Lindorme.
- New Orleans Medical and Surgical Journal, May.**
- 140.—*Note on the Interval Between Infecting and Secondary Cases of Yellow Fever from Recurrence of Yellow Fever at Orwood and Taylor, Miss., in 1898. H. R. Carter.
- 141.—*Clinical Observation on Heroin and Heroin Hydrochlorid as Compared with Codein and Morphin. F. C. Floeckinger.
- 142.—1. Undiagnosed Elbow Injury. 2. Movable Kidney. W. W. Keen.
- American Journal of Surgery and Gynecology (St. Louis, Mo.), April.**
- 143.—*Some Pathologic and Clinical Phases of Gall-Stones. A. H. Cordier.
- 144.—*A Few Practical Points which will Prevent Troublesome Complications in Fractures of Ankle and Elbow. A. J. Oelsner.
- 145.—Cases of Head Injury. Gen. W. Cale.
- 146.—Vaginal Hysterectomy; 225 Consecutive Cases; Four Deaths. Byron Robinson.
- 147.—Case of Double Vagina and Double Uterus; Four Pregnancies. Herman E. Pearsa.
- 148.—Report of Five Operative Cases of Tubal Gestation. R. J. Christie, Jr.
- 149.—Suppuration of Wound after Abdominal Section, Based on an Analysis of 114 Consecutive, Unselected Abdominal Sections without a Death. Hunter Robb.
- 150.—Some Points Worthy of Consideration by the General Surgeon. D. S. Fairchild.
- New England Medical Monthly (Danbury, Conn.), May.**
- 151.—Observations on Treatment of Strangulated Hernia, its Complications and Sequelae. (*Concluded*). J. Coplin Stinson.
- 152.—Some Properties of Utoprin, and Some of the Indications for its Use. Leopold Casper.
- 153.—Albuminuria in Pregnancy; its Cause and Treatment. E. M. Smith.
- 154.—"Allanby's" Infant Food. Harry C. Algira.
- 155.—Alpecia. (*Concluded*). L. Duncan Bulkley.
- 156.—Operation on Cervical Ganglia of Sympathetic for Epilepsy, Glaucoma and Exophthalmic Goiter. Emory Lanphear.
- 157.—Stitch Abscesses in Abdominal Incisions. Points in Regard to Their Etiology and Treatment. Frank H. Washburn.

AMERICAN.

- 1.—See abstract in our society reports, this week.
- 2.—See abstract in THE JOURNAL of May 5, p. 1133.
- 3.—See abstract in THE JOURNAL of May 12, p. 1194.
- 5.—See ¶ 1, above.

6. **Present Status of Rectal Surgery.**—Mathews calls attention to the neglect of the subject of proctology in certain surgical text-books and to some of the misstatements they contain. He notices the progress of the specialty of rectal surgery, but condemns the rushing into specialism of those who are not fully prepared by previous general practice. The society is not to be composed of men who devote themselves exclusively to this subject, but those who desire to become better posted in this class of cases. He suggests that it be annexed as a section to the AMERICAN MEDICAL ASSOCIATION, and that the rules be rigid in the admission of members.

7.—See ¶ 3, above.

8.—*Ibid.*, p. 1193.

9. **Defense of the Organism.**—Meltzer maintains that the prevailing opinion of bacteriologists, who regard the defense of the body against hostile germs as due exclusively to a single element, whether it be alexins or leucocytes, is neither correct nor advantageous. He believes that it is not by a single tissue or a single function, but by concentrated action of independent factors that this defense is maintained, and illustrates this by the conjunctiva, which is usually sterile, notwithstanding its constant exposure. The causes of this are the reflex closure and blinking of the eyes and the bactericidal effect of the tears; similarly the respiratory organs, which are constantly invaded, are protected by the tortuous part of the upper portion of the tract, the action of the epithelial cilia, and the thinness of the epithelial layer, admitting the bacteria quickly to the lymph-glands, which take good care of them. Other defenses are the sphincter muscles at the entrances of some cavities of the body, and such secretions as tears, saliva, mucus, etc. Two new factors, however, which he thinks assist in the work of destruction of bacteria in the body, are proposed. One of these is plasmolysis. He attributes to different osmotic pressures of the fluids, the important part in this function. The second new factor is the heart's impulse. A certain maximum of vibration is indispensable to all forms of life, and can not be overstepped by any one. Every species has its certain individual minimum in this respect. He thinks that the vibrations emanating from an impulse of the heart probably form the optimum of the vibration for the living cells of each individual animal. Recent experiments have shown that the vibrations communicated through the body by the heart are deleterious to extra-vascular dead blood and the suggestion which he wishes to make is that those emanating from the heart-beat of the animal are more than a maximum for all the bacteria invading the interior of the animal body, especially in the injured state in which they are placed by the other influences of the body, for instance, by the plasmolysis. Thus, while we constantly live in a state of latent infection, as Adams calls it, it is not a force to normal health or life, but is rather a confederate in their defense.

10.—See abstract in THE JOURNAL of May 2, p. 1193.

11.—*Ibid.*, p. 1193.

12.—*Ibid.*, p. 1194.

13.—See abstract in our society reports of this week.

14. **United States Pharmacopeia.**—Wood's address reviews the history of the Pharmacopeia and notices the fact that it is especially a book for the pharmacist rather than the medical profession. He congratulates the recent convention for revision on its success and the high standard it has maintained, and makes the proposition that the committee on revision should be divided into two parts, one to prepare and the other to publish the Pharmacopeia.

15.—See abstract in THE JOURNAL of May 12, p. 1194.

16.—*Ibid.*

17.—See ¶ 1, above.

18. **The Tropical Army Ration.**—Munson's article answers the question whether the present army ration is suitable for the tropical service, in the negative, and this involves the consideration of the physiology of hot climates, which is taken up. He finds that the body temperature in the tropics is elevated in new arrivals; the vital forces must frequently neutralize heat reception under external conditions to keep

the bodily temperature down toward the normal. This produces an alteration in the metabolism, and there is additional work for the kidneys and liver, for an excess of nutritive material which in temperate climates would be oxidized here requires to be excreted. The loss of weight occurs in hot countries as in summer in temperate climates. Loss of weight, provided the decrease is limited to the adipose tissue, however, may be considered as strictly beneficial. Tropical heat lowers the pulse-rate, and increases the respiratory capacity by making an alteration in the relative proportion of blood and air in the lungs. Respiration is diminished, perspiration increased and urinary excretion diminished. Through the loss of fluid resulting from increased perspiration, there is a diminished secretion of saliva, mucus, bile, gastric and pancreatic juices, and as a consequence there is dryness of the throat, weakness of appetite and improper digestion, gastric fulness after eating, and habitual constipation.

19 Stricture of the Urethra.—Of all the causes of stricture of the urethra, gonorrhoea stands first, other disorders being various diseased conditions, non-gonorrhoeal inflammations and traumatism; this last stands second as a cause to gonorrhoea, in fact, is relatively more frequent, but the number of cases of gonorrhoea being so much greater than the number of cases of traumatism, those of gonorrhoeal stricture of the urethra are proportionately increased. In many cases, however, the etiologic factor is not discovered. It is possible that an abnormal state of the urine may produce the condition and that it may thus be accounted for in gouty or rheumatic cases. The constitutional disorder mentioned by Cunnison is scrofula, though he does not credit it as a factor or believe in masturbation as a cause; calculi may be a cause, and may account for many rheumatic cases. The pathology of the condition and its symptoms are described at length and also the consequent bladder changes.

20. Nitrous Oxid; Ether; Chloroform.—Goldan insists on the necessity of not being too wedded to the use of any one anesthetic, as is too often the case. In many cases chloroform is preferable, as in acute pulmonary diseases, and in disorders of the circulatory system, since it lowers the blood-pressure and the chance of artery rupture is lessened. Where compensation has occurred, ether is to be advised. Alcoholic and drug habitues are better with chloroform, and it is preferable in obstetrics, though it is contraindicated if surgical narcosis is necessary, and particularly if hemorrhage is present. Chloroform should not be used at night as decomposition takes place when the vapor is brought into contact with an open flame, and the irritating vapors produced are dangerous. Ether can be used at night with safety if the light is above the patient and care is taken as to the inhaler and the container. In emergency cases, chloroform should not be used with the very young or the very old, and ether is practicable, if properly given in old or even young, where it has been claimed to be contraindicated. The after-treatment of the patient is important; he should be put in a bed that has been warmed, should be well covered, and have fresh air admitted to the room. Washing out the mouth with water in which there is a little lemon juice or peppermint will remove any unpleasant taste or odor from the ether. Vomiting should be encouraged, as it relieves the stomach of mucus and saliva. Of the various emergencies arising during anesthesia, the following are mentioned: a falling back of the tongue, which should be looked for; posture, which sometimes interferes; a valve-like action of the lips in very old persons, that sometimes interferes with respiration; spasm of the glottis, chest muscles or lower jaw muscles; vomiting, when loose teeth or particles of food are especially dangerous; insufflation of blood into the larynx, causing asphyxia. He speaks of performing tracheotomy before prolonged operations, and packing the pharynx with sponges as a safeguard against such accidents. In operations on children, for adenoids, etc., chloroform should not be used, as there is a danger of insufflation. In those cases where asphyxia occurs, artificial respiration should be practiced, the patient on the side and inverted, with the head extended. The dangers from the improper administration of the anesthetic are chiefly of the asphyxial nature

when ether is used; direct paralysis of the respiratory function is rare, as is also the depression of the circulation. With chloroform, there may occur depression and paralysis of the vasomotor centers, great fall in blood-pressure, and more rarely, paralysis of the heart. The respiratory centers are only secondarily involved. Collapse from ether rarely occurs without the warning of a shallow gasping respiration, and small rapid, irregular pulse. With chloroform the most frequent symptom of danger is an ashy gray pallor, with a rapid failure of the pulse. The possibility of collapse occurring without warning is mentioned, though he thinks this rare. Artificial respiration, except in operations on children, for adenoids, etc., already mentioned, is best done by Sylvester's method, as inversion permits the blood to gravitate to the vital centers in the medulla. Rhythmic traction of the tongue, according to Laborde's method, is also described, as are also other methods for exciting reflex respiration. Of the drugs that may be used, alcohol is condemned and ammonia recommended; harm may be done to the respiratory apparatus if too much is given. Strychnin is given as probably the best circulatory and respiratory stimulant, but if improvement does not result after a fair-sized dose, no further dependence should be placed on it. Other drugs mentioned are atropin and digitalis though they are not especially recommended, and amyl nitrite, which is found to do more harm than good, when chloroform is administered, though it may be useful with nitrous oxid. Saline infusion is of the greatest value in the treatment of shock where much blood has been lost. The introduction of hot fluid into the colon, though not practiced to a very great extent, is one of the best methods of treating shock and urinary suppression and relieving thirst. Goldan is doubtful as to anesthesia ever being in itself the cause of pneumonia, it is due rather to faulty management. However, he does believe that nephritis or suppression of the urine may result from supersaturating with anesthetics. Paralysis following anesthesia may be due to faulty posture or apparatus, or to rupture of a blood-vessel from improper management.

21. Modern Medical Conceptions.—Coulter calls attention to the progress of medicine, as influenced by improved methods of instruction and the use of the microscope, etc., in building up scientific conceptions. He thinks the fact that so many specialties have progressed so far is evidence that other departments can also be put in the same advanced position.

22. Tuberculosis.—Russell's paper is a plea for dispensary treatment of the consumptive poor who are not able to go to sanatoria, but can be cured or helped by proper treatment. He thinks that in the early stages of consumption, by patient and long-continued treatment, many can be cured, all can be benefited, all so taught as to be capable of directing and teaching others. He believes that the proper establishment of these methods would break down the idea that consumption is in all stages incurable, and would lead to measures for relief in the early stages.

23. Management of the Hair During and After Fevers.—According to Jackson, during the illness we can do little or nothing, except keep the scalp in a good condition. If the patient is a man, that will be a comparatively easy task, but if a woman, it will be more difficult. As a rule, the hair does not begin to fall out until some six weeks or more from the beginning of the disease, then if the patient has recovered with her hair in a snarl and is under 15 years of age, the easiest course to pursue is to cut it off as short as necessary, but if she is elder, or even in a child under certain conditions, the careful attention of the nurse will unravel the snarls. Then the hair should be combed and brushed daily, for only diseased hair can be brushed out, and the sooner that is removed the better. Once or twice a week a little pomade, containing a dram of precipitated sulphur to an ounce of good cold cream, should be gently worked into the scalp, or a 3 per cent. lotion of resorcin in oil and alcohol can be used. Once in every two or three weeks the hair and scalp should be washed, and the best kind of soap is a liquid one, such as the tincture of green soap. This should all be washed out and the best way to do it is to place the head under a full stream

of water as from a faucet. After washing the hair, it should be carefully dried and a little pomade rubbed into the scalp to take the place of the oil which has been removed. With this method the patient will regain all the hair she has lost and sometimes more, and be saved the discomfort of wearing a wig.

25. Ether Anesthesia.—Burrows would give four drams of sulphate of magnesium four hours before the anesthetic, and an injection of a quart of warm water an hour previous; he would restrict all food during the interval, with the exception of perhaps milk, and discontinue that at least four hours previous to the operation. He gives plenty of water, but empties the bladder before the operation, and removes false teeth from the mouth. He says there is no use of giving atropin prior to the anesthetic, which should be commenced gently, with irritation to the respiratory mucous membrane avoided by the gradual admixture of air. Stoppage of breathing in the early stages should not be considered alarming, but the inhaler should be raised and fresh air allowed to strike the nostrils, using a little ether on the chest to help start breathing at once. Plenty of ether is to be used in the early stage, but mixed freely with air, and we should watch the pupils, and if they are dilated widely and irresponsive to light, look out. Always keep the patient thoroughly anesthetized, watch the tongue, and if necessary use tongue forceps. Withdraw the ether occasionally and allow a few breaths of air. Be sure and keep the patient warm. If shock has been considerable, give a hypnotic of 1/30 to 1/15 grain of strychnin and do not leave the patient until reaction begins.

27. Ophthalmic Memoranda.—DeBeck's paper considers the medicolegal cases in eye surgery, which are not common, but do sometimes occur and are of importance. He mentions several interesting suits for malpractice, some of which are due to fraud, and also suits for services rendered. In one case of ophthalmoplegia an agreement was arranged by which he made an examination under the joint auspices of both parties and submitted a report to each. The result was a mutually satisfactory compromise, and he thinks this an ideal way of obtaining expert testimony.

28. Mould in Stomach.—Einhorn reports four cases in which he found spores and mycelia of fungi abundant in the washings of the stomach. These organisms do not find favorable soil for their development in the normal stomach, and any considerable growth would not be possible unless a colony had become so firmly adherent that it had not been carried along with the onward passage of the chyme. It is improbable that any considerable surface of the stomach can be thus occupied and yet be unattended by disturbances of the functions, though it is not easy to say exactly how this may occur. In his cases Einhorn found the mould formations in two groups of gastric affections: 1, in cases of excessive hyperchlorhydria occasionally attended with hypersecretion and vomiting; 2, in gastralgia with normal or reduced gastric secretion. In some of these cases lavage, followed by spraying with a weak solution of nitrate of silver, caused a disappearance of the mould flakes and a subjective improvement in the condition of the patient. He thinks, therefore, that it is probable that mould fungi are connected to some extent with the above-mentioned conditions, and from a therapeutic standpoint, it is therefore desirable to free the stomach from these moulds, and this is best done by irrigation in the fasting state, followed by a spray of an antiseptic solution of silver nitrate, 1-2 per 1000. Otherwise the treatment of these cases must be directed in accordance with the special disease present.

29.—See abstract in THE JOURNAL of Dec. 2, 1899, p. 1424.

31. Tricuspid Regurgitation.—Huntington finds his experience at variance with text-books for, in his examinations, he discovered a large number of tricuspid regurgitations accompanied by conditions more or less abnormal. It is usually described as rare, and yet a certain amount of regurgitation at that valve is said to be normal. He discusses the subject at length and objects to the conclusion that there is a normal regurgitation, on anatomic grounds. He thinks that the

structure of the columnæ carneæ shows that the valve has an automatic safety action and does not depend on a defect for its salvation.

33. Eye Strain.—Satterwhite's paper is a plea for the relief of various conditions, epilepsy, insanity, insomnia, etc., by operation for eye strain. He reports one or two cases that indicate the value of this method.

34. Nephritis in Childhood.—After a historical introduction, Moncorvo reports a number of cases of nephritis complicating malaria that he has found in his experience, which he thinks goes to prove that in cold or temperate climates, malaria plays the same part in the production of nephritis in the young, as does scarlet fever. The disease is of short duration and generally favorable in its outcome. Edema is sometimes extensive and the secretion of urine more than usually diminished, while albuminuria is almost constant and hyaline cysts are also present. As regards its pathogenesis, he suggests the theory of an antitoxin from malaria parasites.

35. Care of Feeble Infants.—Ransom makes the statement that allowing 15 per cent. of the children in the United States born to be either premature or feeble, we have 420,000 of them annually, and he details caring for these infants by incubators, etc., that can be improvised in the poorer homes.

36. Tuberculosis.—According to Gardiner, the reasons why tuberculosis spreads more rapidly among cattle than the human race, are: 1. A normal temperature nearer to that which is most favorable to the growth of the germ. 2. Generations of in-breeding of milk cattle. 3. Local stable conditions favorable to ready contamination.

38. Etiology of Beri-beri.—Ashmead discusses and disputes some of the theories in regard to the origin of beri-beri, which he attributes not to a germ, but to carbonic acid poisoning. He thinks it is a peripheral "neuritis and myelitis of the extremities and of the heart, dropsy following by osmosis through the paralyzed coats of vessels. Dangerous symptoms are respiratory and heart complications, gasping for breath, cyanosis, vomiting, etc. Evidently the pneumogastric nerve is implicated. The best treatment is transplantation to an altitude, fresh air, oxygen by tank, and diaphoretics, and diuretics. Hemoglobin being deficient in every case of beri-beri, and the red corpuscles being always normal, prove that the disease is not caused by insufficient alimentation."

45.—See abstract in THE JOURNAL of Dec. 2, 1899, p. 1421.

47. Pneumothorax.—From an analysis of fifty-one cases examined in the Boston City Hospital during a period of eighteen years, Morse concludes that pneumothorax is an uncommon condition, and that at least 70, and probably 85, per cent. of the cases are tubercular. In non-tubercular cases the prognosis is good when it is due to trauma, and fair when secondary to pulmonary abscess. The results of rib-excision in these cases are very encouraging. Tubercular pneumothorax is most common in males, is most frequent in the third decade of life and occurs about twice as often on the left as on the right side. The onset is acute in less than one-half the cases, and sudden pain with dyspnea is the most common initial symptom. Pneumothorax may be the first sign of tuberculosis. Displacement of the heart always occurs, being most marked in left-sided cases. Pneumothorax is usually complicated by the presence of fluid. Air is rarely present alone in patients living more than a week, and the fluid is more often purulent than serous. About 15 per cent. may recover, but they are practically all serous, and usually die later from pulmonary phthisis. Pneumothorax is a direct cause of death in 60 per cent.; and 80 per cent. die in less than a year, while only 10 per cent. live over five years. The prognosis is worse when the pneumothorax is right-sided or when it is purulent rather than serous, and when found in women. Surgical intervention is at least worthy of consideration in purulent cases. People with these disorders are sometimes able to be up and about, and often able to work.

48. Acute Pneumonic Form of Tuberculosis.—Elting details cases with pathologic findings. There were fibrous exudates filling up a large part of both lungs, and necrotic foci in the older portions. The latter were found also in the liver,

though neither tubercle bacilli nor any other bacteria were found in connection with them. They are, he believes, the result of the direct action of the toxin. The main clinical features of the disease are onset very often without chill, though it may occur; fever, often of an elevated character, but very frequently irregular or remittent and practically always the latter in advanced stages; an absence generally of marked dyspnea and cyanosis; physical signs; consolidation of greater or less proportion of the lung; pain in the side, with cough and sputum, which is at first typically pneumonic, but at the end of a week or ten days may assume a greenish tinge, and containing tubercle bacilli. In the cases reported they were found seven days after the onset.

49. Senile Bronchitis.—Wilcox describes and discusses the degenerative condition of old age and the pathology of senile bronchitis. Bronchorrhea with senile cough is common and passes often so rapidly and imperceptibly into active bronchitis that the patient is taken by surprise. Chilly sensations, general malaise, increase of cough, local pain, may all be wanting, but the increasing purulency of the sputa and the high rectal temperature and duskiness of the face show that bronchitis is present. The auscultation and percussion signs may also be insignificant. The diagnosis from pneumonia is made largely by the physical signs and the general prostration, but it is not always easy to distinguish it from tuberculosis. Sometimes only the post-mortem will establish the diagnosis. The tendency is for the condition to become chronic, as it can not be cured unless we can say that we can cure old age. The drugs in which he puts most confidence are ammonium carbonate and strychnia. The tissue conditions should be looked after and massage is often useful. The points as summarized are: 1. Careful diagnosis. 2. Use of strychnia and ammonium carbonate. 3. Prohibition of opium. 4. Systematic massage, especial attention being given to the chest. 5. Improvement of the general health.

50. Neurofibromata of Nerves.—Keen and Spiller report a case of multiple neurofibromata of the ulnar nerves, illustrated by elaborate drawings of the pathologic conditions. Spiller reviews the literature of the subject and refers especially to the possibility of degenerative malignant change in the tumors.

51. Ectopic Gestation.—Three cases of ectopic pregnancy are reported by Davis, and the diagnosis briefly discussed. He believes that shock referred to the abdomen, occurring in a woman capable of pregnancy, should always occasion a suspicion of this condition, though no tumor be found and the signs and symptoms be obscure; if the shock be pronounced, the abdomen should be opened and the condition present be diagnosed and treated. In one of the cases here reported the absence of shock was the only thing which made him doubt the diagnosis.

52.—See abstract in THE JOURNAL of March 17, ¶ 688.

53. Plague.—Clemow concludes his article on the clinical aspects of plague, by giving the manifestations of the disease. He calls attention to the varying character of different epidemics, as for example, the recent serious recrudescence of the disease in Poona during the monsoon, something entirely contrary to its behavior in previous years, there or in any other part of India. The disease, however, is unquestionably connected with, if not solely caused by, the entrance of specific bacilli into the body, and the subsequent production of specific toxins which, circulating through the tissues, produce the varied general and local symptoms. The toxins appear to have a special and early action on the brain and nerve structures. They are primarily nerve poisons, and the affections of other organs are, to a very great extent, perhaps more than is generally thought, due to the profound disturbance of the nervous mechanism that controls their action and nutrition.

61. Puerperal Sepsis.—The points of Polak's paper as summarized by him are: 1. Puerperal sepsis usually begins in one of two forms of endometritis, i. e., putrid or septic, except when the infection has been direct through the inoculation of lacerations and abrasions by the streptococcus or by the tetanus or diphtheria bacillus. 2. While the curette is in-

dispensable to the successful management of putrid endometritis, it is harmful in an empty uterus, such as is commonly found in the septic form. 3. All forms of septic infection are benefited by general stimulation and supportive treatment. 4. Of the antitoxins used, unguentum Cr d  has proved its superiority over the antistreptococcic serum. 5. Blood-washing and artificial production of a hyperleucocytosis are valuable adjuncts to the routine treatment. 6. Hysterectomy, post-partum, should be limited to those cases in which the sepsis is localized, as a metritis with pyosalpinx, or tubo-ovarian abscess, after the acute symptoms have somewhat subsided. Finally, the most parametric pus collections can be more safely handled by vaginal section.

62. Carcinoma Uteri.—Boldt reviews the methods employed for the palliative treatment of uterine carcinoma and concludes that curetting and the actual cautery are the best therapeutic methods for the treatment of this condition.

70. Intrauterine Implantation of the Ovary.—Dudley reports a case in which he had performed a double ovariectomy, and in order to preserve the function he took the right ovary, cutting away the portion which rested against the pyosalpinx, and planted it within the uterus, fastening it there with fine silk sutures, then closed the uterus, which he dropped back into the pelvis. The patient made a good recovery, and menstruation continued, but as she is an unmarried prostitute he does not look for pregnancy in her case, but he will in future watch for such cases, hoping to find a case of pregnancy following such a procedure.

71. Heat in Pruritus.—Andrews calls attention to the value of heat as a cure for intolerable pruritus, especially in those forms occurring in connection with chilblains, and in the anus and adjacent organs. As a historical fact of interest, he shows that the first Napoleon used this method to relieve a distressing pruritus of the thigh, and mentions the case of an old farmer who had made the discovery independently in his own case. The later authorities are beginning to recognize the value of this agent, but he thinks it should not be depended on too exclusively, though it is a powerful source of relief.

84. Typhoid Fever.—Wilson's article is a report of an experimental therapeutic study of the treatment recommended by Alude, for typhoid fever, in which he advises the use of nuclein and copper arsenite. The results with this method are not favorable, and he thinks Alude's assertion that typhoid fever can be brought to a favorable termination in from three to five days by this method is absolutely without support.

85. The Alleghenies for the Tuberculous.—Spangler points out the climatic and other advantages of the Allegheny region for the treatment of tuberculosis, and shows a climatic meteorologic table. He pleads for legislative interference to preserve the forests of this region and endowments for public sanatoria there.

86. Pulmonary Tuberculosis.—The measures recommended by Forrester for the prophylaxis and management of phthisis are: The regulation of marriage of consumptives, the legal checking of indiscriminate expectoration, regulation of possible tuberculously contaminated foods, proper clothing, early care of catarrhal troubles of the respiratory tracts, outdoor occupations, fresh air, plain nutritious diet, etc. He appears to indorse Mays' theory of the neurotic origin of the disease and the value of silver nitrate injections.

94. Relation of Uric Acid to Migraine.—Lichty reports the results of his studies of the urine, with especial reference to uric acid and urea in their relation to migraine. For the estimation of urea, Liebig's method was employed, and for uric acid the method of Hopkins, modified by the use of a decinormal solution of sulphuric acid with methyl orange as an indicator, instead of titrating with the unstable potassium permanganate solution. When the headache began, the patient was instructed to save the urine in separate vessels during the entire period of the attack, and that voided at the time of the greatest intensity was examined, as was also that specimen collected as soon as the headache disappeared. Several times examinations of two urinations during the attack were made, and also one or more similar examinations in the interval be-

tween the attacks. From these studies, carried on during the past three years, it was found: 1. That both uric acid and urea were diminished during the height of the headache, but their own relation was not disturbed. 2. That after the headache, the urea increased to about what it was between the attacks; while the uric acid increased much more, thus changing the former ratio. These results do not agree with the uric-acid theory of migraine, but the control experiments made by Lichty seem to confirm them. He found that the uric acid wave associated with migraine does not appear for some hours after the culmination of the attack, and that, therefore, this increase of uric acid is to be taken as the effect rather than the cause. By careful chemical analysis, he finds that there was no excess of uric acid in the blood during the attack of migraine, and that in some cases there was even a slight increase of alkalinity.

96. **Curability of Nervous Diseases.**—Punton finds that practical knowledge and experience prove conclusively, that when the two great classes of nervous diseases are compared, irrespective of their seat, the organic diseases are well-nigh incurable, while the so-called functional disorders are in most part curable if recognized early. While there are some exceptions to this rule, its general validity can not be disputed. He notices the views of different individuals on this question, such as, for example, claims that epilepsy is curable, which he rejects.

97.—See abstract in *THE JOURNAL* of April 21, p. 1005.

102.—See abstract in *THE JOURNAL* of April 14, p. 934.

103. **Diagnosis of Pneumonia.**—Several cases are reported by Behrens, which show the difficulty of making an immediate diagnosis of pneumonia, the symptoms and physical signs being obscure. He emphasizes the following points as important in making the diagnosis in non-typical cases: 1. Be in no hurry to pronounce a case pneumonia of special type unless you have examined the patient thoroughly, both as regards objective and subjective symptoms. 2. Remember that no sharp line exists between the ending of a severe bronchitis and the beginning of capillary or catarrhal pneumonia. 3. Depend always on a physical examination as being of the most importance. 4. Children under 6 years have, as a rule, capillary catarrhal pneumonia; 6 to 16, croupous or catarrhal; adults, lobar pneumonia. 5. Do not lose sight of chest exploration, if peculiarities arise in continued fevers.

111. **Latency or Cure of Pulmonary Tuberculosis.**—Von Ruck points out the possibility of latency of phthisis, and insists on the necessity of treatment and testing of cases by the tuberculin reaction before they are pronounced cured. Patients that have been treated by tuberculin preparations can not properly be tested at the discontinuance of treatment, but six months later would give a sufficient interval to make the test of value.

118. **Diaphoresis in Pneumonia.**—In the *Medical Register* for Aug. 15, 1897, Miller reported the use of wrist heat for producing diaphoresis in the treatment of pneumonia. Since that time he has successfully used the treatment in a number of cases with uniform good results, with one exception. "The method of application of the wrist heat is to heat several bricks (six will usually suffice) in the oven and then thoroughly saturate them with boiling water, after which they are to be wrapped in cloths, preferably flannel, and placed about the patient. Sweating must be kept up from two to forty-eight hours, relief of pain being a most valuable indication for discontinuance. The bricks may be removed from time to time by carefully withdrawing them one at a time, and replacing each as removed by a new one prepared as above. Patient's clothing and bed-clothes should not be changed until thoroughly dry." Several cases are reported.

127. **Babinski's Symptom.**—According to Wood, the toe reflex can not be relied on as a basis for diagnosis. He has studied it in children and adults, and has not been able to corroborate the statement of Collier, as to the correctness of the original claim of Babinski, who held that there are two distinct forms of the plantar-reflex, one of the normal adult, and one of the child; and that in certain cases of disease, a rever-

sion of the former reflex occurs in the adult so that it is possible to make a diagnosis as to the seat or even the nature of the disease by this symptom.

128.—See abstract in *THE JOURNAL* of May 12, ¶ 46, p. 1185.

140. **Yellow Fever.**—Carter has analyzed the cases of yellow fever that have occurred in two Mississippi towns, with the special object of ascertaining the regular interval that must elapse between the development of yellow fever in non-infected places, and the development of that contracted by infection. The points involved are, the time from the development of the infecting case until that of another, plus the time the individual in question was exposed to the environment before he contracted the disease, plus the time from the contracting of the disease until its development. He thinks there is much evidence that is usually in, or not sooner than, the third week that the secondary case develops. There is no definite time limit that may be called the situation of "safe" or "unsafe," but hope of safety increases with the passage of the third week and the lapse of time after this. The first group of cases infected from the initial case occurs generally in from two to three weeks. These form new foci, the original ones remaining active; and in two or three weeks more a fever should be "scattered" in tertiary foci, just beginning. Prior to this it is found only in those who have had a common exposure, seldom in more than from four to eight places.

141. **Heroin.**—Floekinger has used heroin at first in 1/6-grain doses, but with this he noticed gastric disturbances in several cases. Since then he has used it only in 1/12-grain doses, and he has found that the hydrochlorid is admirably adapted for hypodermic injection. The dose is from 1/24 to 1/12 grain, whether given hypodermically or through the mouth. He does not think one is liable to become addicted to the use of heroin, as its narcotic effect is so much inferior to that of morphin. In conclusion he says that we possess in heroin an excellent sedative of the respiratory tract, which is devoid of the narcotic effect of morphin or codein and, therefore, in physiologic doses is entirely uninjurious.

143. **Gall-Stones.**—Cordier considers that cholelithiasis is of frequent occurrence and is usually accompanied by symptoms. Cholesterin as a gall-stone-producing agent must be present in an abnormal quantity, for it is largely a product resulting from the destruction and disintegration of the epithelium of the biliary ducts and gall-bladder. Bilirubin-calcium, an insoluble compound of bilirubin and the lime salts is a nucleus of all stones found in the ducts and the majority of those formed in the gall-bladder. Jaundice, ptomain poisoning and suppurative are late symptoms, while dyspeptic ones, swarthy skin, uneasiness in the region of the gall-bladder, and loss of weight are some of the remote and local ones. The most direct causative factors are inflammatory diseases of the duodenum and bile passage. While some patients get well without medical or surgical assistance, the physician can greatly aid the progress. The surgery is especially difficult and should not be undertaken by the inexperienced. A ball-valve stone continuously gives rise to symptoms until surgically removed, and when septic ones occur from gall-stones surgery is required.

144. **Fracture of the Ankle and Elbow.**—Ochsner calls attention to the fact that in a very large proportion of cases there is painful ankle-joint following Pott's fracture, due to the foot being in the equinus position, and resulting from the position in which the foot was fixed when the fracture was first treated. This is nearly always in an obtuse angle to the leg, and the gastrocnemius muscle is in a condition of tension. He would remedy this by putting the leg in a flexed position with relaxation of *this muscle*. To obtain a good result we should always place the foot at a little less than a right angle. In the treatment of fracture of the elbow-joint one of the most common difficulties is a partial ankylosis, especially in children, and the best result he has had in the treatment of this condition is obtained from encouraging the use of a wheelbarrow, something a child will enjoy, and that will cause a spontaneous straightening of the arm.

FOREIGN.

British Medical Journal, April 20.

Acoustic Principles Affecting Conduction of Sound by Bones of Head. ALBERT A. GRAY.—The object of the author's investigations was to find out the acoustic principles on which the tuning-fork tests depend. The fact that the same results can be produced by apparently opposite means in these tests gave rise to certain questions which he sought to solve. His experiments were made on an individual who was unacquainted with the principles involved, and by means of a probe introduced through the meatus against the drum membrane, and by gently pushing it forward against the handle of the malleus and other portions of the drum membrane the sound of the tuning-fork was modified. It was found that inward pressure of the outer parts of the membrane and of the manubrium produced opposite results, and the author accounts for it by the anatomic arrangement of the muscular fibers. The normal position of the drum membrane is slightly depressed in the center, like a funnel, with its apex pointing inward and its convex sides outward. When pressure is applied to these convex sides the radiating fibers will be relaxed and the circular ones become tense. When this occurs the former fibers become worse conductors of sound and the latter better ones, because the increased tension of fibrous substance produces increase in its sound-conducting power, and vice versa. So when pressure is brought to bear on the convex surface of the membrane, the radiating fibers are relaxed and the intensity of the sound conducted by the hammer is diminished. When, however, the probe is applied to the handle of the hammer, the results are different. The apex of the funnel is pressed inward and the tension of both sets of fibers, circular and radiating, makes little or no difference because the paths for the conduction of sound are the radiating ones. The latter are tenser than when the membrane is in a normal condition and the sound is conducted with less loss to the ossicles and thence to the labyrinth. The manner in which the atmospheric pressure causes alteration in the tension, however, is peculiar. Were the membrane equally strong in all parts and not attached to the ossicles, when the atmospheric pressure was increased or diminished the movement of the membrane would be greatest at the middle. Now after very slight increase of pressure of air this is true; the tip of the handle of the hammer and center of the membrane move more than the outer parts, which causes an increase in the tension of the radiating fibers and hence increase in the subjective intensity of the sound conducted by the bones of the head. This explains the fact that if the finger is inserted in the meatus the duration of sound is increased by better conduction. If, however, the finger is pushed forcibly into the meatus, the movement of the center of the membrane and the handle of the hammer soon stops, partly because the ligaments of the ossicles come into play, also because the eeg at the head of the handle catches on the incus and further movement inward is prevented or greatly diminished. The cause of the changes in the bone production when the air is condensed in the meatus seems, therefore, to be this: At first, under very slight increase of pressure, the center of the membrane with the handle of the hammer is drawn slightly inward, while the remaining parts of the membrane increase their convex form; this increases the tension of the radiating fibers, and hence their sound-conducting power; so with very slight increase of pressure of the air, increased intensity of the sound conducted by the bones is produced. If, however, the pressure is increased to more than a slight extent, the center of the membrane remains stationary while the convex surfaces of the membrane become flattened; hence relaxation of the radiating fibers occurs, and diminution in the intensity of bone-conducted sound takes place. The practical applications of the investigation to the test of hearing by better conduction in the deaf, and the experiments which have been made with the view of ascertaining the part played by the tympanic membrane in the generation of different tones will be published later.

The Lancet, April 28.

Case of Pernicious Anemia Treated by Antistreptococcal Serum. WILLIAM ELDER.—The writer reports a case of this affection in a man, 35 years of age, who had suffered

much from defective teeth. He presented all the symptoms characteristic of pernicious anemia. The blood test, two days after admission into the hospital, gave 797,500 red corpuscles, hemoglobin 24 per cent., leucocytes 4520. The treatment was a thorough disinfecting of the mouth, 5 gr. of salol and 15 gr. of bismuth salicylate internally every six hours, and 10 gr. of antistreptococcal serum injected into the subcutaneous tissue, every second day, the total amounting to eighteen injections up to March 19. This, with the exception of an occasional hypnotic and laxative, constituted the whole treatment. Improvement was rapidly progressive. On March 20, forty-five days after the commencement of treatment, the blood was practically normal, red blood-corpuscles 4,800,000, hemoglobin 104 per cent. While it would be a mistake to draw very decided conclusions from this one case, Elder thinks that it is suggestive and believes this form of treatment worth a further careful trial in pernicious anemia.

Cysts of the Breast; Their Relative Frequency, Diagnosis and Treatment. THOMAS BRYANT.—From his experience the author concludes that cysts of the breast are far more common than generally supposed, and that they are chiefly found in women during the same period of life as that in which cancer occurs. They are mostly amenable to local treatment without the sacrifice of the breast glands in which they are situated, and there is no reason to believe that women who have these cysts are more prone to cancer than those who do not have them. He carefully analyzed his notes of cases, and found that they suggest the conclusion that out of every four cases of tumor of the breast more or less simulating cancer, one at least will be cystic or of a simple nature. He thinks these are originally involution cysts in most cases. Their diagnosis may not always be easy, especially when in a middle-aged woman with a hard, slow-growing lump in the breast, and without any history of influence of lactation or any inflammatory breast condition. A careful medical examination should be made and, if the surgeon's sense of touch is keen enough to detect elasticity in the swelling, or even fluctuation, the diagnosis of cyst may be hazarded. If a clear serous fluid can be made to flow from the nipple, by manipulation or pressure on the tumor, the probability of the cyst being a simple one is much enhanced. If the fluid is brown or blood-stained the possibility of intracystic growth of some kind is suggested, and if more like pure blood, the presence of a soft solid growth, sarcomatous or carcinomatous, should be feared.

Strychnin as a Factor in Causing Cerebral Hemorrhage. LACHLAN GRANT.—The author calls attention to the importance of cautioning elderly patients with arterial defects against drugging themselves with tonic syrups and tabloids containing strychnin. On account of the danger of producing arterial rupture in the brain special care should be taken by the physician in administering strychnin to patients who have reached the degenerative age, especially in cases of cirrhotic Bright's disease, chronic gout and syphilis, or where the patient has thickened or tortuous blood-vessels, or even where there has been an hereditary tendency to apoplexy.

Revue de Médecine (Paris), March and April.

Liver in Scarlet Fever. H. ROGER.—This author has found that the alterations noted in the liver in scarlet fever are most extensive in the subacute cases. Fatty degeneration is the lesion most frequently observed. The organ usually appears enlarged, pale, marbled and crowded with leucocytes, while the cells degenerate. These alterations vary in intensity, and in one case of death after a month of scarlet fever nephritis, the liver seemed to be almost normal. The clinical manifestations of these hepatic lesions offer an interesting field of study.

Semaine Médicale (Paris), April 18.

Benedikt's Syndrome. GILLES DE LE TOURETTE AND JEAN CHARCOT.—The syndrome described by Benedikt, paralysis of the third pair with crossed hemiplegia and tremor, is easily diagnosed, the tremor differentiating it from Weber's syndrome, which it most resembles. With an unpublished ob-

ervation found in Charcot's papers and two personal cases, the writers were able to collect only six observations on which to found their study of the affection, including Benedikt's three. It commenced at the ninth month, or fourth, sixteenth or thirty-sixth year: gradually, with a premonitory cephalalgia for a year, or suddenly, with ictus inducing coma for three days. The hemiplegia is the ordinary spasmodic form, and may vary in intensity. The tremor may appear with it or not until a year or two later. The symptoms were doubled in one case, producing a dual syndrome. One case terminated fatally in four months, a child of 4; in another—a young woman—the affection has remained stationary since infancy; in a third—a negro, 39 years old—the syndrome has gradually increased in intensity since its sudden onset sixteen years ago. Benedikt attributes the syndrome to a lesion in the peduncle of the cerebrum near the nucleus of the motor oculi, where this nerve emerges, and he was able to establish its existence in one case by an autopsy. The motor or pyramidal fibers entering the peduncle may be affected "by continuity or contiguity" of the lesion, and to this the tremor must be ascribed, and the variability in its nature, although it has the constant characteristics that it is exaggerated with the voluntary movements and ceases during sleep, but otherwise may suggest the tremor from sclerosis in patches or paralysis agitans, hemichorea or hemiathetosis, with and without abolition of the reflexes. The character of the anatomic lesion seems to be immaterial; the localization in the peduncle at this point is the essential factor of the syndrome.

Grece Medicale (Syra), March.

Aporetic Disturbances of Temperature. TRIANTAPHYLIDES.—A number of tests on 130 subjects in health and aporetic disease, instituted by the writer at Batoum, differed in their results from the dicta of the text-books. He found that the normal temperature varied from one subject to another by more than a degree, but that it was more or less constant in each one. Healthy persons with subnormal temperature (35.8 or 36C.) are not rare at Batoum, and inquiry usually elicits malarial antecedents, unless the hypothermia is due to age or a recent disease. In such cases fever might be masked by the habitual hypothermia and a considerable elevation of temperature fail to be recognized on this account. He reviews the disturbances in the calorification in 101 cases of typhoid fever, 81 of pneumonia, and numbers of other diseases, and concludes that the calorification is one of the organic functions most frequently disturbed by affections which in one way or another touch the entire organism, and that affections in which the calorification is disturbed have a much more serious prognosis than others in which it remains intact. Regulation of the calorification is frequently a sign of a favorable issue.

Berliner Klinische Wochenschrift, April 2 to 23.

Toxicity of Thyroid Alimentation.—In the tests reported, dogs fed with fresh thyroid glands showed besides the usual phenomena a leucosuria amounting to .5 per cent, which persisted several days after discontinuance of the thyroid feeding.

Apparato-Therapy. P. JACOB.—This communication from v. Leyden's clinic extols the remarkable benefits that may be derived in long-seated paralytic affections of the central nervous system by the judicious use of apparatus, either to substitute the function of the paralyzed muscle or group of muscles, to assist and reinforce a partially disabled muscle, or to assist and reinforce the sound muscles to compensate the disability of the others. Two instructive observations are described, one a woman of 33 years of age, who could neither walk nor take hold of anything on account of spontaneous juvenile atrophy of the feet and hands. In the other, myelitis luetica had rendered the patient helpless. This latter case was improved by dural infusion of a solution of iodine, and function practically restored to the members by gymnastic exercises while lying on a hammock in a bath, exercises absolutely impossible in such cases without the support of the water.

Water-Secreting Power of Kidneys. G. KOVESI.—In this study, made at Koranyi's clinic, of the disturbances in the water-secreting power in generally diseased kidneys, Kovesi found that certain important facts might be learned by combining a dilution of the urine, by copious ingestion of water, with the determination of the freezing-point. The lowering of the freezing-point of the urine in renal affections depends on three conditions: 1, on the localization and the degree of the morbid process, which together determine the extreme limits of the variability in the concentration of the urine; 2, on the amount of water ingested, and 3, on the permeability for solid molecules still retained by the kidney. The quantity of water which when ingested produces urine isotonic with the blood, may vary with each case. When the nephritic subject drinks this amount, the kind of renal affection from which he is suffering will have no influence on his urine. If he drinks considerably more than is required to produce this isotonic urine, then, in case of parenchymatous nephritis, the urine will be much more concentrated than in case of contracted kidney. If he drinks less than this special quantity, the freezing-point of the urine falls much lower in case of contracted kidney, while it scarcely varies with parenchymatous nephritis. Tests on twenty subjects with normal or generally diseased kidneys have established several points and thrown light on others. Each drank 1.8 liters of Salvorator water during the noon hour. Study of the urine then showed: 1. That by determining the lowering of the freezing-point and the quantity of urine eliminated during the twenty-four hours, the amount of molecular diuresis can be ascertained and in pronounced cases molecular oliguria be recognized. 2. That by determining the freezing-point of the blood it can be ascertained whether the molecular diuresis is sufficient for elimination of the molecules capable of passing into the urine, formed during metabolism. If the molecular diuresis is insufficient in proportion to the metabolism—corresponding to the diminished permeability of the diseased kidneys for solid substances—then the freezing point of the blood becomes lower. 3. Hypostenuria indicates diminished water-absorbing power on the part of the kidney. 4. The more or less negative result of the "dilution test" indicates a decrease in the water-secreting power. The tests showed that the water-secreting power in the kidney is diminished in parenchymatous nephritis in proportion to the severity of the lesion, while it is retained to a greater or less extent with contracted kidney, as also in renal affections due to heart troubles. Congested kidney, in the tests, behaved like a transition form between chronic parenchymatous nephritis and secondary contracted kidney.

Centralblatt f. Inn. Med. (Leipzig), March 31 and April 21.

Rendering a Toxin Harmless. E. V. CZYHLARZ.—The German title to this article, "Entgiftung," means, literally, "disintoxication." The experiences related were made in the course of studies to determine the power possessed by the various organs, to render a toxin innocuous for the organism. A ligature was placed on the hind leg of a guinea-pig above the knee and a fatal dose of strychnin injected below. The ligature was removed after one to four hours, and none of the twelve animals showed a trace of intoxication at that time or later. Others snuclembed as usual to strychnin intoxication if the ligature was removed in a half hour, but an hour's interval before removing it was sufficient to save the animal from the toxic effects of the drug. Czyhlarz attributes these results to a binding or neutralizing of the strychnin in some manner by the living subcutaneous cellular tissue, muscles and blood and lymph fluids.

Intervals Between Feeding Infants. A. KELLER.—The writer states that five meals in twenty-four hours are sufficient for infants, and no more are allowed at the Breslau children's clinic. At the same time he has established that the absorption and retention of nitrogenized substances and phosphates is not influenced by the length of the interval between feeding. Consequently chemical tests are no criterion by which to regulate an infant's feeding-time.

Deutsche Medicinische Wochenschrift (Leipzig), April 26.

German Malaria Expedition. R. KOCH.—In this third

report Koch describes the results accomplished during January and February in German New Guinea, where he discovered 157 cases of malaria among 734 persons, while he was unable to discover more than 30 cases in five weeks at Batavia. He includes in his list only those in which the presence of the malarial plasmodium could be demonstrated. On a large plantation 12 of the 21 Europeans were affected; 26.3 per cent. of the 240 Chinese laborers; 25.3 per cent. of the Malays; 10.9 per cent. of the Melanese. Among 217 natives examined, he was unable to find a single case of malarial infection in the 154 who were over 10 years of age, and only four between the ages of 5 and 10. But 80 to 100 per cent. of the children under 2 were affected, and over 40 per cent. of those between 2 and 5. "The only means, therefore, of establishing the absence of malaria at a place is investigation as to the children." No cases were found among those at the mission station on an island off the coast, but all were over 2. The form of malarial infection among the children was, in 29 cases: tropical fever in 18, tertian in 5 and quartan in 6. Among the 157 adults it was: tropical in 65, tertian in 20 and quartan in 73. The gradually acquired immunity of the natives after early childhood is apparent from this research, both in Java and in New Guinea. The results of the author's investigations are tabulated and show that elevated regions are certainly more exempt from malaria than low-lying regions, although this is not an invariable rule. There was no malaria to be found, for instance, at Soekaboemi, which is about 1809 feet above the sea, although four different varieties of anopheles were discovered in considerable numbers. On the other hand, at Bandoeng, which is at an elevation of about 3280 feet, over 40 per cent. of the children under 1 year old were affected, and over 14 per cent. above this age.

Pathology of Bronchial Asthma. A. FRAENKEL.—The mucous nature of Curschmann's spirals seems definitely established by the post-mortem findings reported by Fraenkel in two fatal cases of bronchial asthma. The anatomic findings are not always the same, but the morbid process, whatever its nature, seems to be restricted to the more delicate bronchial ramifications. There is, however, one constant bond between all the cases, that is, the abundant desquamation of the epithelium. It is impossible for us to understand the modus operandi of the process which in one case causes the shedding of such abnormal amounts of epithelium in the bronchioles that the lumen is almost completely occluded, while, in another, the mucus-producing capacity is augmented to excess and a peculiarly tenacious mucus is secreted, leading to coagulation and spiral-formation. The only possible assumption is the influence of the nervous system, differing in individual cases, on the vascular and secretory apparatus of the bronchial mucous membrane. The central threads in the spirals are most probably, he thinks, long-drawn-out cell bodies from the ciliated epithelium, around which the mucus accumulates.

Treatment of Obesity. W. EBSTEIN.—Starvation and courses at watering-places to reduce obesity are not the proper methods to pursue, according to Ebstein. He would have the entire life altered to one of self-control: three meals a day, ceasing to eat at the first indication of satiety, food restricted to about 1300 calories for a man weighing 70 kilos; for breakfast, tea without milk or sugar, and 50 gm. of bread with plenty of butter; for dinner, soup, 120 to 180 gm. of roast meat with cabbage and green vegetables, salad, baked fruit without sugar, and fresh fruit, no turnips, parsnips nor potatoes; for supper, one egg, fat ham, smoked fish, 30 gm. of bread with plenty of butter, a little cheese and fresh fruit. This menu is agreeable to most persons and the appetite can be still further appeased by giving a large place in the menu to vegetables free from carbohydrates. Children of parents with a tendency to obesity should be watched over and not allowed to get into habits that would induce it. This rational, life-long treatment of obesity is also applicable to gout, diabetes, etc., and keeps the subject well and energetic. A good test of the amount to be eaten at a meal is whether one returns to work with zest after it. Milk and the products of milk are allowed when much craved, and the effort is made to substitute the albumin of

vegetables for that of meat as far as possible. No naps are allowed after meals.

Mittheilungen a. d. Grenzgebieten (Jena), vi, 1 and 2.

Tumors of Bladder. W. WENDEL.—In four of the sixteen observations described, the patients were workmen in anilin factories, which is a suggestive fact. In all the cases the benign papillary tumor of the bladder evidently originated in a primary proliferation of the epithelium, soon accompanied by proliferation of the vessels and connective tissue. These tumors manifest a decided tendency to malignant degeneration, the first indications of which are the appearance of masses of epithelium in the lymph-spaces of the stroma and in small nests, which have no direct connection with the surface. Epidermoidal formations are due to leucoplasia, and the epidermoidal cancers of the bladder and urinary passages are to be explained as metaplasia. This leucoplasia may develop without a preceding cystitis, and epidermoid cancer without a preceding leucoplasia. The most careful study of the tumors failed to disclose any evidence of a parasitic origin, but it enforced the necessity of extirpating the foundation on which the tumor grows, for quite a distance into the apparently sound tissue, even in case of pedunculated tumors.

Operative Treatment of Abdominal Tuberculosis. A. FRANK.—The remote results of operative treatment in 63 cases of chronic abdominal tuberculosis and allied conditions are tabulated and the following conclusions in regard to the prognosis are deduced: 1. Tuberculous peritonitis with effusion affords the best prognosis, as 40 to 50 per cent. recovered. 2. The prognosis of the dry variety with adhesions is more serious; only 25 per cent. recovered after operation. 3. The three patients with the ulcerative, suppurative variety died. 4. Among the cases with and without effusion the largest number of recoveries occurred in infection proceeding from the female genitalia: 75 per cent. in the former and 50 per cent. in the latter. 5. The attempt to relieve a patient with indications of peritoneal stenosis, by laparotomy and entero-anastomosis, is a justifiable procedure, although the results are far from brilliant. 6. Tuberculous fecal fistule indicate an exceptionally grave prognosis. 7. Tuberculous peritonitis occurring with ovarian cystoma is so rare that the prognosis can not yet be formulated.

Results of Operative Treatment of Basedow's Disease. G. REMBACH.—Four to ten years have passed since Mikulicz operated on his first series of nine cases of Basedow's disease, and the remote results are extremely gratifying. All the objective symptoms were nearly or entirely cured by the operation, and the patients have been completely restored to their working capacity and enjoyment of life. This article reviews the results in 18 operated on. Resection was done in 13 with success; enucleation in 3; bilateral resection in 4 at one time, and in 2 at two separate sittings; unilateral resection in 4. The arteries were ligated in 5 cases. No constant pathologic-anatomic alteration could be discovered specific for the Basedow goiter.

Zeitschrift f. Geb. u. Gyn. (Stuttgart), xiii, 1 and 2.

Conservative Treatment of Pyosalpinx. G. HERBMAN.—Reviewing his experience with thirty-four cases of inflammatory affections of the adnexa, Hermann recommends resolute, antiphlogistic treatment of acute cases as long as possible, in view of possibility of spontaneous recovery. He would operate in chronic cases where the sterility of the pus can be counted on, that is, nine to twelve months after the end of infectious process, obtaining, if possible, certainty of sterility of pus with a test-puncture. His method is laparotomy, conservative in the extreme.

Ultimate Results of Bilateral Operations on Adnexa. F. BARUCH.—The ultimate results in the cases in which the uterus was removed with the adnexa have proved more favorable than in those in which it was left, according to Baruch's experience with sixty-seven patients followed to date. He attributes this fact to the recurring painful inflammation in the ligated stumps and the stump exudation, which occurred scarcely at all after the radical operation. Other factors were the hemorrhages from the retained uterus, and the eliminative

disturbances, which were much less intense in the fourteen from whom the uterus was removed. Abdominal salpingo-oophorectomy proved effectual in every case, and half of the patients were definitely cured. The percentage of cases in which the working capacity has been restored is about the same with and without removal of the uterus—83.3.

Parietal Bone Presentation. H. BOLLENHAGEN.—Only two out of eight cases of this presentation, at the Würzburg clinic during the last three years, required versio-extractio. The rest terminated spontaneously, consequently Bollenhagen advises awaiting as long as possible before resorting to intervention.

Osmosis Between Mother and Fetus. J. VEIT.—The first result of the research reported was the discovery that the freezing-point of the blood of the child at the moment of birth is lower than that of the mother's blood. It was then noted that the freezing-point of the amniotic fluid is higher than that of the blood of either mother or child. It seems evident from these and other facts mentioned, that the dividing wall between mother and child has something of the nature of a dialytic membrane. Veit adds that further study of the subject may lead to a more rational and effective method of treating eclampsia.

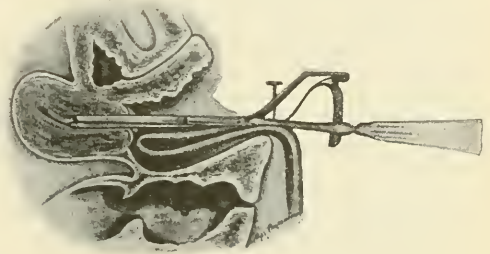
Blood-Pressure in Health. S. JELLINEK.—No relation between blood-pressure and pulse could be detected in tests on 532 healthy soldiers in Vienna. The normal blood-pressure varied between wide limits, from 80 to 185 mm. mercury. The average ranged from 100 to 160 mm. The blood-pressure was higher on the right than on the left side in a number of instances. External stimuli and influences: marching, eating, sharp-shooting, baths, did not affect the blood-pressure materially. In some it was increased, in others, lowered, and in quite a number no effect was perceptible.

Pathogenesis of Eclampsia. W. STROGANOFF.—Several series of cases of eclampsia, occurring at the St. Petersburg Midwives' Institute, sustain the theory advanced by Stroganoff that eclampsia is an infectious disease. Analyzing cases reported by others he notes that Olshausen records eleven series of cases of eclampsia, 83 in all, occurring within 250 days, and Zweifel records twenty series. A curve made up from these and his personal observations shows the same striking accumulation of cases the sixth day after the first infection. He affirms that eclampsia is an acute infectious disease, caused by an air-borne contagium, which usually penetrates into the organism through the air-passages. The disease germ is very slightly virulent. Men and children are not susceptible to it, nor women at any period of their life except during the puerperium. It can also find favorable conditions for development in the fetus, and makes no distinction between male and female in this respect. The germ is very resistant and in hospitals retains its virulence about three weeks. The period of incubation is short, from three to twenty-four hours. Primiparae, women bearing twins and women with renal affections are most susceptible. Strict isolation of all cases and disinfection of attendants are imperative. Nocard also admits the infectious nature of the disease from his observation of its occurrence in cattle and dogs when casting their young.

Klinitchesky Journal (Toscow), ii, 1.

Significance of Pains in Female Pelvic and Peritoneal Cavities. V. T. SNEOUTREFF.—The great importance of the characteristics of the pain in gynecologic troubles, for differentiating affections and indicating treatment, has never been appreciated heretofore. Snegoureff reported a year ago nine cases of severe endometritis dolorosa cured by dilation of the cervix and tamponing the uterus with gauze. As described in *THE JOURNAL* at the time (March 11, 1899, p. 552), he ascribes endometritis dolorosa to an inflammatory lesion of the uterine mucosa, and not to neuralgia or general neuropathy, as others are inclined to believe. He has been following his cases to date and eight new ones, and has obtained valuable and unexpected information by locating the painful points—which correspond mostly to the emerging points of nerves—and by determining the nature of the pains. He has established, in the first place, that one variety of endometritis dolorosa is a

threefold affection, involving the three orifices, anus, urethra and internal orifice of the uterus, which all become spasmodically contracted. The pain is similar in its cause and nature to that of fissura ani, and is benefited by the same treatment as the latter; dilation under narcosis and, if necessary, cutting the fibers of the muscular ring. All the pains vanish at once, showing that compression of the nerves and not an organic lesion was the cause. His method of anterior sphincterian hysterotomy is shown in the cut. One stroke of the concealed knife cuts the internal orifice across and the anterior wall of the cervix. No narcosis is necessary. The patients do not feel the slight incision nor know when it is done. There is no danger of hemorrhage, as he has established that the anterior median line of the uterus, the uterine linea alba, is free from vessels. Even if the bladder should be incised, of which there is scarcely the slightest danger, the incision would close and heal at once with a permanent catheter inserted and left for a time. The region of the incision in the cervix is tamponed with gauze for a couple of days. The significance of the renal plexus in the etiology of pains in the pelvic and peritoneal cavities is another result of his research, and the great benefit derived



from hot rectal injections, which far surpasses the effect of vaginal in these cases. He reports cases of pelveoperitonitis, antelexio uteri with perimetritis posterior adhesiva, and retroversio fixata, in which the patients were cured of their pains by hot rectal injections and appropriate general measures, calomel, etc., as indicated. As an illustration of the significance of the pains his first observation of endometritis dolorosa is typical. The patient, a multipara, 40 years old, complained of frequent and extremely painful micturition, and pain during coitus and defecation; menses irregular, constipation, digestive disturbances, and hypogastric pains. The painful points were located at the tuberculum pubis on each side, on the inner surface of the thighs, at the renal plexus on both sides, and at the solar plexus and rectum. Sounding the uterus induced intense pain at the internal orifice and in the fundus. Nothing abnormal was noted in the nervous, respiratory or circulatory systems. The uterus was normal in size and consistency. The external orifice allowed the passage of finger tip. The "threefold affection", as he calls it, was in this case treated with gradual dilation, under narcosis, of the three painful orifices—anus, urethra and internal orifice of the uterus—and the latter organ packed with a strip of iodoform gauze, left for two days. In five days all the pains had vanished except in the solar plexus, where they lasted a couple of days longer. Hot rectal injections were also ordered and general tonic measures. The patient left the clinic in three weeks, cured of all her pains, and feeling well and strong. In another observation the painful points were the same as above, and also a point on the spina anterior superior. The pains were much more intense on the left side, and subsided somewhat during menstruation. The other organs and micturition were apparently normal. Coitus was painful at times. This case was treated with dilation of the internal orifice and anterior sphincterian hysterotomy as in the illustration. No narcosis was used. Tamponing was with iodoform gauze left for three days. By this time all the pains had disappeared except in the fundus, and these also soon vanished and the patient was dismissed completely

cured in ten days after operation. The painful points are to be sought by pressure, and the sympathetic connection between them is evident. He calls the emerging points of the nerves along the anterior rim of the pelvis the most important, five in all, with the renal, solar, spermatic, and superior hypogastric plexuses, the sycondrosis sacroiliaca, McBurney's point, and two spots on each side a trifle inward and downward from McBurney's point, which correspond to the most sensitive ones in the uterus. In examining these points the patient lies in the dorsal decubitus, the lower limbs together and extended. Besides these areas he calls attention to five others noted in the perineal region. One is the emerging point of the ilio-inguinal nerve; another of the superior internal cutaneous, also of the pubic nerve and, lastly, a point near the edge of the levator ani, equidistant from the anus and the opening of the vagina. Each of these thirty-two points is fraught with significance to the gynecologist, and will reward further study.

Societies.

COMING MEETINGS.

AMERICAN MEDICAL ASSOCIATION, Atlantic City, N. J., June 5-8.

Fifth District Branch of the New York State Medical Association, Brooklyn, N. Y., May 22.

American Medico-Psychological Association, Richmond, Va., May 22-25.

Connecticut State Medical Society, New Haven, May 23-24.
North Dakota State Medical Society, Grand Forks, May 23-24.

West Tennessee Medical and Surgical Association, Jackson, May 24-25.

Indiana State Medical Society, Anderson, May 24-25.
Association of Military Surgeons of the United States, New York City, May 31 to June 2.

American Laryngological, Rhinological and Otolological Society, Philadelphia, May 31, June 1 and 2.

New Hampshire Medical Society, Concord, May 31 and June 1.

International Association of Railway Surgeons, Detroit, Mich., May 30 to June 1.

Baltimore & Ohio Association of Railway Surgeons, Atlantic City, N. J., June 1-2.

Conf. of State and Prov. Bds. of Health of N. A., Atlantic City, N. J., June 1-2.

American Academy of Medicine, Atlantic City, N. J., June 4.
American Medical Publishers' Association, Atlantic City, N. J., June 4.

American Medical Editors' Association, Atlantic City, N. J., June 4.

Association of American Medical Colleges, Atlantic City, N. J., June 4.

Medical Society of New Jersey, Atlantic City, N. J., June 4.
New Mexico Medical Society, Santa Fe, June 5.

American Association of Acting Assistant-Surgeons, U. S. Army, Atlantic City, N. J., June 6.

Rhode Island Medical Society, Providence, June 7.
Medical Association of Delaware, Rehoboth, June 12.

Massachusetts Medical Society, Boston, June 12-13.
American Association of Military Surgeons of the U. S., New York City, June 12-14.

Oregon State Medical Society, Portland, June 12-14.
Colorado State Medical Society, Denver, June 13.

Maine Medical Association, Portland, June 13-15.
South Dakota State Medical Society, Aberdeen, June 14.

Indian Territory Medical Association, Wagoner, June 19-20.
Wisconsin State Medical Society, Milwaukee, June 20.

Third District Branch of the New York State Medical Association, Binghamton, N. Y., June 21.

Second District Branch of the New York State Medical Association, Schenectady, N. Y., June 28.

Allen County Medical Society.—The election of officers for this Society, which met in Lima, Ohio, May 1, resulted as

follows: president, W. H. Parent; vice-president, Frank Steiner; secretary and treasurer, Andrew Rice.

Camden District Medical Society.—At the annual session of this Society, held recently in Camden, N. J., the following officers were elected: president, J. F. Leavitt; vice-president, Wm. F. Powell; secretary, P. M. Meecray; treasurer, E. R. Ramsdell.

Berkshire Medical Society.—The members of this Society met May 3, in Pittsfield, Mass., and elected the following officers: president, W. W. Scofield, Dalton; vice-president, M. L. Woodruff, Pittsfield; secretary, L. C. Swift; treasurer, W. L. Paddock.

Warren County Medical Society.—This Society met in Monmouth, Ill., May 16 and 17. The following new officers were elected: president, Cynthia Skimmer, Monmouth; vice-president, A. R. Graham, Little York; secretary, Della Nichol; treasurer, J. C. Kilgore.

Southeast Missouri Medical Association.—This Society met in Poplar Bluff, Mo., May 1. The new officers elected were: president, M. Rosenthal, Kennett; vice-president, C. F. Greene, Poplar Bluff; secretary, G. S. Cannon, Jackson; treasurer, R. F. Henderson, Jackson.

Fort Dodge District Medical Society.—At the recent meeting of this Society in Fort Dodge, Iowa, the following officers were elected for the ensuing year: president, C. J. Sanders; vice-president, T. F. Grayson; secretary, A. H. McCreight; treasurer Dr. Ristine.

South Carolina Medical Association.—This body met in Charleston, S. C., April 18 and 19, and elected the following officers: president, Geo. R. Dean, Spartanburg; recording secretary, T. P. Whaley, Charleston; corresponding secretary, A. J. Buist, Charleston; treasurer, B. E. Baker, Charleston.

Southern California Medical Society.—This Society closed a three days' session in Riverside, Cal., May 5. The new officers elected were: president, Fred Baker, San Diego; first vice-president, A. S. Parker, Riverside; second vice-president, C. M. Browning, Highland; secretary, F. D. Bullard, Los Angeles.

Union Medical Association of Northeastern Ohio.—At the 115th quarterly meeting of this Association, held in Canton, Ohio, May 2, the following officers were installed: president, T. J. Reed, Massillon; vice-president, J. F. Fox, New Philadelphia; second vice-president, Geo S. Peck, Youngstown; recording secretary, J. H. Seidler, Akron.

New York County Medical Association.—This Association will meet in New York City, May 21. Papers will be presented by Drs. Wm. L. Leszynsky, Wm. S. Gottheil, Wm. H. Bates, Herman M. Biggs, Francis Quinlan and others of New York City; Dr. S. Solis-Cohen and Prof. John B. Shober of Philadelphia.

Nebraska State Medical Society.—At the meeting held in Omaha, Neb., May 8-10, the officers elected for the ensuing year were: president, H. M. McClanahan, Omaha; vice-president, Inez Philbrick, Lincoln; corresponding secretary, H. B. Loury, Lincoln; recording secretary, A. D. Wilkinson, Lincoln; treasurer, J. L. Greene, University Place. Thirty-seven new members were added.

Arizona Medical Association.—This Association met May 3, in Prescott, Ariz. Fourteen new members were enrolled and the following officers elected: president, T. B. Davis, Prescott; first vice-president, John Dennett, Congress; second vice-president, Albert E. Ealy, Kingman; secretary, Chas. H. Jones, Tempe; treasurer, H. W. Hiram, Tucson. Phoenix was selected as the next place of meeting.

Clark County Medical Society.—This Society held its annual meeting in Springfield, Ohio, May 4. Arrangements were made for the semi-centennial celebration to be held there May 31. The following officers were elected: president, B. D. Titlow; vice-president, T. M. Reade; second vice-president, S. R. Hlutchings; secretary and treasurer, C. B. Bliss.

Norfolk District Medical Society.—The fiftieth anniversary of this Society was observed in Boston, May 8. Dr.

Harold Crust delivered an oration upon the work and progress of the society, and short addresses were made by many of the guests. The following officers were elected for the ensuing year: president, F. W. Goss; vice-president, C. F. Withington; secretary and librarian, Jas. C. D. Pigeon; treasurer, E. G. Morse.

Ohio State Medical Society.—The fifty-fifth annual meeting of this Society was held in Columbus, Ohio, May 9-11. Cincinnati was chosen as the next meeting-place, and the following officers were elected to serve the ensuing year: president, F. D. Bain, Kenton; first vice-president, J. S. Beck, Dayton; second vice-president, A. W. Francis, Ripley; third vice-president, L. B. Tuckerman, Cleveland; fourth vice-president, Frank Warner, Columbus; secretary, J. A. Thompson, Cincinnati; treasurer, J. A. Dun, Toledo.

American Surgical Association.

Annual Meeting, Washington, D. C., May 1-3, 1900.

PERFORATING ULCER OF DUODENUM.

DR. ROBERT F. WEIR, New York City, used this as the subject of his presidential address, and considered it under six different heads viz.: sex, causes, frequency, age, size, and symptoms. The last was given considerable attention, and a large number of statistics and references were presented, accompanied by an expression of his opinion concerning the most important. The diagnosis was also considered in detail and the treatment from several standpoints. His experience in the surgical treatment of a duodenal perforation was confined to one case, which he described, including the post-mortem findings. The paper concluded with a list of all patients who have undergone this operation up to April, 1900.

GASTRIC ULCER: NON-PERFORATING: HEMORRHAGE.

DR. WILLIAM L. RODMAN, Philadelphia, read a paper on this, and considered the subject under eight headings, viz.: morbid anatomy, etiology, age, symptoms, hemorrhage, physical signs, prognosis and treatment. Extensive statistics were given under several of the headings, and the treatment of the condition was divided into medical and surgical, the latter in turn being divided into gastrotomy and gastrostomy with curetting, cauterizing, etc.

The mortality of the various methods of treating gastric ulcer by different operators was detailed and twelve different operative measures mentioned in the treatment of gastric hemorrhage. The results of 55 autopsies in non-operative cases were given, in 17 of which occurred ulceration of the splenic artery.

The literature bearing on gastric ulcer was most carefully reviewed, and all operative cases up to date included in the summary. Gastroenterostomy was referred to as being the most generally practiced operation for hemorrhage and as likely to remain so for some time on account of the difficulty in locating the bleeding vessel. Excision is, however, the ideal operation in both hemorrhagic and non-hemorrhagic cases, and should be practiced unless there are prohibitive adhesions.

PERFORATING ULCER OF STOMACH.

DR. J. M. T. FINNEY, Baltimore, Md., considered the history, etiology, frequency of occurrence, pathologic anatomy, symptomatology, diagnosis, treatment, surgical treatment and prognosis of this condition. He said that the nature and extent of the development of a peritonitis in these cases depends on the site of perforations, their number and size, the character and amount of the gastric contents, and the number and varieties of bacteria that escape from the stomach into the peritoneal cavity at the time of perforation. Referring to the first questions needing attention in the treatment of a general septic peritonitis, he mentioned the giving or not of opium; the waiting or not until recovery from shock and the indications existing for an operation. He described the steps of the operation, as he performs it, and called attention to the fact that some of the complications which have been noted were intestinal obstruction from kinking, parotitis, phlebitis, subphrenic abscess, pneumonia and empyema. As to prognosis, he gave seven factors that played important parts:

the condition of the stomach, whether empty or full, when the perforation takes place; the interval between the last meal and the perforation; the time elapsing between the perforation and the operation; the number and size of perforations; the position of the patient at the time of perforation; the perfection of the technique at the operation; the nature of the infectious agent, whether or not streptococcus or pyogenes.

MALIGNANT DISEASE OF STOMACH AND PYLORUS.

DR. WILLIAM J. MAYO, Rochester, Minn., presented this subject and stated that the curability of malignant disease depends on the histologic structure of the growth, its location, extension to neighboring structures, glandular involvement, and the general condition of the patient. He said also that in the beginning, each operation is an exploratory incision, and that this should be a methodical examination, having in view the question of radical operation, palliation, or the inadvisability of attempt at relief. The radical operations to which he referred were complete gastrectomy and pylorotomy and partial gastrectomy; the palliative, gastroenterostomy and jejunostomy, etc.

The preparation of patients for operation on the stomach and the after-care were given considerable attention. He mentioned that malignant disease of the stomach has a peculiarly depressing effect on the patient, and that ascites, even in a limited degree, is a contraindication to operation. Cases of non-malignant disease, too far advanced to extirpate and not requiring palliation, should be closed by the Halsted method. He does not consider that the results of operations limited to the pyloric end of the stomach, taken as a whole, have been satisfactory, although a few cures have taken place in exceptionally favorable cases. He referred to various methods of operating, and mentioned the suture operation of Fenger as an ideal one. The statistics of different operators were given, showing that in 31 gastroenterostomies for benign as well as malignant diseases, in only 2 regurgitant vomiting was marked, both of which were malignant.

BENIGN OBSTRUCTION OF PYLORUS.

DR. FREDERICK KAMMERER, New York City, read a paper on this subject, considering it as congenital and acquired stenosis. He divided the first into two subdivisions: acute, absolute at birth—fetal peritonitis—and congenital hypertrophy of the pylorus. The second or acquired variety, he subdivided into fibrous stenosis; occlusion of the pylorus by benign tumors; syphilitic lesions of the pylorus; gall-stones obstructing the pylorus; spastic contraction of the pylorus—hyperchlorhydria.

He then took up the surgical treatment of benign obstruction, dealing with the dilatation of the stricture and the operative procedures, of which he mentioned three: resection of the pylorus; Loreta's operation; simple division of adhesions about the pylorus. He also discussed relative merits of pyloroplasty and gastroenterostomy, comparing the two procedures and the immediate, as well as remote, results obtained by each, giving many points in their technique.

GASTRIC DILATATION.

DR. B. F. CURTIS, New York City, considered gastroptosis. He said that gastroectasia was almost unknown except in three conditions: malignant disease, benign stenosis and gastroptosis, causing obstruction of the pylorus. This last he treated under three subdivisions: pathology—inclusive of enteroptosis; symptoms and diagnosis; surgical treatment—either gastroplication or gastroenterostomy. He considers that gastroplication is the rival of gastroenterostomy, and that gastroptosis has only recently been brought within the possibilities of surgical treatment. He dwelt on the difficulties of diagnosis of these conditions, and quoted some cases in *extenso* and mentioned some of the details of the operation.

HOOR-GLASS CONTRACTION OF STOMACH.

DR. F. S. WATSON, Boston, presented an article on this subject, considering the condition under three major headings: The different forms of hour-glass stomach and the functional and pathologic changes associated with them. 2. The symptoms and diagnosis. 3. The operative treatment. Under the last he gave the indications and contraindications for the

different operations, together with the reports of some of the cases operated on by gastro-anastomosis.

DIAGNOSIS OF CANCER OF STOMACH.

DR. JOHN C. HEMMETTER, Baltimore, Md., by invitation, read a paper on this subject. The definition of the term "early diagnosis" was given. He then spoke of age, the diagnostic value, the subjective and objective symptoms, the significance of blood and hematemesis, constipation or diarrhea, the emaciation and cachexia, condition of the gastric functions, the secretion of pepsin and chymosin with the method of examining for the same, the lactic acid, and the microscopic examination of the stomach contents, etc.

GASTRIC FUNCTIONS BEFORE AND AFTER GASTROENTEROSTOMY.

DR. CHARLES S. FISCHER, New York City, presented an article on this subject, in which he spoke of several cases that had come under his own observation, and said that examinations of the gastric contents shortly before an operation are valueless.

STRICTURE OF ESOPHAGUS.

DR. FREDERIC S. DENNIS, New York City, read a paper on stricture of the esophagus, following typhoid fever and relieved by gastrostomy. He affirmed that he had had good results.

ADHESIONS OF THE STOMACH.

DR. A. T. CABOT, Boston, made some remarks on this topic, giving the symptoms of the condition and the methods of obtaining relief.

DISLOCATION OF HIP.

DR. OSCAR H. ALLIS, Philadelphia, gave a series of demonstrations on the cadaver, illustrating his mechanism for producing and reducing various dislocations of the hip.

NEPHRECTOMY FOR ANEURYSM OF RENAL ARTERY.

DR. W. W. KEEN, Philadelphia, in a paper on this subject, said he had been able to learn of 12 cases of aneurysm of the renal artery, and of these, only 3 had been operated on; the first, by Albert of Vienna in 1891, the second, by Hahn of Berlin in 1893, and the third, the one in question, which was that of a woman of 45, who, having had at intervals attacks of pain in the region of the gall-bladder for four or five years, together with fever, finally observed that the right side of the abdomen was larger than the left. This tumor had developed in less than five years and without any known cause, and was, apparently, partly cystic, partly solid, painless and fixed. Diagnosis: a partially cystic tumor of the right kidney, probably due to hydronephrosis, but with a possibility of a sarcoma or other neoplasm. The operation was performed Feb. 1, 1900, through an anterior incision 17 cm. long. In less than thirty minutes the tumor was readily separated from its adhesions to the other viscera, after tearing through the outer leaflet, of the mesocolon. The pedicle was so broad that it had to be secured in seven sections, the arteries were numerous and the veins enormously distended. The nature of the tumor was not recognized at the time of operation nor, indeed, until after its removal, when a section of it showed that the kidney was flattened out on the surface of a large mass, measuring 14.5 cm. in diameter and weighing 970 grams, and that nearly all of it was made up of a mass of laminated clots, showing that it was a large aneurysm of the renal artery, a branch of which was traced directly into the aneurysm.

In only one of all the 13 cases collected was a correct diagnosis made. In at least 6 of these the cause was an injury. A recognized tumor was present in only 6, and in the other cases the aneurysm was rather of pathologic than of surgical interest. Pulsation was not present in any of the cases, due to the fact that the artery was small, the sac large and the impulse of the blood not sufficient to distend it and so produce pulsation. Hematuria is only present when the aneurysm either develops in the kidney or bursts into the pelvis. All 3 of the cases operated on by nephrectomy terminated in recovery.

TUMOR OF SUPERIOR PARIETAL CONVOLUTION ACCURATELY LOCALIZED AND REMOVED BY OPERATION.

DR. CHARLES K. MILLS, Philadelphia, presented the medical history of this case—one of unusual interest from the clinical,

physiologic and surgical points of view. The patient was a man 56 years old, who had some neurasthenic and other symptoms since 1884, and began to have paresthetic attacks, affecting his right upper extremity, in 1894. These attacks were of irregular and infrequent occurrence, and were variously described as feelings of crawling, tingling or battery sensations. After the attacks the arm usually felt somewhat heavy, and he frequently complained of a feeling of pressure or discomfort in the head, and especially in the left frontoparietal region. Sometimes this was described as a headache, but he never had the typical headache of a case of brain tumor. Optic neuritis was absent from the first, and vertigo and vomiting were so infrequent as to call for no special consideration, but he was frequently hysterical and despondent.

About five months previous to the operation, he began to show some ataxia in the right arm, and later in the right leg; when investigation of his condition was first made all forms of cutaneous sensibility were impaired, muscular sense was lost. As the case progressed paresis and, eventually, paralysis of the arm and leg supervened and this when complete masked the ataxia. The patient developed a disorder of speech showing itself chiefly as a verbal amnesia and fatigue when he was reading. At one examination he showed a temporary partial right hemianopsia. Reversals of the color fields and contractions of the fields for form, similar to those supposed to be typical of hysteria, were present at several of the examinations. The reflexes of the ataxic and paralyzed side, were somewhat exaggerated, and ankle-clonus was present. The patient was emotional and markedly hysterical.

An operation, which was successfully performed by Dr. W. W. Keen, November 24, exposed a tumor in the exact region which had been assigned as the seat of the growth, viz., the superior parietal convolution.

The patient made a complete surgical recovery, and improved in all his symptoms with comparative rapidity; his speech completely returned, the paralysis of the leg and arm largely disappeared, and cutaneous sensibility was in time restored. He was seen last by Dr. Mills, April 24, when he found that he had regained all the movements of the extremities on the affected side, although he has not full strength in those limbs, and the muscular sense, especially in the lower extremity, is still somewhat impaired, as would be expected from the tissue lost by the encroachment of the growth.

DR. W. W. KEEN, Philadelphia, in giving the surgical history said that as the flap was not to be in the thin, squamous portion of the temple, but in the parietal, it might cause great embarrassment from a very thick skull, not only by the time required to chisel through the bone, but the difficulty of fracturing the base of the osteoplastic flap, so he first made two trephine openings 0.5 cm. in diameter at the two points between which he wished to fracture the flap. The skull was found, as had been feared, unusually thick, being a full centimeter, consequently a Gigli wire saw was passed between the two points, and the bone sawed half through in order to weaken the base of the flap. A large flap, each side of which was 10 cm. long was then made, the anterior border of it being a little in front of the fissure of Rolando; the upper border within 1 cm. of the median line.

As soon as the dura was exposed at the lower portion fluid was suspected beneath it and a dural flap was then cut with the base upward. The tumor suddenly came into view at the anterior superior angle. It measured 5.5 cm. by 4.5 cm., weighed over an ounce, and was made up of small, granular masses like those of an ordinary raspberry, and was of a deep red or purple color. In order to remove the entire tumor, a portion of bone was removed anteriorly. The tumor had begun as a subcortical mass and then burst through the cortex. It was now separated from the brain tissue and removed in connection with a long finger-like cyst which extended, by measurement, 10 cm. into the substance of the brain, and contained from 1½ to 2 ounces of fluid. The patient made a complete and very smooth recovery, the wound being entirely well by the sixth day. On February 23, just three months after

the operation, he walked up the steps of the hospital with a scarcely perceptible limp, and shook hands with ease. His speech was entirely normal and his mental condition excellent, and a week later he started for a pleasure trip on the Mediterranean.

The following officers were elected for the ensuing year: president, Roswell Park, Buffalo, N. Y.; first vice-president, John E. Owens, Chicago; second vice-president, Clayton Parkhill, Denver, Colo.; secretary Herbert L. Burrell, Boston; treasurer, George R. Fowler, New York City; recorder, DeForest Willard, Philadelphia. The next meeting will be held in Baltimore, Md., May 7-9, 1901.

New York Academy of Medicine.

Section on Obstetrics and Gynecology, April 26, 1900.

Wm. H. Thomson, M. D., President.

PREVENTION OF DYSTOCIA.

DR. EDWARD A. AYRES presented a paper entitled "The Prevention of Dystocia Due to Fetal and Pelvic Disproportion." Speaking of the value of the previous history of labors in multipara, the author advised that inquiry be made regarding the length of previous labors, the size of the children, the character of the uterine contractions, and the general appearance of the head of the infant at the time of birth—the latter with a view to forming some conception of the probable amount of head moulding that had been present. He said that it was well to remember that, other things being equal, the pelvis of a stout woman is not so roomy as that of one less fleshy, and that each successive labor usually brings a slightly larger child, up to the age of 35 years, and that after this age the weight and size of each succeeding fetus is less than that of the preceding one. Another element in making the prognosis in a given case of labor is the general size and development of all the bones of the skeleton, and the width of the pubic arch. Special stress was laid on the value of the information obtainable from a method of examination during pregnancy known as tentative engagement of the head. Where there was marked contraction of the pelvic inlet, the head would lie high, and when the obstetrician endeavored with his hand to force the fetal head down into the pelvis there would be a suddenly developed and marked resistance. If, on the other hand, the inlet was fairly spacious, the head could be forced down some distance and would finally come gradually to a rest. Regarding the important subject of the induction of premature labor, the speaker said that this was a procedure which, in effect, transferred the danger from the mother to the child, and the question of the justifiability or advisability of resorting to it hinged chiefly on the extent to which the life of the child was jeopardized by inducing labor two or three weeks ahead of the natural time as compared with allowing labor to come on at full term, the child then being subjected to a difficult and tedious, and possibly an instrumental, delivery. The measures recommended for inducing labor were: 1. The use of a solid, flexible, tapering bougie. 2. The use of a small Barnes' bag to initiate the contractions. 3. The introduction of a tampon.

INDICATIONS FOR PREMATURE DELIVERY.

DR. S. MARK read a paper entitled "Indications for Premature Delivery with Special Reference to Eclampsia—The True Toxemia of Pregnancy," in which he said that puerperal eclampsia, from the standpoint of the clinician, is closely allied to renal insufficiency, and that the quickest way to restore the health is by measures directed to the restoration of the renal function. He dwelt particularly on the fact, so little appreciated by physicians generally, that the mere determination of the presence of albuminuria is of little significance in comparison with the knowledge of the daily quantity of urea excreted, for there may be no albumin in the urine, and yet the careful and thoughtful physician may have good reason for believing that his patient is on the verge of an attack of eclampsia. The daily quantity of urea should be about 500 grains, and the progressive diminution of the quantity of

urea, with or without albuminuria, should be taken as an indication for interference. He advised that all pregnant women be subjected to a pelvimetric examination, but that this instrument be used for purposes of comparison only, and since so much depends on the relative size of the fetal and maternal parts, he cautioned against sweeping deductions from such uncertain premises. When it is found, by pressure from above with the hand, that the head can not be made to engage, it is time to interfere.

TREATMENT OF TUMORS COMPLICATING PREGNANCY.

DR. BROOKS H. WELLS read a paper on this subject in which he said that where a pregnant woman has cancer of the cervix, vaginal hysterectomy should be performed while the uterus is small; that in the early stages it is possible for the cervix to dilate sufficiently to allow labor to proceed, but extensive lacerations are likely to occur; that while a woman with fibroids is not liable to become pregnant, still pregnancy may occur, and under its stimulus the fibroids will grow much more rapidly. The higher up the tumor, and the more nearly of the subperitoneal variety, the less dangerous it is as a complication of labor, but the mortality in labors so complicated has been as high as 50 per cent. in the past. For interstitial tumors, a supravaginal hysterectomy should be performed, and tumors of the cervix should be enucleated when possible. Large ovarian cysts are not likely to block the pelvis, but their pedicles are prone to become twisted and gangrenous. If the case is not seen until labor has begun, and the operation is progressing and the cyst not impacted, the operation should be deferred until after the birth of the child. According to his experience, abdominal operations are well borne during pregnancy.

DIFFICULT OR DELAYED DELIVERY.

DR. MALCOLM McLEAN discussed the question: "When is It Proper to Interfere in Apparently Difficult or Delayed Delivery, Especially in Primipare?" He said that if the presenting part is high up and movable, and the pelvic measurements within the normal limits, one should not interfere, because much unnecessary damage is done to parturient women by attempting surgical interference before the soft parts have had an opportunity to properly relax and dilate.

DR. E. A. TUCKER said that he makes it a practice to advise his patients to do considerable walking during the last few weeks of pregnancy, as a means of facilitating good engagement of the head.

DR. EGERT H. GRANDIN said that if the presenting part will engage under suprapubic pressure, it is highly probable that labor can be completed without assistance, but when such engagement can not be effected with the hand, the physician should at once interfere. He considers the tamponade of sterile gauze the best mode of inducing labor, and the bougie the most tedious and unreliable. He has seen so many and such severe cases of puerperal eclampsia occur in women whose urine has been absolutely free from albumin, that it is his practice, just as soon as there is diminution, both of the total quantity of urine and of the urea, to proceed to empty the uterus, without waiting for cephalalgia, impaired vision and other symptoms of renal insufficiency.

DR. S. MARK said that his own experience has convinced him that it is possible to accomplish considerable for those women who anticipate hard labors because of the large size of the child, by dietetic management, i. e., restricting the starches and sweets, and diminishing the quantity of water taken.

DR. E. A. AYRES indorsed what had been said about the value of walking to the pregnant woman during the last few weeks, but added that while this is an excellent rule for those in good health, its observance in the case of one suffering from renal insufficiency may lead to disastrous consequences.

Chicago Surgical Society.

April Meeting.

CASE OF TENOPLASTY.

DR. L. L. McARTHUR—As Dr. Murphy is down on the program to report a case of tenoplasty, it will add to the interest of the meeting to report a case which I recently oper-

ated on. Briefly, six weeks ago a girl, in going home from school, fell on a slippery sidewalk and sustained a punctured wound between the thenar and hypothernar eminences of the left hand. It was not known whether this wound was produced by glass or ice. It was transverse in direction to the long axis of the arm and about half an inch in length. I saw her four days later, when there was tumefaction, tenderness and pain above the annular ligament of the wrist-joint. There was no fever. The tumefaction and tenderness led me to believe that she had a deep-seated tendovaginitis without superficial redness, and I therefore requested that she be taken to my clinic. On opening the wound I found that there was no infection; that the punctured wound had resulted in the severing of five flexor tendons in the position mentioned between the thenar and hypothernar eminences, and also in a complete severing of the median nerve. It then became necessary to find the retracted ends of the tendons and suture them, and it at the same time became evident that the swelling was not due to inflammation, but to the bunch of retracted tendons presented like a tumor away above the wrist, so that an incision two inches and a half in length was made, and by careful dissection the retracted ends were found, brought down and sutured. The median nerve was also sutured, and primary union obtained. She was requested to return at the end of a week, for redressing, and at that time the stitches were taken out. At the end of two weeks she again returned to the clinic and, to my surprise, had already gained sensation in the first three fingers of the hand, which had been lost at first. This was unusually early for the return of sensation after nerve suturing, the earliest instance with which I am familiar, sensation having returned prior to the fourteenth day. I made suture of the tendons in this case with fine silk worm gut, which is almost comparable to horsehair in size and is of much greater strength, and being unirritating I prefer it to silk or catgut with the possibilities of infection that go with the latter.

The question now arises in my mind as to the period at which it is safe or desirable to break up the adhesions which necessarily form in the tendon sheaths at the site of such suturing. When first sutured, she was unable to move the fingers. She now has excellent use of the flexor sublimis digitorum and can readily approximate the ends of the fingers with the thumb. Much of the flexion is due to the first action of the sublimis, and further action is to be hoped for when we have further interfered with it.

DR. A. J. OCHSNER said that some three years ago he went through the literature of nerve grafting, and he desired to bring out one point in reference to nerve suture and the sequent return of sensation, of which Dr. McArthur spoke, because this point was impressed on him at that time. He had reported seven cases of nerve suture and nerve grafting, and to his surprise he found that within twelve hours sensation returned in those cases in which the nerve had been entirely severed and in which there had been no sensation before.

Another observation which he had made and desired to mention is with reference to tendon suturing at a distance. The longest distance at which he has grafted tendons was about six inches, in a case following a railroad injury, in which the extensor tendons of the hand had been destroyed by infection. The tendon grafting was done by means of fine catgut passed from the remaining tendon above to the remnant below, and then covering it in with available fascia. This operation was done four years ago, and the man is now able to work. He has fair motion and very good extension.

DR. M. L. HARRIS said that one of the most frequent causes of failure to obtain perfect motion after inflammation of the severed tendon is the fact that the cicatrix uniting the tendon blends with the one that unites the skin. Some time ago he published an article which was illustrated by a number of cases of tendon surgery, in which this point was particularly emphasized, and he advised that the surgeon should always interpose a layer of tissue between the cicatrix in the tendon and that in the skin, and that these different layers should all be sutured separately, as he found in several cases

that it makes a remarkable difference in the facility with which motion is regained after these operations.

In reference to the point made by Dr. McArthur, as to the time at which to break up adhesions, Koenig goes into the subject quite thoroughly and as the result of some experimental work which he did on the union of tendons in tendon sheaths, he finds that these tendons unite in a quite similar manner to bone and likens the union to that which formed first between the divided ends of the callus-uniting bone. This callus has a union with the tendon sheath. If the union between the tendon and tendon sheath is broken up too early, the callus is excited to activity and union again occurs. It becomes adherent to the tendon sheath. He advises not to make too active motion in these cases until the callus has time to form and begin its absorption, and the period of time from the formation of this callus to its complete absorption is about six weeks. While active motion should be encouraged to a mild extent previous to this time, too violent, forcible motion should not be instituted previous to the time of absorption of the callus. The material Dr. Harris favors for tendon suture is silk, and it will remain in tendons indefinitely. He has a number of cases in which silk has remained for several years, and the tendons are perfectly movable. Surgeons should select a suture material which will stand considerable tension.

DR. JACOB FRANK said that the swelling referred to is characteristic of tendons that are cut through. He has seen two or three such cases. He mentioned one case in which he cut from high up on the forearm almost down to the knuckles to find the origin of the tendon, and the swelling after the operation quickly disappeared, whereas before it was large. He considers it a true tendonitis. He has learned that in uniting tendons, no matter if the tendon be cut through, not the slightest amount of tension should be used. The hand must be at perfect rest.

DR. L. L. McARTHUR, in closing the discussion, said that in regard to the return of sensation in twelve hours after the suture of the nerve, some authorities are of the opinion that such a return is doubtful as occurring through a sutured nerve, and believe that there may have been a mistake in the diagnosis of sensation, or that it may be a collateral innervation.

In regard to the Harris method of suture, he was ignorant of it and was glad to learn of it.

As to putting in sutures that require tension to approximate the ends of the tendons, in his opinion the proper thing to do is to put these tendons physiologically at rest, to put the parts in that position which will thoroughly relax them, and in his case he took particular pains to close up the fingers, the sublimis profundus digitorum, and the wrist, bandaging so as to relax all tension, and in this way putting the parts physiologically at rest, and therefore having practically no tension on the ends of the tendons.

DOUBLE PYOSALPINX WITH INTESTINAL RESECTION.

DR. JACOB FRANK reported a case of this condition. Although cases similar to the one he desired to report are quite common, he took this opportunity to present one of double pyosalpinx with tubo-ovarian abscess complicated with such firm peritoneal and intestinal adhesions that resection of the bowel was necessary for the removal of the tubes.

The patient, Mrs. B., aged 23, gave the following history: When 17 years of age she was operated on for suppressed menstruation. She was married at 19 and aborted at the second month. From the patient's statements he was led to believe that she had gonorrhoeal arthritis about two years ago, although she insisted it was inflammatory rheumatism. On October 30 of last year she was taken with severe pain in the abdomen, which was very painful on pressure. When sent to the hospital, her temperature and pulse were high. For about five weeks she was treated on the expectant plan, with hot douches, stupes to the abdomen, and occasionally morphia was necessary to allay pain. Everything seemed to progress nicely, when, on the evening of November 22, she presented symptoms of intestinal obstruction, and on the morning of the 23d she was operated on. A median incision was made

and a conglomerate mass of adherent tubes, ovaries, intestines and omentum was encountered. The bowel was flexed by the adhesions and looked edematous, and lying in the midst of the adhesions two small abscesses were found. Owing to the great number and density of the adhesions, which resisted all attempts at careful separation, a rent in the bowel in two different places was accidentally made during removal of the tubes and ovaries. The coil of intestines with the tears was then carefully inspected and the walls were found to be very friable and infiltrated, so it was decided to do an intestinal resection. The anastomosis was effected by means of the Frank decalcified bone-coupler, of which a one-eighth-inch size was used, the measurement having been determined by means of the Frank enterometer. The operation was completed by inserting a Mikulicz and glass drain. The patient left the table in fair condition, but under the usual after-treatment gradually grew worse, until the fourth day, when her life was despaired of, notwithstanding the fact that she had early bowel movements following enemata. At no time, however, was there any escape of fecal matter from the anastomosis. After the fourth day she commenced to improve and left the hospital on Dec. 28, 1899. The piece of rubber tubing was passed on the fifth day following the anastomosis.

Dr. E. W. ANDREWS said that while he believed the Frank coupler is an improvement on any metallic device, yet the one which he used in a case was defective. Perhaps it would not be considered defective if one believes, as Dr. Frank does, that nine hours is sufficient time to get adhesion. Not believing this, however, the speaker was thoroughly alarmed at the rapid manner in which the bone parts of the coupler went to pieces in a case of strangulated hernia in which he used the coupler, although the patient fortunately recovered. In this case he had resected eighteen inches of the intestine. On the following day Dr. Frank demonstrated a new coupler before his (Dr. Andrews') class. The second day after the demonstration Dr. Andrews killed the dog to get the specimen, and he was alarmed to find that the bony parts of the coupler had softened to the consistency of white paste and had flattened out. The bowel was held fairly well by the four stitches which he had put in the form of a quadrant of a circle. Personally, Dr. Andrews does not believe that adhesion strong enough to hold the bowel takes place in six hours, although it may do so in connection with a row of Lembert stitches.

Dr. JACOB FRANK said the couplers can be made to absorb just as readily as catgut if they are formalinized or chromicized, and will come away just as the metal buttons do, but he has not found any need of doing this. The coupler which he used in the demonstration before Dr. Andrews' class was one he brought from Europe, which was made of bone, chemically prepared, and was not as good as the average coupler made in this country.

Kansas Medical Society.

*Thirty-fourth Annual Session, held in Topeka, Kan.,
May 2-4, 1900.*

Dr. Charles Gardiner, Emporia, president.

ADDRESS OF PRESIDENT.

Dr. CHARLES GARDINER, Emporia, in his presidential address, decried patent medicines and physicians who use and endorse them. He paid a glowing tribute to Dr. Benjamin Rush and urged the Society to see that Kansas should contribute her full share to the erection of a monument to his memory.

COMMITTEES AND RESOLUTIONS.

A committee composed of Drs. B. D. Eastman, W. T. Sawhill and W. L. Schenck was appointed to draw up resolutions on proprietary medicines. A resolution was passed, presented by the Douglas County Medical Society, to have a committee appointed to endeavor to secure pure foods and medicines by legislation.

A committee of five was also appointed to draft and present to the next legislature a bill for the protection of regular practitioners from the inroads of quacks and other impostors.

A resolution having in view the appointment of a national board of examiners, certificates from which would entitle

the holder to practice anywhere in the United States, was defeated.

The next meeting is to be held at Pittsburg, Kan., May 2-4, 1901. The following are the officers for the ensuing year: president, J. W. Porter, Pittsburg; first vice-president, J. P. Lewis, Topeka; second vice-president, C. P. Shafer, Topeka; corresponding secretary, J. W. May, Kansas City, Kan.; treasurer, L. H. Munn, Topeka; librarian, S. G. Stewart, Topeka.

There were forty-eight papers read during the session, covering a wide field of professional work.

STATE CONTROL OF TUBERCULOSIS.

Dr. W. E. McVEY, Topeka, in a paper on this subject, said that the laws to regulate and control bovine tuberculosis have not been passed on account of the danger of human tuberculosis resulting, but for financial reasons, as healthy herds are more profitable, while the laity does not realize the danger that really exists from infected herds.

Dr. R. S. MAOEE, Topeka, said that when the city's health board is notified of a tubercular patient dying, or moving from a house, that house is immediately and thoroughly disinfected. This has been the rule in Topeka for some years, and it should always be done.

OCCIPITO-POSTERIOR PRESENTATION IN LABOR.

Dr. J. DILLON, Eureka, read a paper on this subject. He advises, when flexion can not be secured, the use of extreme extension and delivery chin first, a method which is practically unknown.

Dr. G. A. BOYLE, Louisburg, spoke of one case in which he had used that method and in which the eyes of the child protruded extensively, but in about ten days there were no indications on the child of the difficult labor.

SPECIALIZING.

Dr. L. REYNOLDS, Horton, read a paper on "How Much of the Specialties Shall the General Practitioner Do?" He thinks physicians should know more about all the specialties and not send so many patients away, when they should know how to treat them.

Dr. J. W. MAY, Kansas City, Kan., said that he has found that the general practitioner is becoming more of a specialist every year and getting more knowledge on all branches.

VACCINATION.

Dr. T. W. PEERS, Topeka, in his paper, considered modern vaccination, and gave experience in caring for the city patients during the recent epidemic of smallpox. He vaccinated about 1200 and believes in frequent vaccinations. He recommends that legislative enactment provide for the repeated vaccination at stated short intervals, by the city physician, of every man, woman, and child in every city having such an officer. It is much cheaper and more satisfactory to all than to provide and maintain quarantine for a single smallpox patient in each county.

New York County Medical Association.

April 16, 1900.

Frederick Holme Wiggin, M.D., President.

PREVENTION OF INTRACRANIAL AND INTRAVENOUS COMPLICATIONS IN SUPPURATIVE DISEASES OF EARS.

Dr. J. H. WOODWARD read a paper with this title, to be printed in THE JOURNAL.

Dr. FRANCIS J. QUINLAN showed the gravity of otitis media by calling attention to the fact that it was the custom at the present time among the large life insurance companies to decline to accept as a risk any person having a chronic suppurative process of the middle ear above the short process. A mastoid operation should be entirely within the reach of the skill of the average general practitioner. It is most important that it should be done thoroughly, all of the cells being laid open.

WHAT ARE THE ULTIMATE RESULTS IN TREATING CANCER OF THE UTERUS? WHAT IS THE BEST PLAN OF TREATMENT?

Dr. HOWARD A. KELLY, of the Johns Hopkins University, Baltimore, Md., read a paper on this topic. It appears, with the discussion, in this and next week's issues.

THE JOURNAL OF THE
 AMERICAN MEDICAL ASSOCIATION.
 61 MARKET STREET, - CHICAGO.

SATURDAY, MAY 19, 1900.

THE ATLANTIC CITY MEETING OF THE AMERICAN
 MEDICAL ASSOCIATION.

The meeting of the AMERICAN MEDICAL ASSOCIATION at Atlantic City, N. J., next month, promises to be one of the best attended of any yet held. While the West may not be so well represented as it would be were the place of meeting more centrally located, the attendance from the Eastern States will be greater than even at the Philadelphia meeting, judging from reports. The committees at Atlantic City are sparing no pains nor expense to make the meeting a successful and an enjoyable one. The hotel accommodations are ample and no fears need be had on this account.

Railroad rates—one and one-third on the certificate plan—are not satisfactory, as nothing short of half rates ever will be. It would seem that an association whose meetings are as largely attended as are those of the AMERICAN MEDICAL ASSOCIATION ought to be granted half rates on merely asking for them, but the various passenger associations seem to think differently. Every effort to obtain half rates was made by the Committee, but the peculiar location of Atlantic City, as far as railroads are concerned, made these efforts of no avail this year. The time allowed, however, is longer than usual, and this is something for which to be thankful.

The programs of the various Sections, printed in this issue of THE JOURNAL, indicate the character of the scientific work which may be expected. Evidently the officers of some of the Sections have found it impossible to limit the titles of papers to the number recommended by the ASSOCIATION at the Columbus meeting, and if all the papers are read it will mean the utilization of every minute allotted to Section work. The quality, however, is not lowered on account of the quantity in this instance, as the names on the various programs will testify.

At various times in the past attempts have been made, unsuccessfully in each instance, to have the delegates occupy a certain part of the hall in which the meetings were held. This year, instead of repeating this attempt, a distinctive badge will be provided. One will be given to each delegate at the time of registering, on presentation of credentials signed by the secretary of the society which the delegate represents. Members attending as delegates are therefore earnestly urged to have their credentials with them at the meeting. The ASSOCIATION has now become so large that a strict compliance with the constitution and by-laws seems desirable, if not necessary. It is understood that only delegates have the right to vote in the general sessions.

THE GENERAL PRACTITIONER AND THE TECHNIQUE
 OF PATHOLOGIC EXAMINATION.

The so-called laboratory methods in clinical diagnosis are of fundamental importance to the general practitioner, the general surgeon, the specialist, and the hospital physician alike. The necessity of the hour is to make it possible for the individual to make as full personal use of these methods as is consistent with reliable and thorough work. It is seen at once that no one is in greater immediate need of clinical laboratory methods than the general physician, and above all the general physician in the country, more or less remote from large cities. The fact is that the introduction of laboratory methods in clinical diagnosis has greatly increased the already heavy responsibility of the general practitioner. The patients in the country are entitled to the same advantages of these new methods—the earlier, more definite diagnosis and all that that means—as the more fortunately situated dweller in the city; and the community and country at large demand the same prompt protection from communicable diseases, now more surely and earlier recognized, as the more watchful city with its health inspectors, municipal laboratories, and public disinfecting apparatus. The patients in the country can not afford to wait for the report of the laboratory specialist in the city and in many cases they can not be expected to pay the extra expense thus incurred.

The general tendency, in hospital and city practice, is to bring the laboratory and clinic into the closest possible relationship. The true clinician is no longer as fully satisfied as formerly with receiving his laboratory information at second hand. The better hospitals are beginning to establish small, clinical laboratories in connection with the various hospital services or wards as distinguished from the larger, more purely pathologic laboratory. Public and dispensary clinics are making provisions for laboratory facilities of their own because they recognize fully the great advantage of obtaining the information of the microscope and of the test-tube at first hand, of bringing it into immediate correlation with the clinical manifestations and the peculiar chances of error and of delay to which such information is unquestionably subject when it has to be filtered through the mind of another person, working not in the atmosphere of the clinic but of the isolated laboratory, and private practitioners are beginning to realize that clinical laboratory work in their offices is not at all incompatible with other work. This is self-evident. There is no reason why the practitioner should not be trained in the relatively simple details of clinical laboratory work as well as in the technique of physical examination, of the use of the ophthalmoscope, the laryngoscope, and of surgical cleanliness. There is no good ground apparent why a competent practitioner should not rely on his own examination of the sputum or of the blood in the majority of cases requiring such examination just as he relies on his own physical examination in the majority of them. Why always accept

unhesitatingly the verdict, as so commonly done, of the laboratory specialist any oftener than the verdict of the specialist in "diseases of the chest?" Surely things have not come to such a condition that the practitioner must rely wholly on specialists.

If we place so much faith in laboratory methods in clinical diagnosis it is clearly our duty to bring the laboratory facilities as close at hand as circumstances permit, and that is right into our offices and our wards and our clinics. Right here the objection may be raised that thorough laboratory methods are too time-consuming, too complicated for every-day use. But all thorough work is time-consuming. A practitioner who has not the time to do his work thoroughly because of the pressure of a large and extensive practice can well afford to surround himself with young and willing assistants whose work he can supervise and control. In this problem enters also the whole question of organization of the machinery of a practice, and that is a large question which each individual must solve for himself. Laboratory methods may seem complicated to the uninitiated, but to the schooled men they are not too complicated to prevent their daily and constant use. On the other hand, considering the value of the results obtained when rightly used, they must be said to be on the whole quite simple and direct. The first requisite is good training. This the better medical schools and hospitals are now endeavoring to furnish our students, and the larger cities are offering physicians abundant opportunities in the way of post-graduate courses to acquire the knowledge and the skill that their early training and situation may have failed to supply. The next thing is suitable apparatus, the most important single item of which is a reliable microscope, then come a few stains, minor implements, and such special things as blood instruments, etc. The necessary facilities for clinical bacteriology are within comparatively easy reach. It is acknowledged that the question of culture-media may be an awkward one; they may be bought ready-made, however. In the bacteriologic laboratory the "greenest" student generally succeeds fairly well in making the more common ones the first time he tries. It may be that by placing himself in communication with the nearest bacteriologic laboratory the general practitioner, for a small outlay, could receive a fresh supply at regular intervals.

Surely it would not be too much to expect that the general practitioner, as well as the specialist, should be well enough trained to rely wholly on his own chemical and microscopic examination of the urine and to understand fully the importance of examination of the urine of patients in general and of those with certain special symptoms in particular. This, we believe, is even now fairly well recognized by the intelligent and careful physicians.

The methods of examination of the gastric contents are also within the grasp of the man in general practice.

As regards the blood, the estimation of hemoglobin, the counting and staining of the corpuscles, and the study of the fresh specimen are absolutely requisite for the diagnosis or exclusion of a number of diseases, such as chlorosis, pernicious anemia, leukemia, and malaria. It is true that in many cases a diagnosis may be made from the grosser clinical manifestations, but a complete inspection is always desirable, because it furnishes a moral support that makes the professor the master of the situation; and then there are the obscure cases that baffle solution even at the hands of the true expert. All true physicians would be thankful to know that all means within their reasonable powers may be resorted to. The conscientious use of laboratory methods soon brings home a lively sense of the real limitations of one's abilities that discourages dishonest work and the pernicious habit of guessing.

The importance of bacteriologic methods in clinical medicine needs no emphasis. The early recognition of pulmonary tuberculosis by the demonstration of the bacilli in the sputum may save suffering, expense, and even life. In view of the omnipresence of the disease and of its devastation of human life, he must be a callous individual indeed who does not arm himself thoroughly for the struggle against tuberculosis that he feels in duty bound to take up in dead earnest when he assumes the care of the health of his fellow-men. A good microscope, a little carbol-fuchsin, clean slides, and a keen sense of responsibility are essential for successful war against "the white plague," and the outcome of the first encounter rests with the general practitioner.

The definitive diagnosis of diphtheria, in its inception either as a single case or as an endemic, rests largely on the bacteriologic demonstration of the diphtheria bacillus. Should not the general practitioner in the country and the small town where there is as yet no municipal laboratory be competent to settle this question? Will not the settlement of this diagnosis, and similar ones, redound to his great credit?

Among other bacteriologic tests of great value may be mentioned the staining of gonococci in the urethral and other exudates, and the demonstration of tubercle bacilli in feces, in urine, and in pathologic products of various kinds. By following the rule laid down in the extensive article on "The Smegma Bacillus," that has just appeared in *THE JOURNAL*, there should be no danger of confusion of the tubercle and smegma bacilli. The bacteriologic examination of cerebrospinal fluid obtained by lumbar puncture, and of pleural and other inflammatory exudates, may yield information of decisive importance in diagnostic and prognostic problems.

One of the simplest technical methods in clinical diagnosis is Widal's reaction in typhoid fever. It is essential to have a fresh culture of the typhoid bacillus on hand, and in times when typhoid is frequent the

physician would do well to secure the necessary tubes for frequent transplantation. It is essential to know the limitations of Widal's test, and questions of that sort are frequently discussed in our leading journals.

Animal inoculations may be practiced when necessary in order to clear up obscure conditions. Rabbits and guinea-pigs are not difficult to obtain. In case the practitioner does not care to keep a stock on hand a little inquiry will determine a satisfactory source of supply. Suspected local tuberculous processes frequently demand inoculation of guinea-pigs. The operation is simple indeed, the essential requisite being ample precaution against contamination and accidental infection with extraneous microbes.

As regards pathologic tissues, such as tumors and inflammatory productions, one can say that there is no essential reason why a practitioner should not himself fix, imbed, cut and stain the material, and study it microscopically. In case this is not feasible then we certainly have the right to demand that the physician should be familiar with the proper methods of preserving the material preparatory to sending it to the pathologist. The slovenly manner in which pathologic material frequently is treated often renders the result of the microscopic examination everything else than satisfactory.

We plead for a more extensive adoption of laboratory methods in practice. It is feasible. It introduces into routine work a feature that is eminently useful at the same time that it is interesting and enjoyable. It brings the physician a few steps nearer to the secrets of disease. It renders the physician a degree or two less dependent, greatly increases his usefulness, and puts him in touch with his own era. And the young physician, starting out fully equipped to introduce laboratory methods into his practice, at once puts himself at a decided advantage over his competitors who disregard these modern refinements, but who in the eyes of the community, which is quick to see such things, soon reach the unenviable distinction of being regarded as "back numbers."

NEPHRITIS WITHOUT ALBUMINURIA, IN YOUNG CHILDREN.

He will be the most successful diagnostician who early disabuses his mind of the existence of pathognomonic symptoms. The physician, above all men, must train his powers of observation in search of the unusual, the unexpected and the atypical. Apparent paradoxes in medicine are not rare. Thus, febrile disorders are at times unattended with elevation of temperature, epilepsy with the occurrence of convulsions, uremia with the development of coma, nephritis with the presence of albumin and tube-casts in the urine, diabetes with glycosuria. It is true that such occurrences are exceptional, but it is only by an appreciation of their possibility that error is to be avoided. The belief that nephritis may exist without the presence of albumin and tube-casts in

the urine receives support from some observations made by Cassel,¹ who reports a series of nine cases in children in whom, in the absence of disease of the heart, and without a previous history of scarlet fever, widespread anasarca was present, in three also with ascites, while the urine was free from albumin and abnormal morphologic elements.

In two of the three cases that terminated fatally, post-mortem examination disclosed the existence of nephritis. The patients were all young, one being 7 weeks, four 2 months, one 5 months, one 1½ years, and one 2½ years old. In some the anasarca was present when the children came under observation, while in others it developed during this time. The dropsy appeared first in the face, then invaded the dorsum of the hands and the feet, extending to the legs and the thighs, the scrotum or the vulva, and at times to the dependent portions of the back. In two cases the edema had been preceded for two weeks by a vesicular eruption, probably varicellous. In a third case measles developed after the dropsy had been present for two weeks, but the latter was uninfluenced by the complicating disorder. In five cases, however, the hydrops had been preceded by digestive disturbances of acute or subacute character. In one case no etiologic factor whatever could be elicited. Scarlet fever could be excluded with certainty in all. Four cases terminated in recovery in from four to six weeks. In two the results could not be learned and in three death occurred. The urine, obtained by catheterization at different times of the day and night, was pale, of acid reaction and low specific gravity. Tested with acetic acid and potassium ferrocyanid, and by the nitric-acid contact method, it failed in every instance to yield the response for albumin. There was no sediment and none could be obtained on centrifugation. Cassel has succeeded in collecting, from the literature, reports of a number of observers who relate cases of nephritis in which albumin and sometimes also tube-casts could not be found in the urine. In these cases, however, the renal condition was usually a sequel of a preceding disease, such as scarlet fever principally, but other exanthemata also were antecedent in some cases, such as chicken-pox, measles and typhoid fever. It is possible that other infectious diseases also may be attended with the same sequel. The suggestion has been made that the hydrops under the conditions just considered is due not to disease of the kidneys, but to increased permeability of the blood-vessels and the lymphatics of the skin, serous membranes and mucous membranes. A similar explanation may also be applicable when the anasarca attends gastrointestinal disorders, although it has been shown that these may give rise to actual nephritis.

MEDICAL RECIPROCITY.

The necessity of uniformity and reciprocity in medical standards and state qualifications for practice is daily becoming more and more evident. Medical re-

¹ *Berliner Klin. Woch.*, March 5, p. 213.

form is in the air, but it progresses everywhere, largely on distinct lines, and the results are therefore in some regards not all that could be wished. One state does not recognize the qualifications of another, and vice versa, and the outcome is discord and a reflection on the medical standards and the general status of American medicine. If we discredit each other individually, outsiders will discredit us collectively. Aside from this there are still more obvious disadvantages in this lack of reciprocity, not the least of which is the need of re-examination on change of residence, and the manifold inconveniences it involves. Everybody must admit that a uniformly high standard is the ideal and that even the suspicion that we fall short of this reflects discredit on us all. If New York will not recognize Pennsylvania's qualifications, Pennsylvania may retaliate in kind on New York, and both reject those of other parts of the country, and outsiders ignore the whole. It is true that in many states the law authorizes reciprocity in this matter of medical qualifications, but this does not materially improve the case. If the Federal government could assume the control of medical practice, this would be the simplest solution of the problem, but it is one of the disadvantages of our national organization that the Federal jurisdiction is limited in this regard, and it would not be altogether advantageous to our profession in any sense, could construction be placed on certain passages of the Constitution to make them include such jurisdiction—they would include too much.

We have before us the more complicated and difficult task of securing uniform action of the different commonwealths that make up our Union. To do this will require the united action of the medical profession and this, properly exerted, would be invincible. It can only be thus exerted by united action of authorized representatives of all states acting together in a definite, organized body. Anything short of complete uniformity in the medical laws of the various states will be only a partial success, and should not be even the alternative ideal. The difficulties in the way need not be ignored, but they are not insuperable and ought only to stimulate our efforts. There is hardly any subject that more deserves to be seriously considered at the coming meeting of the ASSOCIATION, and we trust it will be thoroughly handled and measures initiated to this end. Two things are certain: One is that this reform must be brought about, the other is that it must be done by the medical profession. As long as each state has its own independent standards and produces physicians only fitted to them, the reputation of American medicine as a whole will continue to be depreciated as in the past.

ALCOHOL IN THE TROPICS.

An army surgeon, in a paper in one of our contemporaries,¹ has expressed the opinion, contrary to that issued from the army headquarters, that the use of in-

toxicating drink is essential to continued health in the tropics, and another, a surgeon of volunteers, in the same issue, though his opinion is modestly given as the result of only one year's experience in active service in the same region, maintains the directly opposite view; he is certain that, as Americans drink it, strong liquor is injurious. The native liquor of the Philippines causes, he says, in its habitués, loss of appetite, fever and diarrhea, and the same results from the irregular American habit of drinking generally. His belief is that "the use of liquor in any form in the tropics is unnecessary, except it be the red wine issued by the Spanish Government to their troops." Judging from the condition and efficiency of the Spanish troops this would not seem to have helped them much. The doctors, however, do not disagree in this matter more than do experienced laymen. In a very limited tropical experience we have heard the most divergent views on this subject from white men there resident, and some who favored alcohol in one form insisted on its deadliness in another. There would seem to be hardly any question of tropical medicine much more important than this, and the burden of proof is certainly on those whose views are opposed to the generally received opinions and statements of authorities.

PRIMARY SARCOMA OF THE INTESTINE.

Based on 29 cases from the literature and three personal ones—32 in all—of primary sarcoma of the small intestines, Westermarck¹ gives the following general statements concerning this form of tumor. As regards frequency, Smoler's statistics show primary sarcoma of the small intestine 11 times in 13,036 autopsies, a percentage of .08. The majority of the recorded cases occurred in persons of the poorer classes. The tumor may be congenital; it has been observed at the age of 70; it is more common before the fortieth year. Of the 32 cases but 8 occurred in women. The growth usually begins in the submucosa, whence the outer coats are involved, the serous remaining intact the longest. At times the growth is nodular, forming subserous masses of varying sizes; or it may appear as a flat, circular infiltration of the intestine, part of which appears to have changed into sarcoma tissue; at other times the growth encroaches on the lumen of the intestine, forming submucous and subserous outgrowths. In a small proportion of the cases the sarcoma has occurred as multiple tumors. Retrogressive changes and hemorrhages are frequent, beginning either on the mucous surface of the tumor or in its interior. Soft tumors may give rise to dangerous intraperitoneal hemorrhages from rupture caused by ordinary palpation. Generally the lumen of the intestine corresponding to the tumor is dilated, the wall losing its elasticity and contractility; in some cases the dilation was very pronounced. In one of Westermarck's cases there was an invagination of the degenerated region into the healthy intestine below. The lower part of the small intestine is more frequently involved than the upper part, and round-celled sarcomas are the more common. The course is rapid, and metastases form early. The most pronounced symptoms are each-

¹ Phila. Med. Jour., April 7.

¹ Phila. Med. Jour., April 7.

exia and loss of strength. In one case of removal by operation the patient remained well for a year, but little is known concerning more remote results. In most of the cases operated on recidivation has occurred in a short time.

STATE ENDOWMENT OF MEDICAL EDUCATION.

A distinguished New York physician and medical educator is quoted as saying: "I hold that the state ought to furnish sufficient funds for the adequate and thorough instruction of all the pupils in every medical institution already legally organized, and for such others as the increase of population may cause to be established under the regulation of the state." It would be injustice to the gentleman to assume that this was other than an undeliberated utterance, since he and every one else in the profession must realize that it would be a very extensive contract for the already burdened public to assume the support of the numerous medical colleges of the country. If there is one thing in which American medical education leads the world, it is in its quantity, but we do not congratulate ourselves on this fact. What we need is improvement in quality, and it would be no loss if three-quarters of the hundred and fifty, more or less, medical colleges of all sorts in this country should go out of business. What the doctor probably meant, but what unfortunately it appears he did not say, was that the state should insure a uniformly thorough scientific medical education in those seeking it, and this necessarily implies a regulation of the standards of education that would be fatal to the success of many of the minor institutions that can command neither the clinical facilities nor the teaching ability that would be required. Whether this can be done uniformly in all the different commonwealths that make up our country is a problem that remains to be solved; that it is desirable no one questions. His remarks also implied that the state should endow and encourage scientific medical research, another thing to be desired, and which it can do to a certain extent though not so universally as he would seem to think. What we do need is endowment of medical instruction, and lifting it above what it is at present to too great an extent in this country—simply a means of nonprohibited medical advertising. Our medical colleges have been too long originated and conducted as business investments, not always for their direct returns, but to supply from their output a consulting clientele for their professors. The stock company medical college, described by a prominent neurologist in the '70s, was a caricature with a broad family likeness to many of the institutions of the time, and there are still in some quarters relics of the same features amongst the medical colleges of to-day.

TUBERCULIN THERAPY.

The use of tuberculin in the human subject, either for therapeutic or diagnostic purposes, has as yet no recognized standing with the profession, and there is a very wide-spread suspicion that it may sometimes revive latent foci and thus arouse at once, what is for the time, at least, a harmless condition into a dangerous state of disease. It has, however, its advocates, and among them we may

include, in a somewhat qualified sense, Dr. Edward R. Baldwin,¹ Saranac Lake, N. Y., who thinks that clinical experience, as well as experiments on animals, shows that it "can favorably influence a pure localized pulmonary tuberculosis and lupus in a well-nourished afebrile patient," but does not, he says, presume to decide whether tuberculins of any sort should be favored for limited therapeutic employment in the light of our present knowledge. This is, indeed, a very qualified endorsement, but it leaves the decision of the question to the individual therapist, who can use it to justify himself in any course he may adopt. It should be added here, however, that he thinks it obvious that this treatment should be limited to institutions, and that the patients should be observed through a series of years. He considers that the action of the tuberculin is in aiding the defective powers of the organism by stimulating the secretion of ferments which attack the tuberculous toxins. It is not established that they are more effective in this way than certain other irritants, such as cinnamic acid or nucleins, but the possibility of producing a toxin immunity makes it more rational to employ a specific irritant. The difficulties and the dangers, however, of thus obtaining any immunity from tuberculins are, he admits, such as leave it practically out of consideration. The question is, therefore, reduced to whether or not we can aid Nature in her contest with the tubercle bacilli by measures that increase hyperemia and absorption. He answers this with, as usual, a qualified affirmative, and quotes, as instances, the effects of laparotomy on tubercular peritonitis, Bier's method of treating tuberculous joints by manipulation, and the action of the X-ray on lupus. The serumtherapy of tuberculosis is mentioned, in conclusion, as still in the experimental stage; and Baldwin is not without hope of results of practical value.

Medical News.

DR. A. GARCELON'S ANNIVERSARY.—We clip the following, concerning the president of the Board of Trustees of the AMERICAN MEDICAL ASSOCIATION, from the *Lewiston (Me.) Journal*:

"Dr. Alonzo Garcelon, of Lewiston, who needs no introduction to the people of the State of Maine, will measure his eighty-seventh milestone on Sunday, May 6. The *Journal* and the citizens of Lewiston and Auburn congratulate the Doctor upon the unusual health and strength which he enjoys to-day. Robust and vigorous, Dr. Garcelon still carries on his practice in these cities and in the surrounding country, and is as light of heart and as jovial company as in the years long gone by. His familiar figure is one that attracts attention upon the streets, being of statesmanlike type of such an earlier period in American history as that of Henry Clay, Calhoun and Webster. Then another characteristic of the Doctor is his great love of good horseflesh. In his stables have always been found some of the finest blooded animals in the two cities, and his old-fashioned chaise has always followed some mighty fast clippers over these country roads. A great lover of travel of any kind, Dr. Garcelon, only this year, made a trip west, covering over 6000 miles. After attending a medical meeting at Chicago, he enjoyed a little side journey for

¹ *Phila. Med. Jour.*, May 5.

pleasure, to Denver and other places in Colorado, where he was entertained richly royally by his many friends. On his way back, Minneapolis, Chicago, New York and Boston were visited, the whole trip being of several weeks' duration. While in Denver, the Doctor had occasion to call upon some friends, but, not having announced his coming, he found them in the midst of a dinner party. The welcome was most cordial. The hostess escorted the Doctor into the dining-hall, and he at once became the most honored guest of the occasion. Introductions were made, and Dr. Garcelon for over an hour entertained the party with delightful reminiscences and stories gleaned from his long and active service in the world. The whole event is said to be one of the happiest in the memory of those present. Again we congratulate the Doctor. Long live one of our most esteemed citizens!"

INTERNATIONAL ANTITUBERCULOSIS CONGRESS.—More than 1200 members assembled at this congress, in Naples, April 25 to 28, a brilliant gathering of the scientists of continental Europe. It was more especially a trilateral than an international assembly, as not a single American or English name appears on the official program of addresses, although all nations were officially represented on the platform. Among these representatives our correspondents mention the names of Drs. Heiser and Willson of this country. In his opening address Baccelli stated that Italy is the most favored land in Europe in respect to tuberculosis, quoting statistics to show that in 1894, when Prussia lost 71,000 inhabitants from tuberculosis and Austria not less than 88,000, the deaths in Italy from this cause were 30,000. He added that old healed tuberculous lesions are found at a third at least of the autopsies in Italy, showing the marked tendency to recovery from the disease in that climate.

De Renzi outlined "The Present Status of the Treatment of Tuberculosis," placing all drugs in the second rank far below prophylaxis and hygienic measures in importance. The two medicines that are considered most effective are creosote and iodine, but the only effect of the creosote is to diminish expectoration, as it would be impossible to administer it to a patient in amounts sufficient to actually destroy the Koch bacillus. It benefits the sympathetic bronchitis but has no influence on the tuberculous processes at practicable doses. Iodine has evidently a favorable effect on local tuberculous processes, but has given conflicting results in experimental research. The Maragliano serum may prove beneficial in light cases. Patients with moderate tuberculosis, under treatment with this serum do not react as usual to injections of tuberculin, which demonstrates that they have acquired a certain resistance to the bacterial toxins. De Renzi's experience with "thiocol Roche" during the last year has been extremely favorable, and he considers its action superior to that of creosote or guaiacol. He concluded by reporting the excellent results he has attained with electric-light baths. Nine patients have been cured and others improved. The beneficial action may be due to the sweating induced. He has established that the sweat of tuberculous subjects is more toxic than in health. Besides the disappearance of all the morbid phenomena, injections of tuberculin failed to produce any reaction after this treatment. He recommends it as a valuable adjuvant to the indispensable hygienic measures, among which he includes pure air, absence of fresh infection, abundant food and gentle exercise. He does not ap-

prove of too much repose, and observes that confined air produces an intoxication of the organism which renders it a peculiarly favorable soil for the development of the Koch bacillus.

Senator exhibited a device for disinfecting the air in industrial establishments, and Ausset proposed that all houses for rent should keep a health record book to serve as a sanitary passport for the habitability of the house. The organization of special tuberculosis dispensaries in cities was advocated by several, and it was observed that sanitarium and dispensary treatment is only a fraction of the task to be accomplished, which should include the support of the patient's family and change of occupation.

Santoliqido, the chief of the sanitary service in Italy, announced that steps are now being taken for the compulsory notification of tuberculosis in poor-houses, dairies, etc., and also in cigar factories. Tuberculous employees are to be excluded from the latter and the state will provide a support for employees thus deprived of a means of earning their livelihood. The Congress voted to establish a permanent trilateral committee for the campaign against tuberculosis, and the Duke von Ratibor was appointed to represent Germany; Lannelongue, France, and Baccelli, Italy. They are empowered to elect an equal number of coadjutors to form the "International League Against Tuberculosis."

The numerous festivities included a trip to Pompeii, where the excavations have been carried on of late with enthusiasm and skill, under the supervision of that eminent member of the profession, Guido Baccelli, who, in his official capacity as minister of public instruction, has had the domestic life of Pompeii resurrected by restoring the famous Vettio mansion, discovered in 1894-95, which has many features of peculiar interest to physicians and sanitarians. The Exposition of Hygiene was inaugurated about the time of the Congress.

NEW YORK.

UNSANITARY PRISON CELLS.

A report on the condition of our state prisons has just been made by a committee consisting of Drs. Austin Flint, J. G. Phelps Stokes, J. Murray Mitchell, J. Seeley Ward, Jr., Eugene Smith, F. P. Bellamy, Henry E. Gregory and William M. F. Round. Referring to the cells at Sing Sing, the report says that the size of the ordinary cell is 3 feet 3 inches by 6 feet 6 inches in height, and 7 feet long, and that there are 1200 of these in a room 60 by 400 feet. In addition to this insufficient breathing-space, the lighting by day is poor, and the prison is overrun with vermin. Auburn prison is not quite so bad, but it is poorly lighted and ventilated, is dangerous in case of fire, and has insufficient sanitary arrangements. Dannemora prison is described as being much cleaner and better in every way, though not what it should be. The discipline was noted to be decidedly lax in Sing Sing, a little better at Dannemora, and excellent at Auburn. This committee, which was appointed under the authority of the supreme court, declares these prisons to be a disgrace to a civilized community.

New York City.

A NEW FIVE-STORY brick and limestone building, costing about \$125,000, is to be erected for Beth Israel Hospital.

A MAN, 65 years of age, recently died here of exhaustion from persistent hiccough, which had lasted about a week, and had resisted all attempts at its control.

THE QUARTERLY report to the president of the Board of Health, for the period ending March 31, shows 221 deaths from la grippe, as against 263 from that disease in the same period of 1899; also 2486 from pneumonia, as against 1654 in 1899.

GIFT TO FLOATING HOSPITAL.

Mrs. AUGUSTUS D. JULLIARD, who has already given the new floating hospital—the *Helen C. Juilliard*—to St. John's Guild, has now donated \$50,000; the interest from which is to be used in defraying the expenses of this hospital. The guild has been still further aided in its work by a gift of \$9046.89 for the erection of a new cottage at the Seaside Hospital, New Dorp, S. L., given by Mrs. Frederick Elliott Lewis in memory of her little son. In the summer of 1899 the guild expended \$60,000 in the care of 82,842 infants, and it proposes to increase its work the coming season.

CONFERENCE ON CHARITIES.

An informal conference on charities has just been held. Dr. George G. Wheelock presented a paper discussing the topic, "Are Public Institutions Adequate to Public Needs?" He said that while there has been some improvement in the department of charities since it was separated from the correction department, still this improvement has been very slow. There has been a decided decrease in the number of inmates in the almshouse, there having been, on Oct. 1, 1899, 743 vacant beds, and there is great need for a convalescent hospital. Fordham Hospital he characterized as "a lamentable instance of an unwise if not culpable expenditure of the city's money." Charities Commissioner Keller, in his address, declared that the most glaring need in his department is a new building to take the place of the miserable and outrageous makeshift now known as the Harlem Hospital.

PENNSYLVANIA.

WORK has been commenced on the new wing of the Lackawanna Hospital at Scranton.

A RESIDENT of Erie was bitten by a cat about five weeks ago, and died May 11 with symptoms of hydrophobia.

TWO CHILDREN living at Allentown swallowed a quantity of butter coloring matter, from the effects of which toxic symptoms developed and one child died.

A MAN, aged 50 years, who had for nearly ten years been isolated at the county house near Media, died on May 9. He came to Pennsylvania in 1887, and, knowing that he had leprosy, jumped from the vessel as it was coming up the Delaware River, and swam ashore to escape the sanitary officers. He stated that he had inherited the disease from his mother.

Philadelphia.

CHARLES LAWRENCE, superintendent of the Philadelphia Hospital, has tendered his resignation.

A LECTURE was delivered by Dr. Simon Flexner at the Museum in Widener Hall, May 10, on "Impressions of the Philippine Islands."

BY THE will of Mary Baker, \$5000 has been left the Philadelphia Hospital for Women, as an endowment of a free bed; \$1000 was left to the Methodist Hospital for the same purpose.

DR. R. N. WILLSON recently delivered an address before the International Convention for the Prevention of Tuberculosis, which was held in Naples.

DRS. H. B. ALLYN and DAVID RIESMAN have been appointed members of the medical staff of the Philadelphia (Blockley) Hospital.

THE COMPETITIVE examination for positions on the staff of the Philadelphia Hospital will occur May 22. The examining board will consist of Drs. James M. Anders, John H. Musser, A. H. Hulsburgher. Sixteen resident physicians will be chosen.

UNIVERSITY HOSPITAL.

Provost Harrison, of the University of Pennsylvania, recently appeared before the Board of Supervisors to advocate an ordinance to strike from the city plan, Pine Street from Thirty-fourth to Thirty-sixth Street, in order that needed enlargement of the University Hospital may be made. Otherwise a gift of \$50,000 can not be accepted on account of the lack of ground on which to build.

MORTALITY STATISTICS.

The number of deaths during the past week was 494, a decrease of 23 from the previous week, and an increase of 90 over the corresponding period of last year. The principal

causes were: nephritis, 26; cancer, 6; tuberculosis, 57; diabetes, 1; heart disease, 32; influenza, 5; appendicitis, 4; pneumonia, 69; peritonitis, 5; septicemia, 4; suicide, 6; tetanus, 1.

PENNSYLVANIA HOSPITAL.

The 149th annual report of this hospital has been made: The total number of cases treated in all the wards, not including the department in West Philadelphia, was 36,126. In the insane department, 619 were treated. The expenses of the Pine Street Hospital were \$116,790.30; the West Philadelphia Hospital for men, \$95,843.32; the Hospital for Women, \$125,490.18. The principal contributions received during the year were: from Frederick F. Ayer, \$25,000; Samuel J. Sharpless, \$10,000; Estate of George Plumer Smith, \$10,000; and \$5000 each from John T. Morris, Elizabeth Baker, estate of Catherine Thorn, Clara Galli and Dr. Joseph Kirkbride. The total contributions amounted to over \$89,500. The sum of \$7968.50 was paid by the Government for the treatment of soldiers during the late war.

MARYLAND.

Baltimore.

DR. THEODORE COOK, JR., has been reappointed physician to the penitentiary.

DR. FREDERICK LAWFOED has been appointed assistant physician to Bayview Hospital.

DRS. WM. B. BURCH, John S. Bishop, and John T. McCarthy have been appointed on the board of police surgeons.

PROF. W. H. WELCH, Johns Hopkins University, has been appointed one of the judges of the Hall of Fame, New York University.

THE WOMAN'S Medical College graduated four women on May 7. Miss Willena A. Peck, of Massachusetts, received the gold medal. The address was delivered by Rev. Dr. J. B. Van Meter, Dean of the Woman's College of Baltimore.

PUBLIC BATHS.

The mayor has approved the city ordinance appointing a commission to take charge of the public baths in Baltimore. Among the seven names on the commission, three are those of physicians: Drs. John S. Fulton, Mary Sherwood and Joseph C. Gichner. Henry Walters has turned over to the city the public baths on High Street, which he has given to Baltimore.

UNIVERSITY HOSPITAL.

The following appointments have been made at the University Hospital: medical superintendent, Dr. S. P. Latane; vice Dr. Spruill, resigned; assistant resident physician, Dr. G. A. Stewart, vice Dr. Fitzhugh, resigned; and Dr. H. Smith, resident surgeons, Drs. Thos. McGreen, A. C. Mathews, and A. C. Hoyt; assistant gynecologists, Drs. C. D. Snyder and C. A. Beck; assistant resident physician and ambulance surgeon, Dr. H. A. Naylor.

VACCIN PHYSICIANS.

The health commissioner made his assignments of the twenty-four vaccin physicians on May 9. Heretofore each of these received \$200 a year for this, and \$100 additional for services at police stations. Under the new law one physician is appointed from each ward to serve as vaccin physician and health warden or sanitary inspector, and medical attendant at the station house. The twenty-four are divided into groups of three, each group to have charge of one of the eight police stations, to look after the health of the prisoners there, and treat minor accident cases. There is some trouble about the salary, owing to insufficient appropriation, as the law allows the health commissioner to pay as much as \$900 a year, and he will not be able to pay the full amount this year.

DISTRICT OF COLUMBIA.

NATIONAL LEGISLATIVE CONFERENCE.

The first meeting of the National Legislative Conference of the AMERICAN MEDICAL ASSOCIATION was held here May 1 and 2, pursuant to the resolution of the ASSOCIATION at its Columbus meeting. The Conference was formally called to order by the Chairman, Dr. H. L. E. Johnson, who stated the object of the meeting. After some general discussion on the

subjects to be considered, the delegates decided, on motion of Dr. Welch of Baltimore, Md., to adjourn to meet the following day, at which meeting the following members were present: Drs. H. L. E. Johnson, representing the ASSOCIATION Committee and the Medical Association of the District of Columbia; Wm. H. Welch of Baltimore, and Wm. E. Rodman of Philadelphia, representing the ASSOCIATION Committee, and the following members representing the states. U. O. B. Wingate, Wisconsin; W. P. Goff, West Virginia; L. B. Tuckerman, Ohio; George Evans Reading, New Jersey; Gustav Eliot, Connecticut; F. J. Tina, Texas; H. M. Bracken, Minnesota; Surgeon-General Wyman; Surgeon-General Sternberg; John B. Roberts, Pennsylvania; George H. Simmons, Nebraska, and Henry Sewall, Colorado. The general matters discussed were "The Department of Public Health," "The Publication of the Index Medicus," "The Antivivisection Bill," "Unification of Medical Practice Acts," Senate bills 4200 and 4274, providing for contract surgeons, and H. R. bill 4483, providing increase in the medical department of the army; H. R. bill 1139 and Senate bill 4171, referring to quarantine, and Senate bill 559, providing for purification of water-supply. The committee of five, consisting of Drs. H. L. E. Johnson, Wm. H. Welch, L. B. Tuckerman, H. M. Bracken, and W. P. Goff, was appointed to wait on the committees of Congress having in charge the bills designated, and urge their prompt passage. The Committee will make a full report to the AMERICAN MEDICAL ASSOCIATION at the June meeting.

ILLINOIS.

SEMI-CENTENNIAL ANNIVERSARY.

Officers of the Illinois State Medical Society were elected May 16, as follows: president, G. N. Kreider, Springfield; first vice-president, Weller Van Hook, Chicago; second vice-president, Denslow Lewis, Chicago; assistant secretary, O. B. Will, Peoria; treasurer, Everett J. Brown, Decatur. The semi-centennial of the society was celebrated in the evening, with a reception and banquet, J. H. Hollister of Chicago officiating. Toasts were responded to as follows: "The Founder of the Illinois State Medical Society," Robert Beal and L. C. Thompson, both of Lacon. "Medical Education for Fifty Years in Illinois," N. S. Davis, Chicago; "Then and Now," James T. Stewart, Podunk; "Reminiscences of Early Day Practice and Hardships of the Pioneer Doctor," W. J. Chenoweth, Decatur; "The Parson to the Doctor," the Rev. D. F. Howe, Springfield; "Reminiscences," C. C. Hunt, Dixon; "Law and Medicine," Judge Charles P. Kine, Springfield; "The Ideal Physician of the Future," F. P. Norbury, Jackson.

Chicago.

A MAN here ruptured a blood-vessel in his head during a severe attack of coughing, death resulting.

PROPERTY ON Forty-ninth Street, near Cottage Grove Avenue, has been transferred to the Chicago Hospital Building Company for a consideration of \$75,000. The building will be renovated and refitted. Dr. Alexander Ferguson is president of the company and chief of the medical staff.

TWO DEATHS have occurred at the Dowie institution the past week. As both were probably preventable, radical measures will be instituted by the State Board of Health.

PERSONALS.

Drs. John A. Robison, Adolph Gehrman, John Hollister, N. S. Davis, J. S. Gill and Daniel R. Brower attended the State Medical Society, just held in Springfield, and presented papers on various subjects. Dr. N. S. Davis is the only living member of the sixteen delegates who were present at the first meeting.

WESLEY HOSPITAL.

The following staff has been appointed for Wesley Hospital: Professors Davis, Edwards and Webster, in medicine; Van Hook, Plumer and Schroeder, in surgery; Dudley and Mergler, in gynecology; Gradle and Allport, in eye and ear; Casselberry, in nose and throat; DeLee in obstetrics; Ridlon, in orthopedics; Danforth, in renal surgery; Hatfield, in children's diseases; Flütterer, pathologist; Zeisler, in skin diseases; Church and Patrick, in nervous and mental diseases.

This institution is devoted entirely to clinical teaching, the services being almost entirely made up of charity cases.

MORTALITY STATISTICS.

There were 527 deaths in the week ending May 12, 39 more than the preceding week and 24 more than in the corresponding period of 1899. The chronic diseases were chiefly responsible for the high mortality. Pneumonia and typhoid fever were also in excess of the preceding week, and there were 15 deaths from measles—the greatest number reported for any week since the weekly mortality records have been kept.

OHIO.

DR. WILLIAM T. GEMMIL, Forest, has been elected president of the State Board of Health.

THE COMMENCEMENT exercises of the Medical College of Ohio were held in Cincinnati, May 7. Prof. Howard Ayers, president of the University of Cincinnati, made the address, and awarded the diplomas to sixty young men. Prof. Jos. Ransohoff made the valedictory address.

REGISTRATION AND EXAMINATION.

Representatives of the different schools of medicine in the state met recently with a committee from the Board of Medical Registration and Examination and discussed the qualifications of those asking for admission to the colleges, and the date of opening. The meeting was the first of its kind, but will hereafter be an annual affair, and will be held at the time of the meeting of the Ohio State Medical Society.

ALUMNI MEETING.

At the annual meeting of the alumni association of the Cleveland College of Physicians and Surgeons the following officers were elected: president, Dr. N. S. Everhard, Wadsworth, Pa.; second vice-president, Dr. G. B. Woods, Washington, Pa.; third vice-president, Dr. H. N. Powers, North Amherst, Ohio; fourth vice-president, Dr. H. C. Crumvine, Cleveland; secretary, Dr. H. B. Ormsby, Cleveland; treasurer, Dr. I. N. Hentzelman, Cleveland.

INDIANA.

A NEW SANITARIUM has been opened in Terre Haute, under the management of Drs. Samuel D. Weir and Louis K. Stock.

THE MAYOR of Logansport issued a proclamation, May 4, ordering citizens to be vaccinated at once; and the State Board of Health has ordered the erection of a pest-house. A case of smallpox in a boarding-house has made these precautions necessary.

KENTUCKY.

COLLEGE CHANGES.

The Board of Curators of the Central University of Kentucky, realizing that it would be more advantageous to have the Louisville College of Dentistry run independent of the Hospital College of Medicine has decided to separate the two. A new building is being erected for the Louisville College of Dentistry. The architect made a personal examination of the different dental colleges of prominence before preparing the plans for this one. It will be four stories high, and devoted solely to dental instruction. Work has begun on the new building and it will be ready for occupancy October 10, when the next session opens. The building and general management of the department will be in the hands of officers selected, because, by experience for many years, both in active practice and intimate connection with dental colleges, they are especially fitted to take charge of the institution.

MICHIGAN.

AT THE meeting of the board of trustees of Butterworth Hospital, held May 7, in Grand Rapids, a new medical staff was appointed.

Detroit.

THE NEW staff at the Harper Hospital is: G. B. Lowrie, house physician; T. F. Heavenrich, S. G. McDonald, R. T. Mason, Dugald Ferguson and W. N. Wilkinson, assistants.

DETROIT COLLEGE OF MEDICINE.

THE thirty-second annual commencement exercises of the Detroit College of Medicine occurred May 10. Dr. W. P. Manton

addressed the class on the subject, "Posthomo Shadows in Medical Science," and Judge J. W. Donovan on "Opportunities." At the alumni meeting, Dr. Don Campbell, of Detroit, was elected president; Dr. E. D. Rice of Flint, vice-president.

LOUISIANA.

DR. J. G. DEMPSEY has been appointed visiting physician to the out-door poor of Truro Infirmary.

THE CITY council of New Orleans has passed an ordinance regulating the management of dairies, with penalties for non-observance. The dairy farms have heretofore been in a very unsanitary condition, and a great improvement is hoped for in the future.

CALIFORNIA.

DR. VINCENT BUCKLEY, of San Francisco, has been appointed to fill the vacancy on the board of health, caused by the resignation of Dr. W. E. Hopkins.

MRS. PHOEBE HEARST has presented to the University of California a complete equipment for the department of medicine, and Dr. Alonzo Taylor is in Germany purchasing the apparatus.

CANADA.

HEALTH PRECAUTIONS.

The Provincial Board of Health of Ontario met May 8 and 9. Among other matters up for discussion and action was that of lumpy-jaw in cattle, and the secretary, Dr. Bryce, was ordered to notify the health officer of Prescott, that any cattle shipped back from Montreal, where the disease had been discovered, as reported to THE JOURNAL a few weeks ago, should be immediately slaughtered. The Board upheld the action of the health officer of Fort William, who prevented a child with tubercular glands in the neck from attending school.

UNSANITARY STREETS.

The unsanitary, dusty streets in Montreal are again causing trouble and caustic comment. The city is so full of scarlet fever as to almost amount to an epidemic; and it is not confined to the poorer classes in the "scums" of the city, for many of the children of the better classes are also victims. The dust of the streets is swirled into the meat shops and provision stores and peppers the foods, so that that which was pure and wholesome becomes polluted and poisonous. It is thought that in this way the large amount of infection arises; but the existing state of affairs continues and the city fathers are being savagely criticised for their negligence in not keeping the streets properly swept and cleaned.

PHYSICIANS' AND SURGEONS' SYNDICATE.

DR. H. W. Shaw, Clinton, Ont., at the last meeting of the Huron Medical Association, in April—an Association which, some fifteen years ago, Professor Osler denominated the best of its kind in Canada—brought forward an idea, which though not perhaps new, will bear close and careful scrutiny at the hands of the profession. It is a plan for cheapening drugs and supplies to physicians and surgeons, and at the same time for profit and perfection in the remedy. It is proposed that a physicians' and surgeons' syndicate be established among doctors, with a capital of \$50,000, in \$10-shares, one physician not to possess more than twenty shares. A supply-house to be opened at some central point, with a competent manager and chemist, from which source all that pertains to the practice of medicine shall be obtained, at a wholesale price to the physician, would necessarily form an important part of the undertaking. The members of the corporation would all have to deal with this house, and share in whatever profits materialized. The accomplishment of some such scheme would do away with travelers wasting the physician's time, a practice which has almost become unbearable; and whatever financial profit there is to these houses would all revert to the doctor. The proposition was well received by the Association, and there is a likelihood of its receiving still further elaboration at an early date.

SMALLPOX AT MONTREAL.

Montreal is fearful of another epidemic of the dreaded dis-

ease. In 1885, when the city was decimated and ravaged to an alarming extent, and something like 3500 people succumbed to the sickness, a lesson was taught the sanitary authorities, which their successors ever afterward do not fail to appreciate. The disease, as previously announced in this correspondence in THE JOURNAL, was brought to the city by a young man coming from Rossland. He occupied a berth in the sleeper directly opposite to one of the victims of the disease at Winnipeg. On arriving at his hotel in Montreal the nature of his trouble was discovered. The whole staff of the hotel was immediately vaccinated, but not before two others of the employees had become infected. Another employee took sick and was sent to the General Hospital, suffering from apparent pneumonia; but the medical superintendent met the case at the hospital doors and diagnosed it smallpox. It was turned over to the Civic Hospital. A doctor has been put in special charge of these cases, another of which has since developed; and the financial committee of the city council has placed at the disposal of the hygienic committee unlimited funds to enable them to ward off all chance of an epidemic. So far all are of a mild character.

Correspondence.

Length of Medical College Curriculum.

HYDE PARK, VT., May 8, 1900.

To the Editor: In view of the coming meeting of the ASSOCIATION and action on the Amendment to Article 2 of the Constitution, proposed by Dr. Reynolds, viz.: "That no state, county or other auxiliary body sending representatives shall receive into its membership any one who may after 1900 receive the degree of Doctor of Medicine on less than four years of graded instruction or an equivalent requirement." I would like to suggest, as a member who will not be able to attend the meeting, that the proposed amendment be changed to read—"who may after 1903 receive the degree of Doctor of Medicine on less than four years of graded instruction, to include at least eight months' attendance at lectures and clinics each year, or an equivalent requirement."

This is offered in view of the fact that all of our leading universities, including such schools as Johns Hopkins, Harvard, Cornell, Columbia, Yale, Jefferson, the universities of Pennsylvania, Michigan, California, Minnesota, Virginia, Missouri, Texas, Chicago and twenty-six other schools, now require attendance on annual sessions of eight and nine months, while there are any number of others keeping the requirements down to six months' annual attendance. On the other hand, every medical school in the country except four or possibly five, which includes the two Georgia schools, has raised the requirements to a four years' required attendance, but, in case of all the southern schools except the university of Texas and one or two others, this requirement only applies to students who matriculate after Jan. 1, 1900, and who receive their degrees after July 1, 1903. To have this amendment apply to all receiving their degree after 1900 would in effect exclude the graduates of nearly every southern school and a number of northern schools who graduate during the years 1901, 1902 and 1903, while to require all graduating after 1903 to have attended four years of eight months each would be giving a fair warning. The extension of the course to eight months could be adopted at the coming session or at the beginning of the session of 1901-02, thereby making the time requirements uniform throughout the country and keeping harmony in the ranks.

It would seem as though the six months' schools extend the time to eight months for their own protection, as the graduates of some of them do not make a very creditable appearance before the numerous examining boards in comparison with those having longer sessions; and how can they, as attendance on annual sessions of eight months means, in four years, eight months' extra work in lectures, recitations, clinics and laboratory? However, in spite of this, some of them will not extend their sessions to eight months until compelled to do so.

Perhaps that would be as far as we ought to go at present, but I would very much like to see, in addition to the above, a requirement that all graduating after 1903, applying for recognition from the ASSOCIATION or its auxiliary bodies, be required to produce evidence that they have had a preliminary education equal to that obtained in a first-grade high school course, as is now required by law in the states of New York, New Hampshire and Ohio (Amendment to Statute passed April 14, 1900).

Johns Hopkins requires a degree in arts, literature, or science for admission. Harvard will require the same from all entering after September of this year. After 1901 the Western Reserve University, Cleveland, Ohio, will require the completion of the junior year in a recognized college, for admission to its medical department, and after 1903 the University of Chicago (see THE JOURNAL, April 21, 1900, p. 1014.) and the University of Minnesota will require the same. While too much can not be said in favor of the adoption of a collegiate education as a standard for admission by our leading universities, still, it would seem that it should be left to the judgment of the individual school, and that the completion of a high school course should be sufficient to require of all schools, but we should insist on that as a condition of admission and that the schools require four annual sessions of eight months each instead of six, and as all of our best schools now require it, let us demand it of all after 1903.

Very truly yours,

WILLIAM T. SLAYTON, M.D.

Deaths and Obituaries.

LONDON CARTER GRAY, M.D., died at his home in New York City, May 8, aged 50 years. He studied in Columbia and Heidelberg universities, and in 1873 took his degree in medicine at Bellevue Hospital Medical College. He began practice in New York City, but afterward moved to Brooklyn, where he was made professor of neurology at the Long Island College Hospital and visiting neurologist to St. Mary's Hospital. He was one of the founders of the New York Polyclinic, and was its professor of nervous and mental diseases. He served as president of the American Neurological Association, the New York Neurological Society, and the Society of Medical Jurisprudence. He was also chairman of the executive committee of the American Congress of Physicians and Surgeons for three successive sessions, and the author of several medical works, among the most important of which is his text-book on nervous and mental diseases.

THOMAS W. GORDON, M.D., Georgetown, Ohio, died April 21, aged 81 years. He was graduated from the Cleveland Medical College in 1846; from 1851 to 1860 he was professor of materia medica and therapeutics in the Cincinnati College of Medicine and Surgery, and during the Civil War was surgeon of the 97th Ohio infantry. He was a member of the AMERICAN MEDICAL ASSOCIATION.

THOMAS DOBINS, M.D., Marysville, Cal., died May 5, of tuberculosis. He was born in Alabama in 1837, but lived in Missouri most of his early life. In 1855, he was graduated from Brunswick College. He was an army surgeon during the Civil War, and at the close went to California, where he has since lived.

CARL BRUMME, M.D., Detroit, Mich., died May 13, aged 83 years. He was born in Göttingen, Germany, and educated there in the public schools and university. In 1852 he came to America and located in Detroit, where he has since resided. He was a member of the Michigan State Medical Society and of the AMERICAN MEDICAL ASSOCIATION.

ROBERT A. ELLIS, M.D., died in Alaska, June 15, 1899. He was about 100 miles from Cape Nome, and news of his death has just reached here. He was graduated from the Kentucky School of Medicine, in Louisville, in the class of 1882, and for fifteen years had practiced in San Francisco. In 1898 he identified himself with a mining company and was looking after its interests when he was stricken with fever.

W. M. BULLARD, M.D., died recently in Fallbrook, Cal.

He was graduated from the Medical College of Indiana in 1876, and then located in Helena, Mont., where he remained until failing health necessitated a change of climate.

DEATHS ABROAD.

DR. RAFAEL LAVISTA, of Mexico, is dead. His name is associated with scientific progress in his country during the last half century; he was the official representative of Mexico at the last three international congresses, and the Pan-American Congress at Washington. The *Revista de Anatomía Pat. y Clínica*, of which he was editor, has suspended publication for the present.

We also note the deaths of Professor Bose, of Giessen, who had recently retired; A. Milne-Edwards and G. Planchow, of Paris.

New Instruments.

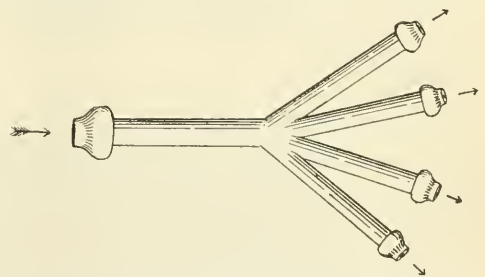
An Improved Device for Rapid Hypodermoclysis.

BY EDWIN M. HASBROUCK, M.D.

WASHINGTON, D.C.

IN THE JOURNAL for March 3, page 520, Dr. Evan O'Neill Kane illustrates and describes a simple home-made device for rapid multiple infusion—consisting of a rubber bulb, glass medicine-dropper, rubber tubing and needles. The affair is a most useful one, but for other than absolute emergencies is too unstable in composition, both from the fact that after repeated sterilizations the rubber bulb is bound to deteriorate and eventually become useless—possibly just when most wanted—and that leakage is bound to occur at the points where the tubing is drawn through the bulb, possibly permitting the entrance of air at some stage of the operation.

Acting on the suggestion contained in Dr. Kane's apparatus, I have had made for me a simple little device that, like the eye-dropper, can be carried about in the pocket, or form part of every surgeon's outfit. It can be sterilized at a moment's



notice together with the needles and tubing, and it will last forever. It consists of a single metal tube provided with a bulbous end for holding the receiving tube from the fountain or supply tank. The lower end divides into four tubes, the ends of which are similarly provided for the feed tubes. The accompanying drawing shows the contrivance, exact size. For convenience and speed the four tubes with their needles can be left permanently attached and dried after each usage—the whole apparatus to be kept in a little box in the instrument bag. While the improved apparatus is my own idea, the profession has to thank Dr. Kane for a most useful little contrivance. The instrument here illustrated was made for me by the W. J. McKee Company, of this city.

2422 Fourteenth St., N. W.

The Artificial Defecator and Irrigator.

BY ROBERT N. BARGER, M.D.

HOPEDALE, ILL.

We all recognize the importance of *rest* in the treatment and cure of disease, yet in hemorrhoids and rectal troubles we have never been able to apply this, for the reason that we must defecate daily and have never had a way for avoiding it, or of

Queries and Minor Notes.

doing it artificially. To secure this much needed rest to the diseased parts I have had constructed an instrument which may be called an artificial defecator and irrigator.

I have found that it suits the purpose, i. e., it evacuates the bowels without any expulsive effort, or contraction of the perineal or sphincter ani muscles, thus giving the needed rest. I have used this instrument for six months and find it not only indispensable to patients suffering from hemorrhoids and rectal troubles, but also useful after all serious surgical operations, fractures of the lower limbs, accouchement cases, in all low types of fever, etc.

Not all its therapeutic applications can now be enumerated nor assigned, but they will develop as necessity calls for its use. In the accompanying cuts, Figure 1 represents the instrument closed and ready for introducing into the rectum or

PRACTICE IN OHIO.

BROOKLYN, N. Y., May 12, 1900.

To the Editor: Will you kindly inform me whether one may now register in Ohio under the present law previous to the one recently enacted taking effect July 1, as noted in THE JOURNAL of above date. Please give me particulars how to go about it, to whom apply, etc.

Yours truly, F. S. M.

ANSWER.—There is nothing in the amended Ohio law to prevent registration under the old conditions prior to July 1, 1900. This would give the right to practice, as the amended law reads: "All persons authorized and entitled prior to July 1, 1900, to practice medicine, surgery, or midwifery, in the State of Ohio, under and by virtue of the provisions of an act, entitled, 'An act to regulate the Practice of Medicine in the State of Ohio,' passed Feb. 27, 1896, to which this act is amendatory, may engage in such practice and shall be subject to the law regulating the same; all other persons desiring to engage in such practice in the state shall

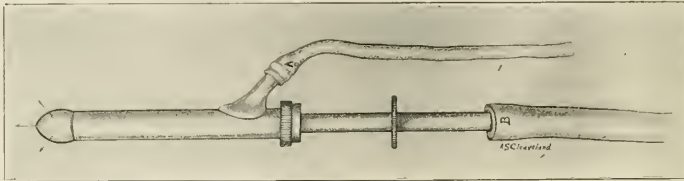


FIGURE 1.

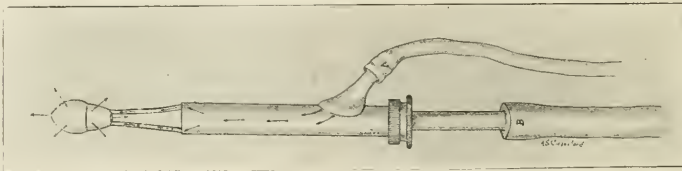


FIGURE 2.

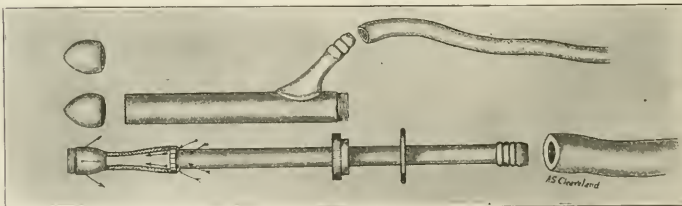


FIGURE 3.

vagina. Figure 2 is the instrument open for use after introduction, the arrows showing the different currents of water. "A" is a rubber tube, or syringe for conveying water into the chamber or reservoir which surrounds the sewerage canal, and "B" is a rubber drainage-tube attached to the sewerage canal for conveying the fecal matters off when the patient is in bed. Figure 3 shows the instrument in three parts for cleansing or sterilizing. The two caps show one for defecation with holes and one for irrigation without holes.

The principal points to be noticed in this instrument are: 1. The sewerage canal is unobstructed by any stem or conduit tube; it has lateral currents to clear the opening and has a straight shoot from the rectum to a vessel beneath the bed. 2. The reservoir or chamber, surrounding the sewerage canal and encased by the outer cylinder, so places the water as to throw currents in every direction, thus triturating and liquefying the fecal matter. This placing of the water also makes it a very desirable rectal and vaginal irrigator.

apply to the state board of registration and examination for a certificate, and submit to the examination heretofore provided." There are exceptions in favor of Ohio medical students matriculating before Jan. 1, 1900, and a reciprocity clause. For further particulars address the Secretary of the Board of Medical Registration and Examination, Columbus, Ohio.

THE PATIENT AND PHYSICIAN IN ILLUSTRATION.

MILLVILLE, Mo., May 7, 1900.

To the Editor: Some time ago THE JOURNAL published an account of a series of three pictures, by a foreign artist, representing the patient's attitude toward his physician, during illness, convalescence and health. If you can give me any information regarding these—as to where and how they can be purchased—I would greatly appreciate it.

Very fraternally, J. M. G.

ANSWER.—The pictures referred to appeared in *Janus*, an international journal devoted to the history of medicine and medical geography, published at Amsterdam, by Dr. H. F. A. Peypers (Address Parkweg 212). Several acts were given. The subscription is \$5 a year for twelve numbers of *Janus*. Articles are in German, French or English, as contributed. Surgeon-General Sternberg, Dr. N. S. Davis, of Chicago; Dr. J. E. Pilcher, of Columbus, and Dr. Solis-Cohen, of Philadelphia, are on the list of collaborators.

PATHOLOGY OF CHOREA.

PRINCETON, ILL., April 31, 1900.

To the Editor: Will you kindly tell me whether the pathology of chorea has been satisfactorily determined, and give it to us in as condensed form as possible.

ANSWER.—Its essential lesions are not determined, and none of the several theories that have been advanced can be said to be satisfactorily established. At the present time there seems to be a tendency to attribute the affection to a germ, and it has been claimed that a specific bacterium has been found in cases of chorea, but this has not been confirmed. The other theories, the neurotic and the rheumatic, the latter having many supporters, are also still *sub judice*.

ST. LUKE'S HOSPITAL AGAIN.

LOS ANGELES, CAL., May 4, 1900.

To the Editor: A few days ago I received a letter from the president and treasurer of St. Luke's Hospital of Niles, Mich.

The president of this institution, like many another man of reputation, has several titles—M.D., Ph.D., LL. D.—while the proposition he made me nearly took my breath away, and I began to think that my great merits as a scholar, statesman, writer, orator, microscopist, and struggler-for-a-living were about to be appreciated in Michigan, by appointment on the "medical staff" of a great hospital, and to be given a certificate therefor. Here is a copy of the letter:

By way of introduction, we obtained your name from the list of medical practitioners located abroad from "R. L. Polk & Co.'s Medical and Surgical Register," located in a letter to you, subject to your confirmation. The plan of organization is entirely different to that (here is a Scotticism betraying something) of any other institution of its kind—and trust that we may have the pleasure of adding your name to this list, same as we have this day Dr. N. Banerjee, of Calcutta, India, who sent us \$10.00 for our genuine sheepskin Certificate and Membership ticket.

We will pay you a commission of 25 per cent. of the operation fee of all surgical cases and 10 per cent. of the fee of all medical cases you may send to our hospital (from India and Hawaii!) We charge nothing for nursing patients day or night, as that part of the expense is taken from our "Nursing Fund." We do charge, however, for board and room, ranging from \$1.50 to \$2.00 per week, according to the location selected by the patient.

Should you wish to consult us at any time regarding difficult cases we will freely give you what assistance and advice we can, and will make microscopical analysis of specimens free of charge. It is our intention never to appoint more than one physician in each locality, and should he so desire it, after accepting the appointment and paying the membership fee, and will send us a list of names, not exceeding twelve, including the local newspapers, we will write individual letters recommending him to the copy of which we herewith enclose.

To each of our members we issue a very neat and attractive Certificate setting forth that he is a member in good standing on our medical staff, and entitled to all the advantages and privileges of our hospital. We also issue in addition to our certificate a neat pocket lithographed Pocket Membership Ticket, which we believe, if rightly used, will be the means of securing many patients for our hospital. We charge as a membership fee according to the grade of certificate selected (see Physician's Application Blank), which goes to make up our "Nursing Fund."

Trusting that you will fill out the enclosed application form and return it to us with a remittance covering the amount of the priced certificate selected.

We remain yours fraternally, etc.

In a postscript was added:

Our House-Surgeon, Dr. Geo. A. Steel, is also a graduate of Rush, Class of 1895.

At the head of the letter are the names of some thirty-one physicians comprising the medical staff, from Niles, Berlin, New York, Chicago, Cincinnati, Kansas City, Philadelphia, Louisville, Buffalo, Edinburgh, St. Paul, Brooklyn, Paris, Keokuk, Indianapolis, Dublin, St. Louis, London, and Albany. Three of these names were: J. B. Green, M.D., F.R.C.P.S., president of staff, professor of practice of surgery, Queen's University, L. A. Larsen, A.B., M.D., Rush Medical College of Chicago; A. J. H. Delacey, M.D., University of Edinburgh, Scotland. These names show the cosmopolitan nature of the institution. It annihilates space, and through its wards may fit the attending spirits of Dr. McAdoo of Philadelphia, Dr. Banerjee of Calcutta, Dr. Osborne of Indiana, or Dr. Norwood of London. I call this great!

I received also a membership ticket stating that Dr. _____ is a member of St. Luke's Hospital staff, a blank form of application saying that "the list will be closed shortly" and giving a price of different kinds of certificates; a picture of the president and his hospital, and a printed list of testimonials received from physicians "who are members of our staff." One of them says: "The beautiful certificate of membership has reached me," and another writes: "The certificate is an elegant one, and I shall have it framed and placed in my new sanitarium where all can see it."

The following is a copy of the "individual letter" which would be sent around if the new incumbent so desired:

Dear Sir or Madam: We beg respectfully to call your attention to the fact that we have just recently elected and appointed Dr. _____ of your place, to be a visiting and consulting physician and surgeon on the Medical Staff of our Hospital, on account of his excellent medical qualifications and professional standing. We have no hesitation in recommending him to you, any member of your family, friends or acquaintances, if you should become sick and desire medical treatment. We wish to induce the Doctor and recommend you to patronize him. Should you at any time desire the services of our hospital for yourself, friends or acquaintances, the Doctor will make arrangements with you so that you can come here for treatment.

We have a first-class, up-to-date hospital, with every home comfort, and a Medical Staff of eminent physicians and surgeons, and our charges are less than anywhere else you may go.

In regard to these letters is the following private information: The above we send out upon our regular printed business letter-head (twelve to each certificate holder) recommending or endorsing those members only who have paid for their certificates of membership.

On receipt of this generous offer and before my gratitude could grow cold, as gratitude often does, I sat down and wrote the following note to the president:

Venerated and Distinguished Sir: I do not think that it would be becoming in a man of my humble station to accept of such vast and appalling honors and responsibilities as you suggest in your letter of February 24, just received. My diplomas and certificates have been secured by hard work; to get so much for so little might at my time of life (menopause) upset me completely.

I have often resented the statement that Americans are fond of titles; that they have a love for empty honors, and like to be "humbugged," but, after reading all these testimonials from physicians who have paid \$10 to be placed on the medical staff of the St. Luke's Hospital of Niles, I will be more saving of my indignation. Were the privileges of membership somewhat more difficult to get were the qualifications more shrewdly stated, and, as in the case with so many other easily-secured honors, made to seem special and legitimate, we should not be surprised that many had swallowed the bait. But here any doctor who can pay the fee gets the certificate. A man who has worked hard to get a real diploma from a real college, does not care to see his name on a sheepskin he can buy for \$10; and the older he grows in the experience of the world, the less he seeks the seeming; the more he loves the real.

E. S. GOODRUE, M.D.

Miscellany.

BOOKS AND PAMPHLETS RECEIVED.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review as dictated by their merits, or in the interests of our readers.

BOOKS.

CHEMISTRY AND PHYSICS. A Manual for Students and Practitioners. Series Edited by Bern B. Gallaudet, M.D., Demonstrator of Anatomy, College of Physicians and Surgeons, and William H. Rockwith, Jr., M.D., Assistant Demonstrator of Anatomy, College of Physicians and Surgeons, Columbia University, New York. Series Edited by Bern B. Gallaudet, M.D., Demonstrator of Anatomy and Instructor in Surgery, College of Physicians and Surgeons, Columbia University, New York. Illustrated with 137 Engravings. Cloth. Pp. 374. Price \$1.50. Philadelphia and New York: Lea Brothers & Co.

THE MEDICAL REVIEW. (*Medical and Surgical Review of Reviews*). An Indexed and Illustrated Monthly Summary of all that is important to the Practitioner in the Medical Periodicals of the World. Edited by Nathan E. Body, M.D. Volume II, January-December, 1899. Cloth. Pp. 768. London: Harrison & Sons.

DISEASES OF THE GALL-BLADDER AND BILE-DUCTS, INCLUDING GALL-STONES. By A. W. Mayo Robson, F.R.C.S., Senior Surgeon to General Infirmary at Leeds. Assisted by Farquhar MacKae, M.B., C.M. Cloth. Pp. 313. Price \$3. Second Edition. New York: William Wood & Co., 1900.

TRANSACTIONS OF THE MEDICAL AND CHIRURGICAL FACULTY OF THE STATE OF MARYLAND. One Hundred and Fifth Annual Session (Centennial Anniversary). Held at Baltimore, Md., April, 1899; Semi-annual Session held at Frederick, Md., November, 1899. Paper. Pp. 213. Baltimore: DeWitt, 1900.

A HANDBOOK FOR NURSES. By J. K. Watson, M.D., Late House-Surgeon, Essex and Colchester Hospital, American Edition under the Supervision of A. A. Stevens, A.M., M.D., Professor of Pathology in the Women's Medical College of Pennsylvania. Cloth. Pp. 413. Price \$1.50. Philadelphia: W. B. Saunders, 1900.

ESSENTIALS OF DIAGNOSIS. Arranged in the Form of Questions and Answers. Prepared Especially for Students of Medicine. By Solomon Solis-Cohen, M.D., Professor of Clinical Medicine and Therapeutics in the Philadelphia College of Podiatry, and Augustus A. Eshner, M.D., Professor of Clinical Medicine in the Philadelphia Polyclinic. Illustrated. Second Edition, Revised and Enlarged. Cloth. Pp. 417. Price \$1. Philadelphia: W. B. Saunders, 1900.

PATHOLOGY AND SURGICAL TREATMENT OF TUMORS. By N. Sean, M.D., Ph.D., LL.D., Professor of Surgery in Rush Medical College. Second Edition. Revised. Illustrated by 478 Engravings, and 12 Full-Page Plates. Cloth. Pp. 718. Price \$5. Philadelphia: W. B. Saunders, 1900.

TRANSACTIONS OF TWENTY-FIRST ANNUAL MEETING OF AMERICAN LARYNGOLOGICAL ASSOCIATION. Held in Chicago, May 22-24, 1899. Cloth. Pp. 253. New York: D. Appleton & Co., 1900.

CONSTITUTION AND BY-LAWS OF THE SACRAMENTO SOCIETY FOR MEDICAL IMPROVEMENT. Organized March 17, 1868. Incorporated June 20, 1878. Revision of October 30, 1899. Cloth. Pp. 19. Sacramento, Cal.: W. F. Furnell, 1900.

FESTSCHRIFT in Honor of Abraham Jacob, M.D., LL.D., To Commemorate the Seventieth Anniversary of his Birth. May 6, 1900. Paper. Pp. 496. New York: Knickerbocker Press, 1900.

PROCEEDINGS OF THE TWENTY-FOURTH ANNUAL SESSION OF THE ARKANSAS MEDICAL SOCIETY. Held at Little Rock, Ark., May 10-12, 1899. Paper. Pp. 348. Little Rock: Tunnah & Pittard.

TRANSACTIONS OF THE FLORIDA MEDICAL ASSOCIATION. For the year 1899. Held at Jacksonville, Fla., April 19 and 20. Paper. Pp. 184. Jacksonville: DaCosta & Pringle Co., 1899.

DEUTSCHER STRIMMEN APTS VEREIN IN LONDON. Gesammelt von Frau Prof. Dr. J. H. W. Stuckenber, North Cambridge, Mass. Paper. Pp. 44. Preils, 5 cents; Das Hundert, 3 dollar. Cambridge: The Co-Operative Press.

PROCEEDINGS OF CONNECTICUT MEDICAL SOCIETY. 1899. One Hundred and Seventh Annual Convention, Held at Hartford, May 24 and 25. Cloth. Pp. 416. Published by the Society.

MEDICAL AND SURGICAL REPORT OF THE PRESBYTERIAN HOSPITAL OF THE CITY OF NEW YORK. Volume IV. January, 1900. Boards. Pp. 223. Edited by Andrew J. McCosh, M.D., and W. G. Thompson, M.D.

PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF PHILADELPHIA. Volume III. April, 1900. Paper. Pp. 23. Philadelphia. Published by the Society. 1900.

PROCEEDINGS OF THE PHILADELPHIA COUNTY MEDICAL SOCIETY. March, 1900. Paper. Pp. 39. Philadelphia: Published by the Society.

PAMPHLETS

A MEDICO-RELIGIOUS SOCIETY. By W. T. Parker, Westboro, Mass. Reprinted from Va. Med. Semi-Monthly.

AN EQUATION OF RESPONSIBILITY. By Edwin W. Pyle, Jersey City, N. J. Reprinted from N. Y. Med. Times.

AN EXPERIMENT IN THE TRANSMISSION OF SYPHILIS TO CALVES. By Mazzyk P. Ravenel, Philadelphia. Reprinted from Am. Jour. of the Med. Sci.

DEPRACTIVE DEVELOPMENT AND DISEASE WITH SPECIAL REFERENCE TO THE CURABILITY OF CONSUMPTION AND CANCER. By M. A. Veeder, Lyons, N. Y. Reprinted from Trans. of Am. Microscopical Society.

NECROSIS AND SOME OF THE CLINICAL ASPECTS OF GYROMA AND ENDOTHELIOMA OF THE OVARY. Fourth Hitherto Undescribed Disease of the Ovary—Colloid Degeneration: Third Hitherto Undescribed Disease of Ovary—Myxomatous Degeneration: Microscopic Studies in Pelvic Peritonitis. By Mary Dixon Jones, New York City. Reprints.

HERNIA OF VERMIFORM APPENDIX. By L. L. Hill, Montgomery, Ala. Reprinted from Med. Record.

BARRETT'S DISEASE. REPORT OF A CASE. By C. G. Stivers, Los Angeles, Cal. Reprinted from Southern Cal. Pract.

PRESIDENTIAL ADDRESS: HIGHER MEDICAL EDUCATION. By R. MacNeill, Stanley Bridge, P. E. I. Reprinted from Montreal Med. Jour.

REPORT OF CASE OF FIBROMA OF NECK. By J. A. Sutcliffe, Indianapolis, Ind. Reprinted from Med. and Surg. Monitor.

SURGERY OF THE HAND. By W. A. Kulewski, Chicago. Reprinted from Chicago Clinic.

The Public Service.

ARMY CHANGES.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., May 5 to 10, 1900, inclusive:

Francis J. Bailey, acting asst.-surgeon, from Hillsboro, Ore., to the Department of California.

John M. Banister, major and surgeon, U. S. A., member of a board at West Point, N. Y., to examine military cadets.

Reuben M. Bonar, acting asst.-surgeon, U. S. A., now at San Francisco, Cal., is relieved from further duty in the Philippines, and will report to the Department of California.

George E. Bushnell, major and surgeon, U. S. A., member of a board convened at West Point, N. Y., to examine military cadets.

William J. Endera, acting asst.-surgeon, from Philadelphia, Pa., to the Department of California.

John S. Foxg, acting asst.-surgeon, leave of absence extended.

William M. Hendrickson, acting asst.-surgeon, from Skagway, Alaska, to the Department of California.

Loren B. T. Johnson, acting asst.-surgeon, from Washington, D. C., to the Department of California.

William L. Weller, acting asst.-surgeon, from Chicago, to temporary duty at Fort Logan, Colo.

Thomas B. McCown, acting asst.-surgeon, from Windsor, Mo., to the Department of California.

John L. Phillips, captain and asst.-surgeon, U. S. A., member of a board at West Point, N. Y., to examine military cadets.

John J. Repetti, acting asst.-surgeon, from Washington, D. C., to the Department of California.

NAVY CHANGES.

Changes in the Medical Corps of the U. S. Navy for the week ending May 5, 1900.

(By cable from Asiatic Station.)

Asst.-Surgeon W. E. High, detached from the *Manila* and ordered to the hospital.

Asst.-Surgeon D. G. Beebe, detached from the *Torkosen* and ordered to the *Isla de Luzon*.

Surgeon T. A. Berryhill, detached from the *Monongahela*, on reporting relief, and ordered home to wait orders.

P. A. Surzeon C. M. Wheeler, detached from the *Vermont*, May 3, and ordered to the *Kearsarge*.

P. A. Surzeon G. H. Barber, detached from the *Kearsarge* and ordered to the *Monongahela*.

Asst.-Surgeon D. H. Morgan, ordered to the *Vermont*.

Medical Inspector J. C. Boyd, detached from duty as assistant to bureau of medicine and surgery, Navy Department, and ordered to the *New York*, as fleet surgeon of the North Atlantic Station.

Medical Inspector P. Pizzalomo, detached from the *New York*, as fleet surgeon of the North Atlantic Station, and ordered to proceed home and wait orders.

Surgeon J. D. Gatewood, detached from the bureau of medicine and surgery, Navy Department, May 3, and ordered to duty as assistant to bureau of medicine and surgery, same day.

P. A. Surzeon C. D. Brownell, ordered to the naval training station, Newport, R. I.

MARINE-HOSPITAL CHANGES.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital Service for the seven days ended May 3, 1900.

Surgeon P. H. Ballhache, detailed to represent the Service at the convention for the decennial revision of the United States Pharmacopoeia, at Washington, D. C., May 2.

Surgeon Eugene Waldin, detailed to represent the Service at the meeting of the AMERICAN MEDICAL ASSOCIATION, at Atlantic City, N. J., June 5 to 8.

P. A. Surzeon J. C. Cobb, to report to chairman of board of examiners for examination to determine fitness for promotion to the grade of surgeon.

P. A. Surzeon H. D. Goddings, detailed to represent the Service

at the convention for the decennial revision of the United States Pharmacopoeia, at Washington, D. C., May 2.

P. A. Surzeon M. J. Rosenau, detailed to represent the Service at the meeting of the AMERICAN MEDICAL ASSOCIATION, at Atlantic City, N. J., June 5 to 8.

Asst.-Surgeon D. H. Tabb, upon being relieved from duty at Savannah, Ga., to report in person at the bureau for further orders.

Asst.-Surgeon John McMullen, granted 60 days extension of leave of absence.

Asst.-Surgeon R. H. von Ezdorf, relieved from duty at New Orleans, La., and directed to proceed to Savannah, Ga., and assume command of the Service.

Asst.-Surgeon D. F. Fricks, relieved from duty at Washington, D. C., and directed to proceed to Manila, P. I., and report to the chief quarantine officer for duty.

Asst.-Surgeon G. M. Corput, to proceed to Mullet Key, Fla., and assume command of the detention camp and the steamer *W. D. Bhatton*.

Asst.-Surgeon H. A. Stansfield, relieved from duty at Honolulu, H. I., and directed to proceed to Manila, P. I., and report to the chief quarantine officer for duty.

Hospital Steward E. S. Maguire, relieved from duty at Evansville, Ind., and directed to proceed to New York City (Stapleton), and report to the medical officer in command, for duty and assignment to quarters.

Hospital Steward H. R. Mason, to proceed to New York City and report to the medical purveyor for temporary duty.

Hospital Steward E. M. Holt, to proceed to Portland, Me., and report to the medical officer in command for temporary duty and assignment to quarters.

BOARD CONVENED.

Board convened to meet at Washington, D. C., May 3, 1900, for the examination of P. A. Surzeon J. O. Cobb, to determine his fitness for promotion to the grade of surgeon. Detail for the Board—Surgeon J. H. White, Chairman; Surgeon R. M. Woodward, and Surgeon G. T. Vaughan, Recorder.

HEALTH REPORTS.

The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ended May 12, 1900.

ALABAMA.—SMALLPOX—UNITED STATES AND INSULAR. District of Columbia: Washington, April 26 to May 5, 1 case, 1 death.

Florida: Jacksonville, April 26 to May 5, 1 case.

Indiana: Evansville, April 26 to May 5, 5 cases; Indianapolis, April 26 to May 5, 6 cases.

Iowa: Des Moines, April 1 to 30, 16 cases; Ottumwa, April 14 to 21, 2 cases.

Kansas: Wichita, April 26 to May 5, 4 cases.

Kentucky: Covington, April 26 to May 5, 6 cases; Lexington, April 26 to May 5, 1 case.

Louisiana: New Orleans, April 26 to May 5, 50 cases, 18 deaths.

Maryland: Baltimore, April 26 to May 5, 5 cases.

Massachusetts: Chicopees, April 26 to May 5, 1 case.

Michigan: Grand Rapids, April 26 to May 5, 3 cases.

Nebraska: Omaha, April 21 to 28, 2 cases.

New York: New York, April 26 to May 5, 2 cases.

Ohio: Cleveland, April 26 to May 5, 7 cases, 1 death.

Tennessee: Nashville, April 26 to May 5, 2 cases.

Utah: Ogden, April 1 to 30, 2 cases; Salt Lake City, April 26 to May 5, 5 cases.

Philippines: Manila, March 3 to 24, 9 cases, 1 death.

SMALLPOX—FOREIGN.

Austria: Prague, April 7 to 21, 9 cases.

Belgium: Ghent, April 14 to 21, 1 death.

Brazil: Rio de Janeiro, March 23 to 30, 6 cases, 12 deaths.

Canada: New Brunswick—Grand Falls, April 28, present; Ontario, April 18 to May 1, 3 cases; Quebec—Bonaventure County, May 4, 26 cases.

England: Liverpool, April 14 to 21, 18 cases, 3 deaths; London, April 14 to 21, 4 cases; Southampton, April 14 to 21, 2 cases.

France: Lyons, April 1 to 14, 3 deaths.

Gibraltar: Gibraltar, April 15 to 22, 2 cases, 1 death.

Greece: Athens, April 14 to 21, 2 cases, 1 death.

India: Bombay, April 3 to 10, 111 deaths; Calcutta, March 10 to 28, deaths; Surachnee, April 1 to 8, 20 cases, 14 deaths.

Italy: Milan, April 21 to 28, 1 case.

Mexico: Vera Cruz, April 21 to 28, 4 deaths.

Russia: Moscow, April 1 to 7, 7 cases; Odessa, April 7 to 21, 2 cases; 8 deaths; Warsaw, April 1 to 4, 5 deaths.

Scotland: Glasgow, April 14 to 21, 6 cases, 1 death.

Spain: Corunna, April 14 to 21, 1 death.

Straits Settlements: Singapore, March 10 to 17, 3 deaths.

Venezuela: Maracaibo, April 1 to 14, 1 case.

YELLOW FEVER.

Brazil: Rio de Janeiro, March 23 to 30, 7 cases, 23 deaths; Santos, February 18 to April 8, 125 deaths.

Mexico: Vera Cruz, April 21 to 28, 1 death.

CHOLERA.

India: Bombay, April 3 to 10, 15 deaths; Calcutta, March 10 to 17, 77 deaths.

Philippines: Manila, March 3 to 24, 15 cases, 12 deaths.

PLAQUE—INSULAR.

PLAQUE—FOREIGN.

Arabia: Aden, February 21 to April 14, 119 cases, 81 deaths.

Egypt: Port Said, May 4, outbreak reported.

Indo-China: Bombay, April 2 to 10, 608 deaths; Calcutta, March 10 to 17, 744 deaths; Kurrachee, April 1 to 8, 471 cases, 333 deaths.

CHANGE OF ADDRESS.

Dr. M. M. Allueth, from 429 Grand Avenue to 1467 Humboldt Blvd., Chicago, Ill.

Dr. E. F. Brandon, from Detroit, Mich., to Alger, Ohio.

Dr. J. C. Beach, from 3007 Cottage Grove Avenue, Chicago, Ill., to care of Brown & Price, Columbus, Ohio.

Dr. W. C. Bailey, from Hot Springs to Las Vegas, N. M.

Dr. A. C. Browler, from Detroit to Martin, Mich.

Dr. C. M. Brucker, from Denver, Colo., to 805 9th Street, Tell City, Ind.

Dr. E. N. Brady, from 238 Marshfield Avenue to 323 S. Western Avenue, Chicago, Ill.
 Dr. H. J. O'Brien, from 620 Tower Street to Waterman Block, West Superior, Wis.
 Dr. H. A. Brous, from 9th and Pine Streets, Philadelphia, Pa., to Manhattan, Kans.
 Dr. G. A. Bachman, from Detroit to Burnips Corners, Mich.
 Dr. M. R. Beaudoin-Bennett, from Jackson, Mich., to 176 Broadway, New York, N. Y.
 Dr. S. H. Banta, from Detroit to Hubbardston, Mich.
 Dr. I. B. Chadwick, from 1514 Myrtle Street to 4627 E. 10th St., Kansas City, Mo.
 Dr. J. F. Cardwell, from St. Luke's Hospital, Detroit to Durand Michigan.
 Dr. W. H. Curtiss, from 528 S. 9th Street, Lafayette to Frankfort, Ind.
 Chicago Med. Society, from Stewart Bldg. to 203 Michigan Avenue, Chicago, Ill.
 Dr. S. F. Clay, from Washington, D. C., to Lewisburg, W. Va.
 Dr. D. A. Conrad, from Los Angeles to 40 E. Colorado Street, Pasadena, Cal.
 Dr. S. C. Carver, from Winterset to Lorimor, Iowa.
 Dr. T. Chandler, from 1236 to 1318 Noble Avenue, Chicago, Ill.
 Dr. J. W. Duncan, from Atlanta, Ga., to Gay and Vine Streets, Knoxville, Tenn.
 Dr. E. C. Dukes, from St. Louis to Lookout, Mo.
 Dr. L. B. Doeblerman, from 95 Columbia Street East, Detroit, Mich., to Covington, Ind.
 Dr. E. E. Evans, from Detroit to Armada, Mich.
 Dr. A. R. Edwards, from 2818 to 2950 Indiana Avenue, Chicago, Ill.
 Dr. G. S. Edmondson, from Marva to Keamek Opera House, Clinton, Ill.
 Dr. J. P. Freeman, from Glenville to Emmons, Minn.
 Dr. C. H. Frizelle, from Chicago to Sterry Block, Pontiac, Ill.
 Dr. F. E. Gibbons, from 492 Lincoln Street, Chicago, Ill., to Maroa, Wis.
 Dr. R. L. Gallaher, from Wheat, Tenn., to English, Texas.
 Dr. C. O. Gose, from Pleasantville, Iowa, to Hennessy, O. T.
 Dr. S. E. Greenfield, from 682 W. Adams Street, Chicago, Ill., to Drichson, Kans.
 Dr. H. D. Gray, from Newton to Kellogg, Iowa.
 Dr. I. J. K. Golden, from 1045 to 1134 Milwaukee Avenue, Chicago, Ill.
 Dr. F. H. Hansberry, from Milwaukee to Hillsboro, Wis.
 Dr. E. D. Hammond, from Omaha, Neb., to The Sliding, Wyo.
 Dr. Chas. Hines, from 629 Front Street, to 265 Morrison Street, Portland, Ore.
 Dr. O. E. Howell, from Woods to Santa Rosa, Mo.
 Dr. C. P. Horner, from Paxton to Tampico, Ill.
 Dr. S. Hexter R. A. C. Co., from 199 Market St. to 154 State St., Chicago, Ill.
 Dr. F. D. Hollenbeck, from 313 E. Chicago Ave. to 205 North State St., Chicago, Ill.
 Dr. H. J. Hillebrand, from 863 Armitage Ave. to 1059 W. Fullerton Ave., Chicago, Ill.
 Dr. C. W. Heath, from 165 Wood St. to 16 Astor St., Chicago, Ill.
 Dr. J. Hawley, from 3515 Grand Boul. to 3421 S. Park Ave., Chicago, Ill.
 Dr. J. D. Hartley, from 6422 Stony Island Avenue to 7840 Emerald Avenue, Chicago, Ill.
 Dr. R. B. Jackson, from Washington, D. C., to 156 W. 53d Street, New York, N. Y.
 Dr. H. Johnston, from New Orleans to Clinton, La.
 Dr. W. A. Jaquith, from 2522 Calumet to 3841 Rhodes Avenue, Chicago, Ill.
 Dr. W. J. Joyce, from Baltimore, Md., to 187 54th Street, Brooklyn, N. Y.
 Dr. M. F. Kirkbride, from Philadelphia, Pa., to Spring Lake Beach, N. J.
 Dr. E. K. Kerr, from 2328 Calumet Avenue to 1323 Washington St., Chicago, Ill.
 Dr. J. Klein, from St. Elizabeth Hospital to 4800 N. Clark Street, Chicago, Ill.
 Dr. J. E. Lanier, from Quince to Omega, Ga.
 Dr. Jas. E. Lewis, from Wasca to St. James, Minn.
 Dr. A. L. Lehman, from Mullan to Wallace, Idaho.
 Dr. E. A. Lawbaugh, from 31 Washington Street, to 237 La Salle Avenue, Chicago, Ill.
 Dr. F. V. Leckley, from 178 Ashley Avenue, Charleston, to Lady and Sumter Streets, Columbia, S. C.
 Dr. R. E. Miller, from 5858 State Street to 5859 Wentworth Avenue, Chicago, Ill.
 Dr. J. F. Minley, from 3457 State Street to 39th and Cottage Grove Avenue, Chicago, Ill.
 Dr. Jno. S. Miller, Philadelphia, Pa., to Louisville, Colo.
 Dr. W. O. Nance, from 6213 Hibbard Avenue to 100 State Street, Chicago, Ill.
 Dr. J. C. Ober, from Malvern Place to 2221 Park Avenue, Cincinnati, Ohio.
 Dr. F. P. Parker, from Centaur to 1423 Euclid Avenue, St. Louis, Mo.
 Dr. H. J. Patten, from 1735 Armitage Avenue to 1093 Tripp Avenue, Chicago, Ill.
 Dr. H. C. Palmer, from 5 Hopper Street to 2 West Street, Utica, N. Y.
 Dr. W. E. Patterson, from 706 Monroe Street, Chicago, Ill., to Greene, Iowa.
 Dr. L. W. Rowell, from 280 S. Leavitt Street to 45 Loomis Street, Chicago, Ill.
 Dr. E. F. Rorbaugh, from 4308 Langley Avenue to 109 42d Place, Chicago, Ill.
 Dr. H. H. Rittenhouse, from 57th and Jefferson Streets to 5729 Rosalle Court, Chicago, Ill.
 Dr. F. C. Rosse, from 1701 H Street N. W., to 1110 F Street N. W., Washington, D. C.
 Dr. B. W. Sippy, from 143 Oakwood Boul. to The Winamac, Chicago, Ill.
 Dr. J. J. Sexton, from 384 S. Marshfield to 835 W. Harrison Street, Chicago, Ill.
 Dr. C. M. Shanely, from Ledgerwood to Forman, N. D.
 Dr. H. B. Stehman, from Pasadena to 217 S. Broadway, Los Angeles, Cal.
 Dr. J. A. Silverman, from 975 Post Street to 822 Geary Street, San Francisco, Cal.

Dr. W. B. Simpson, from New Orleans, La., to Hot Springs, Ark.
 Dr. A. D. Smith, from 295 Marshfield Avenue, Chicago, Ill., to Hicks Bldg., San Antonio, Texas.
 Dr. T. E. Spaulding, from Galveston to Kingston, Texas.
 Dr. L. A. Sholars, from New Orleans to Henry, via Abbeville, Louisiana.
 Dr. J. T. Topinka, from 2534 Wentworth to 2602 Indiana Avenue, Chicago, Ill.
 Dr. C. Vedeler, from Denver to care D. & R. G. Hospital, Salida Colorado.
 Dr. A. S. Walss, from 2691 to 2516 N. Hermitage Avenue, Chicago, Ill.
 Dr. F. E. Wadhams, from 3329 Indiana to 3435 S. Park Avenue, Chicago, Ill.
 Dr. U. R. Webb, from Lenox Flats, 16th and L Streets, to 2021 Hilger Place, Chicago, Ill.
 Dr. T. B. Wingo, from Martin, Tenn., to Dexter, Mo.
 Dr. C. L. Worrall, from Alliance to Magnolia, Ohio.
 Dr. M. N. White, from Augusta, Ga., to 1521 Pitzwater Street, Philadelphia, Pa.
 Dr. O. A. Young, from 626 6th Avenue, Cedar Rapids, Iowa, to 1009 Rusk Avenue, Houston, Texas.
 Dr. A. T. Zeller, from 901 Walnut Street to 603 Locust Street, McKeesport, Pa.

Association News.

Board of Trustees.—There will be a meeting of the Board of Trustees of the AMERICAN MEDICAL ASSOCIATION in Room 237, Hotel Dennis, Atlantic City, N. J., at 10 a. m., Monday, June 4, 1900. Alonzo Garcelon, M.D., President.

Membership Receipts.—Members attending the Atlantic City meeting, and who have paid their dues for 1900, are reminded of the necessity of taking their receipts with them if they wish to avoid annoyance when they register.

The Official Program.—In order to avoid misunderstandings and to protect the interests of advertisers, attention is called to the fact that there is but one official program. This program is copyrighted by the Board of Trustees and contains no advertising matter.

Delegates to the Meeting of the American Medical Association.—Secretaries of societies are requested to forward the names of delegates as soon as possible after these are appointed or elected. George H. Simmons, M.D., Secretary, 61 Market St., Chicago.

General Business Committee.—The first meeting of the General Business Committee of the AMERICAN MEDICAL ASSOCIATION will be held at the Hotel Dennis, Atlantic City, N. J., on Monday afternoon, June 4, at 4:30 o'clock. Subsequent meetings of the Committee will be held at the same place and hour, every afternoon, during the meeting of the ASSOCIATION, unless otherwise directed by the Committee. In order that the business of the ASSOCIATION may be effectively transacted, it is very important that all the members of the Committee should attend all its meetings. L. DUNCAN BULKLEY, Acting Secretary.

Railroad Rates for Atlantic City Meeting.—As previously announced in these columns, the Trunk Lines Association and the Central Passenger Association have granted one and one-third fare rate on the certificate plan for the Atlantic City meeting. Tickets will be on sale in the territory of these Associations from May 30 to June 7, and good to return to June 23. Action has also been taken by the Western Passenger Association, and the same rate announced from all points in its territory, tickets also to be sold on the certificate plan, the dates of sale being May 30 to June 5. The return limit was made June 12 by this Association, but on account of the later limit allowed by the others, it will probably be changed to correspond with that of the Trunk Lines and Central Passenger associations. The certificates will be signed at Atlantic City by Dr. W. Blain Stewart, N. E. Cor. Pacific and North Carolina Avenues, and a special agent will be present on June 6, 7 and 8. The territory covered by the two first-named includes practically everything north of the Ohio River and east of the Mississippi from Cairo to St. Louis, thence east of a line drawn from St. Louis to Chicago, through Jacksonville, Decatur, Gibson, etc. The Western Passenger Association's territory to which the certificate plan usually applies comprises points west of Chicago, Peoria and St. Louis, including Oklahoma, Indian Territory, Kansas, Colorado, Utah, Nebraska, South Dakota, Minnesota, Wis-

consin, Iowa, most of North Dakota and Missouri, and northern Michigan and northern Illinois.

Pathologic Exhibit at the American Medical Association.—The state medical society has constituted the chief avenue through which pathologic material has been solicited for the exhibit, and a number of state organizations have appointed representatives or committees to take in charge the work. Besides, a number of laboratories and hospitals will send on their own account. A partially complete list of the organizations and institutions which will participate, with the committees acting for them, is as follows: Alabama Medical Association, Thos. D. Parke, Birmingham; Colorado State Medical Society, A. M. Holmes, Denver; Florida State Medical Society, Edward N. Liell, Jacksonville; Illinois State Medical Society, Maximilian Herzog, Chicago; Indiana State Medical Society, Frank B. Wynn and H. G. Gaylord, of Indianapolis, L. P. Drayer of Fort Wayne, A. W. Bitting of Lafayette, Edwin Walker of Evansville, George H. Grant of Richmond, Allen Pierson of Spencer and L. J. Willien of Terre Haute; Kentucky State Medical Society, James B. Bullit, Louisville; Louisiana State Medical Society, O. L. Pothier, New Orleans; Missouri State Medical Association, Hugo Summa, St. Louis; New Jersey State Medical Society, F. W. Bailey, Elizabeth; New York State Medical Association, Edward K. Dunham, D. Hunter McAlpin, Leon T. LeWald, and J. W. Draper Maury, New York City; North Carolina State Medical Society, Richard H. Whitehead, Chapel Hill; Ohio State Medical Society, A. P. Ohlmacher, Gallipolis; Tennessee State Medical Society, William Krauss, Memphis; West Virginia State Medical Society, W. P. Goff, Clarksburg; Wisconsin State Medical Society, Gustav A. Kletzsch, Milwaukee; Government Hospital for Insane, A. R. Richardson and I. W. Blackburn, Washington; Iowa State University, Walter L. Bierring, Iowa City; Johns Hopkins Hospital, William H. Welch, Baltimore; Lakeside Hospital, William T. Howard, Jr., and Dr. Perkins, Cleveland; Pepper Laboratory and other institutions of Philadelphia, Alfred Stengel; Pathological Institute of the New York State Commission in Lunacy, Ira Van Gieson, New York City; United States Marine-Hospital Service, Walter Wyman, Washington; United States Bureau of Animal Industry, D. E. Salmon, Washington.

It is urged that representatives in charge of collections, as well as individuals sending specimens, should comply as nearly as possible with the wishes of the committee in the matter of case histories. These should be typewritten, cross-wise on paper $5\frac{1}{2}$ by nine inches in size, leaving a margin of $1\frac{1}{2}$ inches at the top. The first page should be a brief containing the essential facts and striking features of the specimen, to be elaborated in the succeeding pages. For specimens with meager data a large tag will be provided. In the former the case history will be enclosed in a neat cover and placed with the specimen for convenience of reference. Tags and covers may be obtained from the secretary of the committee by specifying the number desired.

Specimens should be packed carefully and labeled "Breakable!" There will be less danger of breakage if the packages do not exceed 250 to 300 pounds in weight. Boxes with rope handles may be checked on the tickets of the representative accompanying the collection. If shipped by freight due allowance should be made for delays. Every possible effort should be made to have the material reach Atlantic City by June 2, and under no circumstances later than June 4, since it will require considerable time and labor to put the collection in order. In every instance the committee should be notified as to the method of transportation, date of shipment and probable time of arrival. All material or communications expected to arrive in Atlantic City after May 21 should be sent in care of the "Pathological Exhibit of The American Medical Association."

The members of the Provisional Committee on the Pathologic Exhibits are: Joseph Stokes, Moorestown, N. J., Chairman; Alfred Stengel, 1811 Spruce St., Philadelphia; W. W. Fox, City Hospital, Atlantic City, N. J.; Frank B. Wynn, 18 E. Ohio St., Indianapolis, Ind., Secretary.

Programs for Atlantic City Meeting.

Following are the lists of papers to be presented before the several Sections at the next meeting of the ASSOCIATION.

SECTION ON PRACTICE OF MEDICINE.

TUESDAY, JUNE 5—AFTERNOON SESSION.

1. Address of Chairman. GEORGE DOCK, Ann Arbor, Mich.
2. A System of Personal Biologic Examinations of the Condition of Adequate Medical and Scientific Conduct of Life. GEORGE M. GOULD, Philadelphia.
3. The Hospital Clinical Laboratory. C. N. B. CAMAC, New York City.
4. Value of Bacteriologic Cultures of Throat to General Practitioner. M. HOWARD FUSSELL, Philadelphia.
5. Dysentery. SIMON FLEXNER, Philadelphia.
6. Notes on Tropical Dysentery. J. H. MUSSER, Philadelphia.
7. Serumtherapy in Croupous Pneumonia. J. C. WILSON, Philadelphia.
8. Influence of Sea Air and Sea Water Baths on Disease. W. BLAIR STEWART, Atlantic City, N. J.

WEDNESDAY, JUNE 6—MORNING SESSION.

9. Pseudo (?), or Modified (?) Smallpox? T. J. HAPPEL, Trenton, Tenn.
10. Yellow Fever: Its Nature and Its Cause. EUGENE WASHIN, Surgeon. U. S. M.-H. S.
11. Prolonged Fevers of Obscure Origin. ROBT. B. PREBLE, Chicago.
12. Some Interesting Cases of Infectious Diseases. DELANCEY ROCHESTER, Buffalo, N. Y.
13. Certain Clinical Features of Influenza Recently Epidemic. H. S. ANDERS, Philadelphia.
14. Influenza With Four Distinct Pneumonic Attacks Accompanied by Otitis Media Purulenta, Cerebral Hyperemia, Colitis, Marasmus. Recovery. JULIUS ULLMAN, Buffa^o, N. Y.
15. Observations on Direct Antiseptic Treatment of Infectious Diseases. C. AM ENDE, New York City.

WEDNESDAY, JUNE 6—AFTERNOON SESSION.

SYMPOSIUM ON MALARIA.

16. Pathology of Malarial Fevers: Structure of the Parasites and Changes in the Tissues. JESSE W. LAZEAR, U. S. A., Havana, Cuba.
17. Etiology of Malaria With Especial Reference to Mosquitoes. W. S. TRAYER, Baltimore, Md.
18. Inoculation of Malarial Fever Through Agency of the Mosquito, with Some Sections and Dissections of the Mosquito. Etiology of Malarial Fever and Some Observations Made in the South Several Years Ago. A. E. WOLDERT, Philadelphia.
19. Entomologic and Practical Aspects of the Mosquito; With Specimens and Drawings. L. O. HOWARD, U. S. Dept. of Agriculture.
20. Some Typical Cases of Estivo-autumnal Fever and Combined Estivo-autumnal and Tertian Malarial Fevers; with a Study of the Parasites Observed in the Blood. CHAS. F. CRAIG, U. S. Army.
21. Experiences with Some of the Pernicious Forms of Malaria. M. GOLDMAN, Memphis, Tenn.
22. Clinical Observations in Malaria. FRANK A. JONES, Memphis, Tenn.
23. Malarial Hemoglobinuria. WM. BRITT BURNS, Deckerville, Ark.

Discussion on Malaria, by WM. OSLER, Baltimore; A. C. ABROTT, Philadelphia; WM. KRAUSS, Memphis, Tenn.; ARTHUR R. EDWARDS, Chicago; JUDSON DALAND, Philadelphia; T. J. HAPPEL, Trenton, Tenn.

THURSDAY, JUNE 7—MORNING SESSION.

SYMPOSIUM ON ARTHRITIS.

24. Pathology of Rheumatism. DAVID RIESMAN, Philadelphia.
25. Rheumatism and Prevention of Heart Complications. JAMES J. WALSH, New York City.

26. Relations of Chorea and Rheumatism.
C. W. BURR, Philadelphia.
27. Heart in Rheumatism.
DELANCEY ROCHESTER, Buffalo, N. Y.
28. Heart in Rheumatism. ARTHUR R. EDWARDS, Chicago.
29. Pathogenesis and Clinical Features of Arthritis Deformans.
A. O. J. KELLY, Philadelphia.
30. Iodid of Iron in Treatment of Certain Forms of Infective Arthritis.
J. C. WILSON, Philadelphia.
Discussion on Arthritic Diseases, by F. A. PACKARD, Philadelphia; J. H. MUSSER, Philadelphia; J. M. ANDERS, Philadelphia; EDWARD F. WELLS, Chicago; CHARLES G. STOCKTON, Buffalo, N. Y.; L. F. BISHOP, New York City; H. B. FAVILL, Chicago.
31. Case of Malignant Endocarditis with Recovery.
N. S. DAVIS, JR., Chicago.
32. Relative Importance of Muscular and Valvular Lesions of Diseases of the Heart.
S. SOLIS-COHEN, Philadelphia.
33. Clinical Study of Myocarditis.
LOUIS FAUGERES BISHOP, New York City.
34. Plea for a More Rational Prognosis in Heart Affections.
JNO. J. MORRISSEY, New York City.
Discussion on Cardiac Disease, by FRANK BILLINGS, Chicago; DELANCEY ROCHESTER, Buffalo, N. Y.; JAMES B. HERRICK, Chicago; O. T. OSBORNE, New Haven, Conn.; D. D. STEWART, Philadelphia; BERTRAM W. SIPPY, Chicago; ROBERT B. PREBLE, Chicago; M. H. FUSSELL, Philadelphia.
- THURSDAY, JUNE 7—AFTERNOON SESSION.
35. In What Relation Does Occupation Stand to Tuberculosis?
W. FREDENTHAL, New York City.
36. Diagnosis and Treatment of Prebacillary Stage of Pulmonary Tuberculosis.
J. M. ANDERS, Philadelphia.
37. Subnormal Temperature in Pulmonary Phthisis; Its Clinical Significance.
J. FRANK MCCONNELL, Las Cruces, New Mexico.
38. Importance of Rest in Pulmonary Tuberculosis.
CARROLL E. EDSON, Denver, Colo.
39. Pulmonary Tuberculosis; Present Condition of Cases Treated During 1898 and Reported Last Year at the Columbus Meeting.
C. P. AMBLER, Asheville, N. C.
40. Tuberculosis of the Lungs.
A. F. LEMKE, Chicago.
41. Rational Treatment of Tuberculosis With Compressed-Air in Saturated Antiseptic Solution for Inhalation and Internal Use.
EUSTATHIUS CHANCELLOR, St. Louis, Mo.
42. Silver Injection Treatment of Pulmonary Consumption.
THOMAS J. MAYS, Philadelphia.
Discussion on Tuberculosis, opened by J. C. WILSON, Philadelphia; DELANCEY ROCHESTER, Buffalo; HENRY B. FAVILL, Chicago; S. SOLIS-COHEN, Philadelphia; JAMES B. HERRICK, Chicago.
43. Hydrophobia and the Pasteur Method.
CHARLES WINSLOW DULLES, Philadelphia.
44. Brain Break and Nerve Strain of the American Soldier; His Mind and Nerve Exhaustion; His Insanity and Neurasthenia.
C. H. HUGHES, St. Louis, Mo.
- FRIDAY, JUNE 8—MORNING SESSION.
45. Diagnosis of Diabetes.
JAMES B. HERRICK, Chicago.
46. Mortality From Diabetes Mellitus in the City of New York During the Decade 1889-1899.
HEINRICH STERN, New York City.
47. Cutaneous Diseases Accompanying Diabetes.
MILTON B. HARTZELL, Philadelphia.
48. Exophthalmic Goiter.
O. T. OSBORNE, New Haven, Conn.
49. Typhoid Bacillus and Its Complete Biologic History From Eberth's Discovery Until To-day.
FELIX VITALE, Coytesville, N. J.
50. Case of Scorbutus in Which Typhoid Fever, Complicated by Acute Leukemia, Occurred.
D. D. STEWART, Philadelphia.
51. Chlorosis: With Especial Reference to Diagnosis, Prognosis and Treatment.
EDWARD F. WELLS, Chicago.
52. Treatment of Typhoid Fever with Bactericidal Agents and Some Consequent Deductions.
JAMES M. PECK, Arlington, Ky.
FRIDAY, JUNE 8—AFTERNOON SESSION.
53. Lesions of Cauda Equina and Conus Medullaris.
BERTRAM W. SIPPY, Chicago.
54. Movable Kidney From the Standpoint of the General Practitioner.
A. MARCY, JR., Riverton, N. J.
55. Antiseptic Treatment of Diphtheria.
D. BENJAMIN, Camden, N. J.
56. Rational Therapeutics of So-Called Uric Acid Lesions With Some Original Investigations.
ALFRED C. CROFTAN, Pasadena, Cal.
57. Some Points on the Nature and Treatment of the Melancholias.
J. JOSEPH KINDRED, New York City.
58. Climatology of Arizona.
WILLIAM DUFFIELD, Phenix, Ariz.
59. Clinical Laws of Immunity of Disease.
LAMBERT OTT, Philadelphia.
- SECTION ON OBSTETRICS AND DISEASES OF WOMEN.
TUESDAY, JUNE 5—AFTERNOON SESSION.
- 2 o'clock.
1. Address of Chairman. W. E. B. DAVIS, Birmingham, Ala.
2. Value of the Angiotribe in Vaginal Celiotomy.
J. H. CARSTENS, Detroit, Mich.
3. Further Experience with Tuffier's Angiotribe.
I. S. STONE, Washington, D. C.
4. Angiotripsy in Abdominal Surgery.
HUGH M. TAYLOR, Richmond, Va.
3:30 o'clock.
- SYMPOSIUM ON FIBROMYOMA.
5. Personal Experience with Uterine Fibroid.
H. D. INGRAHAM, Buffalo, N. Y.
6. Myomectomy Per Vaginam.
J. RIDDLE GOFFE, New York City.
7. Myofibroma Uteri.
H. J. BOLDT, New York City.
8. Arrhythmia Cordis Complicating Fibromata Uteri.
J. WESLEY BOVÉE, Washington, D. C.
9. Antelexion of Uterus; Its Causes and Treatment.
AUGUSTUS P. CLARKE, Cambridge, Mass.
- WEDNESDAY, JUNE 6—MORNING SESSION.
- 9 o'clock.
10. Improved Technique in Major and Minor Surgery of the Female Generative Organs.
HENRY P. NEWMAN, Chicago.
11. The Rubber Glove in Aseptic Surgery.
C. C. FREDERICK, Buffalo, N. Y.
10 o'clock.
- SYMPOSIUM ON OBSTETRICS.
12. Practical Application of Posture During Labor.
EDWARD P. DAVIS, Philadelphia.
13. Plea for Regular and Systematic Examination of the Uterus for Eight or Ten Weeks Following Parturition.
HIRAM N. VINEBERG, New York City.
14. Parturition as a Factor in Gynecic Practice.
JOHN M. DUFF, Pittsburg, Pa.
15. Classical Cesarean Section Versus the Porro-Cesarean.
GEO. M. BOYD, Philadelphia.
16. Forced Re-expansion of Uterus During Labor and Its Relation to Manual Operations for Correction of Malpositions of Child.
D. BENJAMIN, Camden, N. J.
17. Maternity Hospitals and Obstetric Teaching.
GEO. C. MOSHER, Kansas City, Mo.
18. Puerperal Eclampsia.
J. LUE SUTHERLAND, Grand Island, Neb.
- WEDNESDAY, JUNE 6—AFTERNOON SESSION.
- 3 o'clock.
- SYMPOSIUM ON THE RELATION OF PELVIC AND INTRA-ABDOMINAL DISEASES TO NERVOUS DISEASES.
19. Causal Relation Intra-Abdominal Diseases Bear to Nervous Disturbances Recognized by Gynecologists, Ignored by Neurologists.
HENRY O. MARCY, Boston.

20. Traumatism and Malformation of Female Generative Apparatus as Cause of Insanity.
GEO. H. NOBLE, Atlanta, Ga.
21. Neuroses Due to Autointoxication from Faulty Menstruation.
ARTHUR JOHNSTONE, Cincinnati, Ohio.
22. Tubo-Ovarian Adhesions; Their Reflexes.
A. L. BEAHAN, Canandaigua, N. Y.
23. Gall-Stones and Diseases of Gall-Bladder and Nervous Symptoms Resulting Therefrom.
EDWIN RICKETTS, Cincinnati, Ohio.
24. How Shall We Treat Our Cases of Hysteria and Neurasthenia.
JOSEPH TABER JOHNSTON, Washington D. C.
25. Title to be announced.
F. X. DERCUM, Philadelphia.
26. Third Element in Equation Between Pelvic Disease and Disturbance in Nervous System in Women.
H. A. TOMLINSON, St. Peter, Minn.
27. Pelvic Disease as a Factor of Cause in Insanity of Female, and Surgery as a Factor of Cure.
E. C. CARPENTER, Columbus, Ohio.
28. Interrelation of Gynecology and Neurology in Practice.
C. H. HUGHES, St. Louis, Mo.
- THURSDAY, JUNE 8—MORNING SESSION.
29. Abdominal Tumors of Infancy.
DENSLOW LEWIS, Chicago.
30. Aseptic Minor Gynecology with Demonstrations.
AUGUSTIN H. GOELET, New York City.
- SYMPOSIUM ON CANCER OF FEMALE GENERATIVE ORGANS.
10 o'clock.
31. The Prophylaxis and Diagnosis of Cancer of Uterus.
L. S. MCMURTRY, Louisville, Ky.
32. Technique of Vaginal Extirpation for Cancer of Uterus.
R. B. HALL, Cincinnati, Ohio.
33. Combined Abdominal and Vaginal Versus Vaginal Hysterectomy for Carcinoma.
JOHN B. DEEVER, Philadelphia.
34. Operative Treatment of Cancer of Uterus.
E. E. MONTGOMERY, Philadelphia.
35. Operation for Cancer of Rectum in Female.
JOHN B. MURPHY, Chicago.
36. Cancer of Uterus.
W. H. HUMISTON, Cleveland, Ohio.
37. Treatment of Cancer of Uterus.
WM. R. PRYOR, New York City.
- THURSDAY, JUNE 8—AFTERNOON SESSION.
2 o'clock.
38. Nephrorrhaphy: A Study of the Remote Results, With Remarks on the Technique.
CHARLES P. NOBLE, Philadelphia.
39. Resection of Ureter.
HOWARD A. KELLY, Baltimore, Md.
40. Exclusion of Intestinal Areas From Fecal Tract.
JOHN B. MURPHY, Chicago.
- SYMPOSIUM ON INFLAMMATORY DISEASES OF FEMALE GENITALIA.
3 o'clock.
41. Senile Endometritis.
L. H. DUNNING, Indianapolis, Ind.
42. Inflammation of Fallopian Tube, with Special Reference to Specific Origin.
J. R. GUTHRIE, Dubuque, Iowa.
43. Appendicitis Operations in Young Women and Girls.
JOSEPH PRICE, Philadelphia.
44. Tubercular Peritonitis.
A. H. CORBIER, Kansas City, Mo.
45. Source of Infection in Pelvic Suppuration as an Indication for Treatment.
H. D. NILES, Salt Lake City, Utah.
46. Ovarian Dermoid and Large Hematocele, with Twisted Pedicle Which Caused Alarming Conditions Resembling Appendicitis; Patient Ten Years of Age; Operation; Recovery.
MILO B. WARD, Kansas City, Mo.
47. Pathology of Pelvic Suppurations.
F. HENROTIN, Chicago.
48. Plea for More Frequent Avoidance of Exsection of Ovary in Connection with Resections of Diseased Tubes.
PHILANDER A. HARRIS, Paterson, N. J.
49. Residual Symptoms of Gonorrhoea in Female.
EDWARD J. ILL, Newark, N. J.
- FRIDAY, JUNE 8—MORNING SESSION.
9 o'clock.
50. After-Treatment of Laparotomy.
WALTER B. CHASE, Brooklyn, N. Y.
51. Ovulation and Menstruation Not Interdependent Functions.
C. C. THAYER, Clifton Springs, N. Y.
52. Contribution to Study of Dysmenorrhoea.
GEO. TUCKER HARRISON, New York City.
53. The Sins of Omission and Sins of Commission.
G. H. BALLERHAY, Paterson, N. J.
54. Confinement Following a Supposed Double Ovariectomy, Complicated with Intestinal Hernia Through the Old Laparotomy Wound.
HENRI LEONARD, Detroit, Mich.
55. Surgery of Uterus and Other Pelvic Structures, Per Vaginam.
W. H. WATHEN, Louisville, Ky.
56. Treatment of Menorrhagia (Dysmenorrhoea) of Pelvic Origin, by Electricity.
G. BETTON MASSEY, Philadelphia.

SECTION ON SURGERY AND ANATOMY.

1. Suggestions in Plastic Surgery of the Face.
J. B. ROBERTS, Philadelphia.
2. Two Cases of Growths in Frontal Sinus.
W. D. HAMILTON, Columbus, Ohio.
3. Injuries of the Skull and Its Contents.
W. H. EARLES, Milwaukee, Wis.
4. Traumatic Spine: Contribution to Mechanical Treatment of the Same, with Report of Cases.
GEO. R. ELLIOTT, New York City.
5. Laminectomy for Diseases and Injuries of the Cord.
SAMUEL LLOYD, New York City.
- Discussion opened by H. WHARTON, Philadelphia.
6. External Drainage of Superficial Lung Cavities, with Report of Two Successful Cases.
W. L. WILLS, Los Angeles, Cal.
- Discussion opened by J. B. MURPHY, Chicago.
7. A Retrospect of Surgery of the Stomach.
H. O. WALKER, Detroit, Mich.
8. Non-Perforating Gastric Ulcer With and Without Hemorrhage.
W. L. RODMAN, Philadelphia.
9. Anterior Transverse Gastro-Enterostomy with Splitting of the Upper Anterior One-Half of Intestinal Wound.
CHRISTIAN FENGER, Chicago.
- Discussion opened by FENTON B. TURCK, Chicago.
10. Two Successful Operations: a. Cholelithiasis. b. Hepatonephroptosis: Cure by Cholecystorrhaphy.
A. F. JONAS, Omaha, Neb.
11. Diagnosis and Treatment of Cholelithiasis.
W. J. MEANS, Columbus, Ohio.
12. Removal of Mucous Membrane of Gall-Bladder, a Substitute for Cholecystotomy.
W. J. MAYO, Rochester, Minn.
13. Importance of Early Operation for Biliary Calculi.
M. H. RICHARDSON, Boston, Mass.
- Discussion opened by W. W. KEEN, Philadelphia.
14. Colostomy for Permanent Fecal Fistula.
J. A. WYETH, New York City.
15. Exclusion of the Intestinal Area from the Fecal Tract.
J. B. MURPHY, Chicago.
16. Original Investigations on the Anatomy and Histology of Rectum and Colon, Together with Treatment of Obstinate Constipation for Obstruction Based on These Points.
J. R. PENNINGTON, Chicago.
- Discussion opened by G. R. FOWLER, Brooklyn, N. Y.
17. Gunshot Wounds of Abdomen.
W. F. WESTMORELAND, Atlanta, Ga.
18. Gastric and Intestinal Wounds.
D. W. COWLEY, Oakland, Cal.
19. Lesions of Abdominal Viscera Without Injury to the Skin.
GEO. T. VAUGHAN, Washington, D. C.
20. Repair After Resection of Intestine.
W. A. EVANS, Chicago.
- Discussion opened by F. H. WIGGIN, New York City.
21. Appendicitis: Colitis as an Etiologic Factor, and the Operation of Removing the Appendix in All Cases Operated on.
MILES S. PORTER, Ft. Wayne, Ind.
22. Comments on Appendicitis as Commonly Practiced.
JOSEPH PRICE, Philadelphia.

23. Appendiceal Fistula. J. B. DEEVER, Philadelphia.
Discussion opened by ROTT. T. MORRIS, New York City.
24. Treatment of Ventral Hernia in Children
A. J. OCHSNER, Chicago.
25. Treatment of Ventral Hernia.
M. M. JOHNSON, Hartford, Conn.
26. Remarks on Injection Method of Treating Hernia, with
Comments. G. G. COTTON, Rock Rapids, Iowa.
27. Cure of Inguinal Hernia in Men. H. O. MARCY, Boston.
Discussion opened by W. B. DE GARMO, New York City.
28. Diagnosis of Calculus Disease of Kidney, Ureters and
Bladder by Roentgen Method.
C. L. LEONARD, Philadelphia.
29. Movable Kidney. M. L. HARRIS, Chicago.
30. Treatment of Injuries of the Ureter.
B. F. DAVIS, Omaha, Neb.
31. Vesico-rectal Anastomosis for Extrophy of Bladder, with
Report of Case. A. E. HALSTED, Chicago.
32. Extrophy of Bladder, with Exhibition of Case.
AP MORGAN VANCE, Louisville, Ky.
Discussion opened by EDWARD MARTIN, Philadelphia.
33. Tuberculosis of Prostate and Vesicula Seminales.
A. I. BOUFFLEUR, Chicago.
34. Contribution to Surgical Asepsis of Urethra and Bladder.
FERD. C. VALENTINE, New York City.
35. Treatment of Prostatic Hypertrophy.
PARKER SYMS, New York City.
36. Indications of Urethrotomy.
G. FRANK LYDSTON, Chicago.
Discussion opened by C. C. THAYER, Clifton Springs, N.Y.
37. Use of Decalcified Bone Chips in Diseases of the Bones.
J. G. CARPENTER, Stanford, Ky.
38. Bone Tuberculosis. DEFOREST WILLARD, Philadelphia.
39. Treatment of Tubercular Knee-Joint.
WISNER TOWNSEND, New York City.
40. Operative Treatment of Disease of Shafts of Long Bones.
S. L. MCCURDY, Pittsburg, Pa.
Discussion opened by NICHOLAS SENN, Chicago.
41. Fractures of Patella. J. M. BARTON, Philadelphia.
42. Restitution of Continuity of Shaft in Tibia, by Transplan-
tation of Patella Between the Fragments.
N. SENN, Chicago.
43. Operative Treatment for Reduced and Irreducible Dislo-
cations. ARTHUR DEAN BEVAN, Chicago.
44. Ambulatory Treatment of Fracture, with Demonstration of
a New Apparatus for Cases of Fracture Below the Knee.
E. H. LEE, Chicago.
Discussion opened by C. A. POWERS, Denver, Colo.
45. Surgical Errors of Skiagraphy.
CARL BECK, New York City.
46. Report of Five Cases of Tetanus, Treated with Anti-
tetanic Serum. J. D. BLAKE, Baltimore, Md.
47. Old Age Influencing Surgical Operations.
J. P. TUTTLE, New York City.
48. Report of Case of Specific Myositis, Simulating Retro-
peritoneal Sarcoma. ERNEST LAPLACE, Philadelphia.
49. Sarcoma of Colon, with Report of Case.
C. VAN ZWALENBERG, Riverside, Cal.
50. Coccygeal Dermoids.
J. R. EASTMAN, Indianapolis, Ind.

SECTION ON STATE MEDICINE.

1. The Stamping Out of Typhoid Fever.
SAMUEL KNOX CRAWFORD, Chicago.
JAMES MARTIN, Fredricksburg, Ohio.
2. Prevention of Tuberculosis by the State.
BENJAMIN LEE, Philadelphia.
Discussion by J. N. HURTY, Indianapolis, Ind., and HENRY
MITCHELL, Trenton, N. J.
3. Experiences with Recent Epidemic of Rabies in Buffalo.
ERNEST WENDE, Buffalo, N. Y.
4. Municipal Regulation of the Spitting Habit.
E. B. BORLAND, Pittsburg, Pa.
5. Pollution of Streams and Purification of Public Water-
Supplies. GEORGE M. KOBER, Washington, D.C.
6. Present State of Interstate Reciprocity Concerning Licen-
ses to Practice Medicine. E. AMBERG, Detroit, Mich.
7. Venereal Disease as a Social Problem.
W. C. GATES, Rockland, Mich.
8. Pure Food Legislation.
MURRAY G. MOTTER, Washington, D. C.

SECTION ON OPHTHALMOLOGY.
TUESDAY, JUNE 5—AFTERNOON SESSION.

1. Address of Chairman.
H. V. WÜRDEMANN, Milwaukee, Wis.
2. Treatment of Conical Cornea: Optical Therapeutics.
SWAN M. BURNETT, Washington, D. C.
3. Operations.
ROBERT SATTLER, Cincinnati, Ohio.
Discussion opened by HERMAN KNAPP, New York City,
and SAMUEL D. RISLEY, Philadelphia.
4. Keratitis Bullosa, with Report of Case.
E. O. SISSON, Keokuk, Iowa.
Discussion opened by CASEY A. WOOD, Chicago.
5. Observations on Etiology of Scrofulous or Phlyctenular
Keratitis and Its Treatment by Salicylate of Sodium.
H. GRADLE, Chicago.
6. Use of Protargol in Pyogenic Affections of the Cornea.
F. C. HOTZ, Chicago.
Discussion opened by L. WEBSTER FOX, Philadelphia.
WEDNESDAY, JUNE 6—MORNING SESSION.
- EXHIBITION OF SPECIMENS AND NEW INSTRUMENTS.
7. A Double Trial Lens to Balance the Eyes in Presbyopia.
MARK D. STEVENSON, Akron, Ohio.
Discussion opened by JAMES THORINGTON, Philadelphia.
8. Relative Value of Instruments Used for Keratometry,
with Demonstrations of Different Ophthalmometers.
A. D. MCCONACHIE, Baltimore, Md.
9. Astigmatism, Its Detection and Correction.
H. BERT ELLIS, Los Angeles, Cal.
10. Remarks on the Value of Homotropin as a Cycloplegic—
A Clinical Study. E. C. ELLETT, Memphis, Tenn.
11. A Comparison of the Cycloplegic Action of Atropin and
Scopolamin. W. K. ROGERS, Columbus, Ohio.
12. How to Construct Curves Representing Relative Accommo-
dation and Convergence. LUCIEN HOWE, Buffalo, N. Y.
Discussion opened by Edward Jackson, Denver, Colo.
WEDNESDAY JUNE 6—AFTERNOON SESSION.
- RELATION OF OCULAR DISEASES AND VISUAL DEFECTS TO
VOCATIONS.
13. Estimation of Amount of Injury to the Business Capacity
of the Individual from Partial or Complete Loss of
Vision. H. T. HANSELL, Philadelphia.
14. What Amount of Visual Defect Should Disqualify in Rail-
road and Steamship Service? FRANK ALLPORT, Chicago.
Discussion opened by C. H. WILLIAMS, Boston; ROBERT
SATTLER, Cincinnati, Ohio.
15. Amount of Myopia Corrected by Removal of the Crystal-
line Lens. EDWARD JACKSON, Denver, Colo.
Discussion opened by JOHN E. WEEKS, New York City.
16. Lessons Learned from a First Series of 100 Cataract Ex-
tractions. F. T. ROGERS, Providence, R. I.
Discussion opened by E. E. HOLT, Portland, Me.
17. Secondary Operations on Capsular Membranes.
PETER A. CALLAN, New York City.
Discussion opened by H. KNAPP, New York City.
18. Systematic Cleansing of Nasal Cavities Before Operations
Which Involve Opening of the Eyeball.
J. A. LIPPINCOTT, Pittsburg, Pa.
Discussion opened by H. GRADLE, Chicago.
19. Case of Coloboma of Each Lens Without Coloboma of Iris
or Choroid. JAMES MOORES BALL, St. Louis, Mo.
Discussion opened by A. D. MCCONACHIE, Baltimore, Md.
THURSDAY, JUNE 7—MORNING SESSION.
- EXHIBITION OF SPECIMENS AND NEW INSTRUMENTS.
20. An Improved Lantern for Testing Color Perception.
C. H. WILLIAMS, Boston, Mass.
21. A Double Hook for Use in Advancement Operations.
C. F. CLARKE, Columbus, Ohio.

22. Demonstration of a Tubercular Tumor of the Orbit.
H. F. HANSELL Philadelphia.
Discussion opened by JNO. E. WEEKS, New York City.
23. Demonstration of Sections of an Unusual Intraocular Growth.
WILBER P. MARPLE, New York City.
24. The Douche in the Treatment of Purulent Conjunctivitis.
E. E. HOLT, Portland, Me.
25. An Insurance Case in Which Ossification of the Choroid Led to Identification of the Body.
ROBERT L. RANDOLPH, Baltimore, Md.
Discussion opened by A. R. BAKER, Cleveland, Ohio.
THURSDAY, JUNE 7—AFTERNOON SESSION.
- RATIONAL USE AND LIMITATIONS OF THERAPEUTIC MEASURES INTENDED TO PROMOTE ABSORPTION OF EXUDATES WITHIN THE EYEBALL.
26. Medicinal Measures.
RANDOLPH BRUNSON, Hot Springs, Ark.
27. Local Therapeutics.
M. URIBE TRONCOSO, Mexico City, Mex.
28. Present Status and Value of Massage of the Eyeball, with the Consideration What Diseases of the Eye May Be Favorably Influenced by This Therapeutic Measure, and What Are the Best Means of Its Application.
CASEY A. WOOD, Chicago.
29. Use and Abuse of Iodid of Potash in Ophthalmic Practice.
A. R. BAKER, Cleveland, Ohio.
Discussion opened by GEO. M. GOULD, Philadelphia; S. C. RITCHIE, Washington, D. C.; J. SANTOS FERNANDEZ, Havana, Cuba; J. A. PRATT, Aurora, Ill.
30. Use of Heat as a Therapeutic Agent in Chronic Eye Affections.
L. J. LAUTENBACH, Philadelphia.
Discussion opened by LEARTUS CONNOR, Detroit, Mich.
FRIDAY, JUNE 8—MORNING SESSION.
- EXHIBITION OF SPECIMENS AND NEW INSTRUMENTS.
31. A Recording Electric Perimeter.
WM. M. SWEET, Philadelphia.
Discussion opened by H. O. REIK, Baltimore, Md.
32. Treatment of Immature Cataract with Special Reference to Rate of Development and Such Measures as May Check it.
G. E. DE SCHWEINITZ, Philadelphia.
Discussion opened by JOHN E. WEEKS, New York City; ABNER W. CALHOUN, Atlanta, Ga.; and SAMUEL D. RISLEY, Philadelphia.
33. Report of Cases: a. Injury of the Eye, Iridocyclitis, Enucleation, Death from Meningitis. b. Case of Exophthalmus Due to Septic Thrombosis (?) Evisceration of Orbital Contents—Cure.
EDW. J. BERNSTEIN, Baltimore, Md.
34. Paresis of External Recti Associated with Irregular Tabes.
G. ORAM RINO, Philadelphia.
Discussion opened by SAMUEL D. RISLEY, Philadelphia.
35. Glioma of Retina.
G. A. SULZER, Portsmouth, Ohio.
Discussion opened by G. E. DE SCHWEINITZ, Philadelphia.
36. Hemorrhagic Glaucoma.
W. C. POSEY, Philadelphia.
Discussion opened by CHAS. A. OLIVER, Philadelphia.
37. Ocular Complications of Injuries to the Head. With Report of Two Cases.
J. T. CARPENTER, Philadelphia.
Discussion opened by H. T. HANSELL, Philadelphia.
38. Blindness from Drinking Jamaica Ginger: Recovery.
EDWARD STIEREN, Pittsburg Pa.
Discussion opened by R. L. RANDOLPH, Baltimore, Md.
39. Case of Extensive Laceration of External Ocular Muscles with Resultant Diplopia. Spontaneous Recovery.
40. Clinical Lessons of 200 Cases of Hyperphoria.
WENDELL REBER, Philadelphia.
4. Care of Higher Grades of the Feeble-Minded.
A. W. WILMARTH, Chippewa Falls, Wis.
5. A Study of the Circulation in the Feeble-Minded.
J. MADISON TAYLOR and F. SAVARY PEARCE, Philadelphia.
6. Infantile Cerebral Palsies.
A. C. COTTON, Chicago.
Discussion by WM. M. LESZYNSKY, New York City; I. N. LOVE, St. Louis, Mo.; W. S. CHRISTOPHER, Chicago; JOHN S. MUSSER, DE FORREST WILLARD, and F. X. DER-CUM, Philadelphia; H. N. MOYER, Chicago; LOUIS FAUGERES BISHOP, New York City; J. P. CROZER GIFFITH, Philadelphia.
TUESDAY, JUNE 5—AFTERNOON SESSION.
- SESSION DEVOTED TO CONSIDERATION OF DISEASES OF THE BLOOD AND THE CIRCULATION.
7. Antecedents of Valvular Heart Disease in Children.
FREDERICK A. PACKARD, Philadelphia.
8. Purpura Hemorrhagica or Scorbutus: A Clinical Sketch.
HENRY E. TULEY, Louisville, Ky.
SAMUEL E. WOODY, Louisville, Ky.
9. Rheumatism.
J. CLEMENTS, Kansas City, Mo.
10. Chorea.
G. M. BLECH, Chicago.
11. Medicinal and Surgical Treatment of So-Called Scrofula.
G. M. BLECH, Chicago.
12. Essential Points of Difference in Treatment of Adolescent Senile Heart.
JOHN A. ROBISON, Chicago.
13. Abortive Treatment of Pneumonia.
HENRY ILLOWAY, New York City.
Discussion on Pneumonia by EWD. F. WELLS, Chicago.
Discussion opened by ALFRED STENGL, Philadelphia; S. SOLIS-COHEN, Philadelphia; EDWIN E. GRAHAM, and S. S. ADAMS, Washington, D. C.; J. J. MORRISSEY, New York City.
14. Value of Blood Examinations for Diagnostic Purposes.
J. BRANDEIS, New York City.
15. Diabetes Mellitus in Children: Report of Two Cases.
LEOPOLD F. HAAS, New York City.
WEDNESDAY, JUNE 6—MORNING SESSION.
- SESSION DEVOTED TO THE CONSIDERATION OF INFANT FEEDING AND TO DISEASES OF DIGESTIVE TRACT.
16. Milk Supply and Control at the Kaiserin Friedrich Hospital.
ADOLF BAGINSKY and PAUL SOMMERFELD, Berlin.
Read by LOUIS FISCHER, New York City.
17. Infant Feeding.
ALEXANDER McALISTER, Camden, N. J.
Discussion opened by HENRY D. CHAPIN, New York City; VICTOR C. VAUGHAN, Ann Arbor, Mich.; and WILLIAM LELAND STOWELL, New York City.
19. Gastrointestinal Hemorrhage in the New-Born.
EDWARD H. SMALL, Pittsburg, Pa.
18. Infant Feeding; Accidents and Incidents.
WM. F. NORTHRUP, New York City.
20. Causation and Relative Frequency of Typhlitis, Perityphlitis and Appendicitis in Infancy and Childhood.
JOSEPH N. BYRNE, New York City.
21. Differential Diagnosis Between Abdominal Typhoid and Appendicitis, by Means of Iodin Reaction: Report of Case.
S. WEISS, Vienna.
22. Congenital Malformation of Rectum. A Case of Maternal Impression.
THOMAS CHARLES MARTIN, Cleveland, Ohio.
23. Athresia Infantum; Diagnosis and Treatment.
LOUIS FISCHER, New York City.
24. New Home Milk Modifier: Demonstration.
25. Clinical Significance of Stools in Diarrhea of Infants.
WILLIAM E. DARNALL, Atlantic City, N. J.
WEDNESDAY, JUNE 6—AFTERNOON SESSION.
- SESSION DEVOTED TO CONSIDERATION OF CONTAGIOUS DISEASE.
26. Shall Children be Kept from Measles and Exanthemata Usually Incident to Children?
C. F. WAHREER, Fort Madison, Iowa.
27. Rötheln, A Distinct Affection Apart from Measles and Scarlatina, and Its Differentiation from These Exanthemata.
HENRY KOPLIK, New York City.
28. Clinical and Pathologic Study of Rash of Scarlet Fever, with Especial Reference to Origin and Character of Desquamation.
JAY F. SCHAMBERG, Philadelphia.

SECTION ON DISEASES OF CHILDREN.

TUESDAY, JUNE 5—MORNING SESSION.

1. Address of Chairman. EDWIN ROSENTHAL, Philadelphia.
SESSION DEVOTED TO CONSIDERATION OF FEEBLE-MINDED AND TO NERVOUS DISEASES.
2. Etiology of Idiocy and Imbecility.
MARTIN W. BARR, Elwyn, Pa.
3. Physiologic Training of Feeble-Minded.
S. J. FORT, Ellicott City, Md.

29. Differential Diagnosis of Influenza with Eruptions, and Infectious Diseases of Childhood.
A. S. DANIEL, New York City.

30. Fetal and Infantile Typhoid.

JNO. LOVETT MORSE, Boston.
JOSEPH TRUMPP, Munich.

Read by the SECRETARY.

32. Resulting Injuries Due to Extubation.

JANOS BOKAY, Budapest.
Read by ALEXANDER KLEIN, Philadelphia.

33. Treatment of Ear Complications in Measles, Diphtheria and Scarlet Fever. CHARLES W. HOOPES, Philadelphia.
Discussion by WM. M. WELCH, W. C. HOLLOWETER, S. SOLIS-COHEN, Philadelphia; LOUIS FISCHER, WM. P. NORTHRUP and DILLON BROWN, New York City.

THURSDAY, JUNE 7—AFTERNOON SESSION.

SESSION DEVOTED TO CONSIDERATION OF SCHOOL CHILDREN.

34. Symmetrical Development; or, Does Our Present School System Develop the Highest Powers of the Child?
E. STUVER, Fort Collins, Colo.

35. School Break-Downs.

J. HENRY BARTLETT, Philadelphia.

36. Eye Strain. THOMAS H. FENTON, Philadelphia.

37. Care of Ear in School Children.

LOUIS J. LAUTENBACH, Philadelphia.

38. Neglect of Teeth in Children.

A. D. ROSENTHAL, New York City.

39. Physician's Responsibility in Physical Education of School Children. GRACE E. SPIEGLE, Philadelphia.
Discussion by F. X. DERGUM, Philadelphia; C. F. WAHBER, Fort Madison, Iowa.

FRIDAY, JUNE 8—MORNING AND AFTERNOON SESSIONS.
SESSION DEVOTED TO SURGICAL SUBJECTS.

40. Movable Kidney (Floating) in Children.

ISAAC A. ABT, Chicago.

41. Symptomatology of Appendicular Inflammation in Children. THOMAS H. MANLEY, New York City.

42. Normal Salt Transfusion in New-Born for Hemorrhage from Cord. JOHN S. MILLER, Philadelphia.

43. Some Joint Diseases in Children; Their Diagnosis and Treatment. EDWARD A. TRACY, South Boston, Mass.

44. Diseases of Antrum of Highmore in Young Children, with Report of Case. EMIL MAYER, New York City.

45. Surgical Circumcision: Its Technique; Prevention of Infection; Its Legal Control; Should be Performed by None but Physicians.
FERD. C. VALENTINE, New York City.

SECTION ON STOMATOLOGY.

TUESDAY, JUNE 5—AFTERNOON SESSION.

Address of Chairman. EUGENE S. TALBOT.

SYMPOSIUM ON DENTAL EDUCATION.

1. Relations of Dental and Oral Surgery to General Medicine: Professional Status of Properly Educated Practitioners of Dental and Oral Surgery.

N. S. DAVIS, SR., Chicago.

2. Preliminary Qualifications. J. TAFT, Cincinnati, Ohio.

3. Course of Study. W. A. EVANS, Chicago.

4. Methods of Teaching—Didactic or Recitational.

A. H. PECK, Chicago.

WEDNESDAY, JUNE 6—MORNING SESSION.

5. Shall the Dental Student be Educated Independently of General Medicine? G. V. I. BROWN, Milwaukee, Wis.

6. Is Medical Education a Necessary Qualification for Dental Practice? ALICE STEEVES, Chicago.

7. Is Medical Education a Necessary Qualification for Dental Practice? R. R. ANDREWS, Cambridge, Mass.

8. Practical Value of a Medical Education in Dental Practice. W. B. HILL, Milwaukee, Wis.

9. Technical Training versus Theoretic. JOHN S. MARSHALL, Chicago.

WEDNESDAY, JUNE 6—AFTERNOON SESSION.

10. Should the Medical Undergraduate be Instructed in the Principles of Dentistry? M. L. RHEIN, New York City.

11. Post-Graduate Study in Dentistry and Degrees Thereof. W. E. WALKER, Pass Christian, Miss.

12. The Handwriting on the Wall: What does it Portray? A. E. BALDWIN, Chicago.

13. Limitations. EUGENE S. TALBOT, Chicago.

THURSDAY, JUNE 7—MORNING SESSION.

SYMPOSIUM ON INTERSTITIAL GINGIVITIS OR SO-CALLED PYORRHEA ALVEOLARIS.

14. Etiology. G. LENOX CURTIS, New York City.

15. Neurotic Affections. J. G. KIERNAN, Chicago.

16. Indigestion Antointoxication. EUGENE S. TALBOT, Chicago.

17. Chemical Factors in Etiology. W. L. BAUM, Chicago.

18. Constitutional Treatment. J. H. SALISBURY, Chicago.

THURSDAY, JUNE 7—AFTERNOON SESSION.

19. Local Treatment. M. H. FLETCHER, Cincinnati, Ohio.

20. So-Called Glands in the Peridental Membrane. M. H. FLETCHER, Cincinnati, Ohio.

21. Evolution of Decay Continued.

ARCH C. HART, San Francisco, Cal.

22. Co-operation of Public Schools in Teaching. Good Teeth, Good Health. Whatever We Wish to See Introduced Into the Life of a Nation Must First Be Introduced Into Its Schools. RICHARD GRADY, Baltimore, Md.

23. Oral Surgical Operations. G. V. I. BROWN, Milwaukee, Wis.

SECTION ON NEUROLOGY AND MEDICAL JURISPRUDENCE.

The Hotel Brighton will be headquarters of this Section, and the meetings will be held there. There will be no morning sessions unless necessary for completion of the program.

TUESDAY, JUNE 5—AFTERNOON SESSION.

1. Address of Chairman. HUGH T. PATRICK, Chicago.

2. Report of Eight Operations for Brain Tumors and Cysts. HERM. H. HOPPE, Cincinnati, Ohio.

3. Diagnosis of Apoplexy Without Motor Paralysis.

WILLIAM N. BULLARD, Boston.

4. A Case Resembling one of Raynaud's Disease, With Microscopic Examination. WILLIAM G. SPILLER, Philadelphia.

5. Legal Responsibility of Degenerates not Insane.

DAVID INGLIS, Detroit, Mich.

6. Therapeutics of Travel and Change of Scene in Nervous and Mental Diseases. RICHARD DEWEY, Chicago.

7. Post-febrile Insanity and Its Treatment.

FRANK P. NORBURY, Jacksonville, Ill.

8. Cranial Injuries and Insanity, with Report of Case.

EUGENE G. CARPENTER, Columbus, Ohio.

9. Medicolegal Relations of Opium Inebriety.

T. D. CROTHERS, Hartford, Conn.

10. Morphism from the Standpoint of the General Practitioner. T. J. HAPPEL, Trenton, Tenn.

WEDNESDAY, JUNE 6—AFTERNOON SESSION.

11. The Nervous Diseases Caused by Trauma.

CHAS. W. BURB, Philadelphia.

12. Nature and Symptomatology of Traumatic Neuroses.

HAROLD N. MOYER, Chicago.

13. Traumatic Neuroses from the Standpoint of a Railway Surgeon. ARTHUR DEAN BEVAN, Chicago.

14. Medicolegal Relations of Traumatic Nervous Affections.

JAMES HENDRIE LLOYD, Philadelphia.

15. An Analysis of Cases of Traumatic Neuroses with Special Reference to Prognosis.

JAMES JACKSON PUTNAM, Boston.

16. Prognosis and Treatment of Traumatic Neuroses.

WHARTON SINKLER, Philadelphia.

- Discussion opened by DANIEL R. BROWER, HERM. H. HOPPE, and FRANCIS X. DERGUM.

17. Treatment of Neurasthenia.

DANIEL R. BROWER, Chicago.

18. Some Methods of Treating Neuralgia.

W. J. HERDMAN, Ann Arbor, Mich.

19. Modern Treatment of Locomotor Ataxia.

CURRAN POPE, Louisville, Ky.

20. Subject Unannounced.

FRANCIS X. DERGUM, Philadelphia.

THURSDAY, JUNE 7—AFTERNOON SESSION.

2 o'clock.

21. Diagnosis of Hysteria from Organic Disease of the Brain.
CHAS. K. MILLS, Philadelphia.
22. Diagnosis of Hysteria from Organic Disease of the Spinal Cord and Peripheral Nerves.
FREDERICK PETERSON, New York City.
23. General Treatment of Hysteria.
B. SACHS, New York City.
24. Technique of the "Rest Cure," with Indications and Contraindications for its Use.
JOHN K. MITCHELL, Philadelphia.
Discussion to be opened by C. W. BUEB, JOHN PUNTON, WILLIAM G. SPILLER and W. J. HERDMAN.
25. Differentiation of Chorea and Disorders Simulating It.
A. A. ESHNER, Philadelphia.
26. Prophylaxis of Chorea.
J. MADISON TAYLOR, Philadelphia.
27. On a Certain Routine Treatment for Gouty Conditions.
FRANK R. FRY, St. Louis, Mo.
28. Combined Sclerosis of the Lichtheim-Putnam-Dana Type Accompanying Pernicious Anemia.
F. W. LANGDON, M. A. BROWN and D. I. WOLFSTEIN, Cincinnati, Ohio.
29. Aphasia: Report of Case.
GUY MINSDALE, Philadelphia.

FRIDAY, JUNE 8—AFTERNOON SESSION.

2 o'clock.

30. Subject Unannounced.
J. HENDRIE LLOYD, Philadelphia.
31. Migraine, with the Consideration of Heredity.
D. J. MCCARTHY, Philadelphia.
32. Case of Gastric Vertigo Closely Simulating Meière's Disease.
G. W. MCCASKEY, Fort Wayne, Ind.
33. Evolutional and Involutional Types of Nervous Disease.
ED. E. MAYER, Pittsburg, Pa.
34. Effect of Alcohol on the Nervous System.
ALBERT E. STERNE, Indianapolis, Ind.
35. Case of Transient Motor Aphasia. Complete Anomia, Nearly Complete Aphasia and Slight Word-Blindness, Occurring in a Left-Handed Man, and Due to a Probable Lesion of the Third Frontal Convolution of the Right Side.
CHAS. S. POTTS, Philadelphia.
36. Hereditary Color-Blindness.
F. SAVARY PEARCE, Philadelphia.
37. Pathophobia as an Element of Nervous Diseases and its Treatment.
JOHN PUNTON, Kansas City, Mo.
38. Post-Anesthetic Paralysis.
C. C. HERSMAN, Pittsburg, Pa.
39. The Insanities.
WILLIAM FRANCIS DREWRY, Petersburg, Va.
40. The Simplest Explanation of the Functions of the Nervous System.
G. W. DRAKE, Hollins, Va.
41. Drug Habits.
A. J. PRESSEY, Cleveland, Ohio.
42. A Study of Cerebral Syphilis, with Report of Case.
JAS. H. MCBRIDE, Pasadena, Cal.
43. Case of Gastric Vertigo Closely Simulating Meière's Disease.
G. W. MCCASKEY, Fort Wayne, Ind.

SECTION ON CUTANEOUS MEDICINE AND SURGERY.

TUESDAY, JUNE 5—AFTERNOON SESSION.

3 o'clock.

1. Address of Chairman: "Recent Advances in Dermatology Which are of Service to the General Practitioner."
L. DUNCAN BULKLEY, New York City.
2. Treatment of Skin Cancers.
LOUIS A. DUHING, Philadelphia.
3. An Additional Note on Herpes Gangrenosus.
A. W. BRAYTON, Indianapolis, Ind.
4. A Peculiar Progressive Pigmentary Disease of the Skin.
JAY F. SCHAMBERG, Philadelphia.
5. Report of Four Cases of Lupus Vulgaris Treated with X-Rays.
WILLIAM B. EWING, Pittsburg, Pa.

WEDNESDAY, JUNE 6—AFTERNOON SESSION.

6. Leucopathia Ungium; Some Etiologic and Pathologic Considerations.
M. L. HEIDINGSFELD, Cincinnati, Ohio.
7. Syphilis as a Nonvenereal Disease.
L. DUNCAN BULKLEY, New York City.
8. Successful Treatment of Skin Cancers Without Operation.
HENRY W. STELWAGON, Philadelphia.
9. Xeroderma Pigmentosum (With Lantern Slide Illustrations).
A. RAVOGLI, Cincinnati, Ohio.
10. Syphilitic Gumma of Larynx.
EDWARD T. DICKERMAN, Chicago.

THURSDAY, JUNE 7—AFTERNOON SESSION.

11. Acute Suppurative Folliculitis of Scalp.
WILLIAM S. GOTTHEIL, New York City.
12. Diagnosis and Treatment of Pruritus Essentialis.
FRED J. LEVISEUR, New York City.
13. Clinical Study of Pityriasis Versicolor and Pityriasis Rosea.
CHARLES W. ALLEN, New York City.
14. Pemphigus of Mucous Membrane of Mouth.
WILLIAM L. BAUM, Chicago.
15. Some of the Rarer Skin Manifestations of Syphilis.
J. A. FORDYCE, New York City.
16. Treatment of Syphilis: General Discussion.

SECTION ON LARYNGOLOGY AND OTOTOLOGY.

TUESDAY, JUNE 5—AFTERNOON SESSION.

2 o'clock.

1. Address of Chairman.
CHRISTIAN R. HOLMES, Cincinnati, Ohio.
2. Address on Laryngology and Its Relation to General Medicine. (By Invitation.)
J. SOLIS-COHEN, Philadelphia.
3. Import of Bacteria As Found in the Ear, Nose and Throat.
D. BRADEN KYLE, Philadelphia.
4. Comminution of Thyroid Cartilages Due to a Bullet Whose Point of Entrance Was in the Frontal Bone.
EMIL MAYER, New York City.
5. Papilloma of Larynx.
E. T. DICKERMAN, Chicago.
6. Unusual Papillomatous Growth in Larynx.
JAS. S. GIBBS, Philadelphia.
7. Angina Epiglottida Anterior.
C. F. THEISEN, Albany, N. Y.
8. Care and Use of Instruments.
A. DEVILBISS, Toledo, Ohio.
9. Embryonic Defects of Nose, Throat and Ear and Their Causes, with Lantern Exhibition.
GEO. C. STOUT, Philadelphia.

WEDNESDAY, JUNE 6—MORNING SESSION.

9 o'clock.

10. The Atrophic Pharynx.
R. W. SEISS, Philadelphia.
11. Present Status of Antitoxin Treatment.
S. J. ALLEN, Cincinnati, Ohio.
12. Some Experiments on Relation Between Audition and Circulation of Blood.
H. STILLSON, Seattle, Wash.
13. Some Points in Diagnosis of Syphilis of Upper Air-Passages.
GEO. L. RICHARDS, Fall River, Mass.
14. Remarks on Internal and External Operations for Chronic Frontal Sinusitis.
R. C. MYLES, New York City.
15. Hysterical Deafness, with Report of Cases.
A. E. BULSON, JR., Fort Wayne, Ind.
16. Ear Diseases in Childhood and Infancy.
J. HOMER COULTER, Chicago.
17. Value of Enzymol in Treatment of Acute and Chronic Purulent Affections of Mastoid, Tympanic and Accessory Cavities, Based on Bacteriologic Study of Fifty Cases.
TALBOT R. CHAMBERS, Jersey City, N. J.
18. Notes on Two Cases of Voluntary Laryngeal Whistling.
G. HUDSON MARUEN, Philadelphia.

WEDNESDAY, JUNE 6—AFTERNOON SESSION.

2 o'clock.

SYMPOSIUM ON INFLAMMATION OF MASTOID.

19. Tympanomastoiditis in Children. (By Invitation.)
HERMAN KNAPP, New York City.
20. Complications of Mastoid Abscess.
C. W. RICHARDSON, Washington, D. C.

21. Some Observations in Mastoid Operations.
A. W. CALHOUN, Atlanta, Ga.
 22. Primary Tuberculosis of the Mastoid.
M. A. GOLDSTEIN, St. Louis, Mo.
 23. Report of Three Cases of Ligation of Internal Jugular for Septic Thrombosis, Following Purulent Otitis Media: Recovery.
E. B. DENCH, New York City.
 24. Suppurating Mastoiditis, with Report of Cases.
J. H. BRYAN, Washington, D. C.
General discussion on the Symposium, opened by FRED WHITING, New York City.
 25. Limitation of Ossiculectomy and Tympanic Curettement.
FRANK ALLPORT, Chicago.
 26. Bony Defects and Fistulae in the Meatus in the Ear.
H. GRADLE, Chicago.
 27. Accessory Sinus Affections.
E. L. VANSANT, Philadelphia.
 28. Enlarged Lingual Tonsil: Report of Case.
FRANK D. BOYD, Fort Worth, Texas.
THURSDAY, JUNE 7—MORNING SESSION.
9 o'clock.
 29. Sarcoma of Nasal Passages: Report of Cases.
DUNBAR ROY, Atlanta, Ga.
 30. Untoward Sequence of Adenoid Operations.
E. L. SHURLY, Detroit, Mich.
 31. Various Forms of Nasal Hemorrhage.
W. SCHEPPEGREL, New Orleans, La.
 32. General Bodily Resistance as a Factor in History and Cure of Nose and Throat Diseases.
F. L. STILLMAN, Columbus, Ohio.
 33. Limitation of Laryngologist in General Treatment of Nose and Throat Diseases.
H. W. LOEB, St. Louis, Mo.
 34. Treatment of Atrophic Rhinitis by Electrolysis and Some Experiments to Determine Efficiency of Needles of Different Metals.
CAROLUS M. COBB, Lynn, Mass.
 35. Treatment of Deflection of Nasal Septum, Complicated by Traumatic Deformity of External Bony and Cartilaginous Framework of Nose.
E. B. GLEASON, Philadelphia.
 36. Neuroses of Larynx.
J. F. WOODWARD, Norfolk, Va.
 37. Cough Due to Reflex Irritation in Upper Air-Passages.
F. H. S. MILBURY, Brooklyn, N. Y.
 38. Immunizing Treatment of Hay-Fever.
HOLBROOK H. CURTIS, New York City.
THURSDAY, JUNE 7—AFTERNOON SESSION.
2 o'clock.
 39. Ocular Expression of Intranasal Lesions.
ROBERT SATTLER, Cincinnati, Ohio.
 40. Systemic Factors in Catarrhal Deafness.
SARGENT F. SNOW, Syracuse, N. Y.
 41. Diagnosis and Prognosis of Ear Disease.
B. ALEXANDER RANDALL, Philadelphia.
 42. Unusual Ocular Symptoms Following Removal of Septal Spurs.
J. L. GOODALE, Boston.
 43. Lithemia from Otorhinologic Point of View.
CHEVALIER JACKSON, Pittsburg, Pa.
 44. Aural Manifestations of Hysteria.
NOBYAL H. PIERCE, Chicago.
 45. Fistula Auris Congenita. Operation and Important Complications.
JOHN O. McREYNOLDS, Dallas, Texas.
 46. Laryngeal Tuberculosis at Montefiore Home, New York City.
W. FREDENTHAL, New York City.
 47. Operation for Disease of Middle Ear.
W. F. COLE, Waco, Texas.
 48. Modus of Infection of Maxillary Sinus.
M. H. CRYER, Philadelphia.
 49. Nasopharyngeal Growth from Non-Use of Nose.
NOBBURNE B. JENKINS, Chicago.
- SECTION ON MATERIA MEDICA, PHARMACY AND THERAPEUTICS.
- TUESDAY, JUNE 5—AFTERNOON SESSION.
2 o'clock Sharp.
1. Address of Chairman. LEON L. SOLOMON, Louisville, Ky.
 2. Treatment of Acute Alcoholism by Large Doses of Digitalis. A Clinical Study Based on Cases in the Alcoholic Wards of Bellevue Hospital.
HENRY P. LOOMIS, New York City.
 3. Some Dangers from the Use of Narcotics in Young Persons.
T. D. CROTHERS, Hartford, Conn.
 4. Plea for Greater Simplicity in Therapeutics.
L. FAUGERES BISHOP, New York City.
 5. Neglect of Old Remedies.
HERSCHEL FISCHER, Lebanon, Ohio.
 6. Therapeutic Progress.
J. TRACY MELVIN, Saguache, Colo.
 7. Therapeutic Skepticism.
H. V. SWERINGEN, Fort Wayne, Ind.
Discussion by DRs. N. S. DAVIS, JR., Chicago; HENRY LOOMIS, New York City, and FRANK WOODBURY, Philadelphia.
 8. Diabetic Treatment of Diabetes. N. S. DAVIS, JR., Chicago.
 9. a. Coma Diabeticum and its Treatment. b. The Milk Régime in the Diabetic State.
HEINRICH STERN, New York City.
Discussion by DRs. F. L. SHATTUCK, Boston, Mass.; CHAS. LYMAN GREENE, St. Paul, Minn.; O. T. OSBORNE, New Haven, Conn.; N. P. BARNES, Washington, D. C.
WEDNESDAY, JUNE 6—MORNING SESSION.
9 o'clock Sharp.
 10. Brief Note on Ointments and Some of Their Medical Applications. The Intraleiptic Method of Treatment.
FRANK WOODBURY, Philadelphia.
 11. Present Views on Use of Unbroken Skin as an Absorbing Medium.
THOMAS F. RELLY, New York City.
Discussion by DRs. J. V. SHOEMAKER, Philadelphia; GEO. F. BUTLER, Alma, Mich.; H. A. HARE, Philadelphia; G. C. OBER, Washington, D. C.
 12. The Metric System.
F. G. WHEATLEY, N. Abington, Mass.
 13. Treatment of Migraine.
E. W. MITCHELL, Cincinnati, Ohio.
 14. Value of Potassium Bicarbonate in Practice.
STEPHEN HARNSEBERGER, Catlett, Va.
 15. Organic or Inorganic Preparations of Iron.
H. FINKELPEARL, Pittsburg, Pa.
 16. Idiosyncrasy Against Mercury. A Case of Erythema Mercuriale.
A. BERNHEIM, Philadelphia.
 17. Report of Case Illustrating Value of Rectal Injections of Salt Solution in Hemorrhage.
T. B. GREENLEY, Meadow Lawn, Ky.
 18. Hydratic Treatment of Chronic Disorders.
J. H. KELLOGG, Battle Creek, Mich.
WEDNESDAY, JUNE 6—AFTERNOON SESSION.
2 o'clock Sharp.
 19. Role of Drugs in the Management of Consumption.
S. SOLIS-COHEN, Philadelphia.
 20. Importance of Early Recognition of Tuberculosis.
A. M. HOLMES, Denver, Colo.
Discussion by DRs. WM. H. THOMPSON, New York City; J. N. UPSHUR, Richmond, Va.; HENRY P. LOOMIS, New York City.
 21. Treatment of Chronic Interstitial Nephritis.
CHAS. LYMAN GREENE, St. Paul, Minn.
 22. Heart Tonics.
J. N. UPSHUR, Richmond, Va.
 23. Treatment of Gastric and Duodenal Ulcer.
F. L. SHATTUCK, Boston, Mass.
 24. Some Points in Treatment of Gastric Ulcer.
D. D. STEWART, Philadelphia.
 25. Classification of Medicines Based on the Time Required to Produce Their Effects.
WM. H. THOMPSON, New York City.
Discussion by DRs. H. A. HARE, Philadelphia; G. F. BUTLER, Alma, Mich.; J. V. SHOEMAKER, Philadelphia, and WM. BAILEY, Louisville, Ky.
 26. Therapeutics of Vertigo.
J. LEONARD CORNING, New York City.
Discussion by DRs. J. H. MUSSER, Philadelphia; D. R. BROWER, Chicago; J. C. CULBERTSON, Cincinnati, Ohio; SAMUEL C. BUSEY, Washington, D. C.

27. Use of Adhesive Plaster in Various Internal Conditions.
J. H. MUSSE, Philadelphia.
THURSDAY, JUNE 7—MORNING SESSION.
28. Therapeutics of Croupous Pneumonia.
J. M. ALLEN, Liberty, Mo.
29. Therapy of Malignant Cases of Acute Infections.
J. C. LANGE, Pittsburg, Pa.
30. Increasing the Value of Cod-liver Oil by the Addition of Free Iodin and Free Phosphorus.
LOUIS J. LAUTENBACH, Philadelphia.
31. Action of Chlorolose as a Hypnotic.
JAMES TYSON, Philadelphia.
32. Gastro-Intestinal Remedies in Typhoid Fever.
J. M. ANDERS, Philadelphia.
Discussion by DRs. FRANK BILLINGS, Chicago; J. C. LANGE, Philadelphia; J. M. TYSON, Philadelphia; and F. P. MORGAN, Washington, D. C.
33. Chills from Obscure Causes.
M. C. O'BRIEN, New York City.
THURSDAY, JUNE 7—AFTERNOON SESSION.
34. Irrigation of the Colon as a Therapeutic Measure.
GEO. J. LOCHROEHLER, Washington, D. C.
35. Pharmaco-Physiologic Action of Drugs as Contrasted with Their Alleged Specific Action.
GEO. F. BUTLER, Alma, Mich.
Discussion by DRs. J. M. ANDERS, Philadelphia; O. T. OSBORNE, New Haven, Conn.; C. D. SPIVAK, Denver, Colo.
36. Therapeutic Application of Organic Extracts.
O. T. OSBORNE, New Haven, Conn.
37. Relative Value of Various Forms of Local Treatment in Erysipelas.
HOBART A. HARE, Philadelphia.
38. Psychic Therapeutics.
J. C. CULBERTSON, Cincinnati, Ohio.
39. Treatment of Addison's Disease, with Case.
JOHN V. SHOEMAKER, Philadelphia.
40. Lavage of Stomach as a Therapeutic Measure in Treatment of Constipation.
C. D. SPIVAK, Denver, Colo.
41. Protest Against the Use of Proprietary Remedies.
DANIEL R. BROWER, Chicago.
42. Symposium on New Remedies, Including Their Chemistry and Therapeutic Application.
J. W. WALNWRIGHT, New York City.
FRIDAY, JUNE 8—MORNING SESSION.
43. Decadence of the Crude Drugs.
LUCIUS E. SAYRE, Lawrence, Kan.
44. Pharmacologic Assay of Drugs and its Importance in Therapeutics.
E. M. HOUGHTON, Detroit, Mich.
45. What Standardization Means for the Physician.
A. R. L. DOHME, Baltimore, Md.
46. The United States Pharmacopeia of 1900.
JOS. P. REMINGTON, Philadelphia.
47. The Pharmacopeia, The Medical Journal and the Profession.
A. L. BENEDICT, Buffalo, N. Y.
48. Pharmacology and Ethics.
F. E. STEWART, New York City.
Discussions by DRs. H. C. WOOD, Philadelphia; G. F. BUTLER, Alma, Mich.; H. A. HARE, Philadelphia; CHAS. RICE, New York City; J. V. SHOEMAKER, Philadelphia; O. T. OSBORNE, New Haven, Conn.; J. M. ANDERS, Philadelphia.
4. Food in Health and Disease. E. BRIGGS, Wilmington, Ohio.
9. Dietetic Treatment of Typhoid Sequelæ in Children.
HUGH F. LORIMER, Fair Haven, Ohio.
10. The Progression of an Entity.
E. G. BERGEN, Washington, N. J.
11. Life and Its Association with Matter; Matter not Vital but Absolutely Chemical.
E. C. HIEBBARD, Boston.
12. Post-Operative Nervous Phenomena, or Artificial Menopause.
JOSEPH PRICE, Philadelphia.
13. Is it Possible by Proper Dietsics and Hygiene to Exterminate Tuberculosis.
J. E. KINNEY, Denver, Colo.
14. Modern Covering of Foot as Affecting its Physiologic Action.
AUGUSTUS P. CLARKE, Cambridge, Mass.
15. Poisoning from Auto-Intoxications.
T. D. CROTHERS, Hartford, Conn.
16. When Should Patients be Advised to Eat Everything.
BOARDMAN REED, Philadelphia.
17. Synthesis of Cataract by Food.
EPHRAIM CUTTER, New York City.
18. Physiologic Explanation of Pharmacology.
ELMER F. GOULD, Carthage, Mo.
19. Solids of Skimmed Milk as a Food Product.
WILLIAM A. HALL, New York City.
20. Physiologic Care of Colds.
CHARLES H. SHEPARD, Brooklyn, N. Y.
21. Contribution to Methods of Physiologic Training.
ELMER GATES, Chevy Chase, Md.
22. Bone Food.
B. T. WHITMORE, New York City.
23. Alcohol; Is it a Food or Drug?
A. T. CUZNER, Gilmore, Fla.
DR. CRAWFORD.

PROVISIONAL SECTION ON PATHOLOGY.

Program Prepared by Unofficial Committee on Pathologic Section. L. Hektoen, Chairman.

1. Hemorrhagic Infection in an Infant, due to the Typhoid Bacillus.
GEORGE BLUMER, Albany, N. Y.
2. Effect of Direct, Alternating and Tesla Currents on Bacteria.
F. ROBERT ZEIT, Chicago.
3. Pathologic Alterations of Mucous Membranes of Upper Respiratory Tract Following La Grippe.
D. BRADEN KYLE, Philadelphia.
4. Bacterial Toxins.
VICTOR C. VAUGHAN and THOMAS B. COOLEY, Ann Arbor, Mich.
5. Morphologic Variations in Pathogenic Bacteria, with Two Pronounced Examples.
A. P. OHLMACHER, Gallipolis, Ohio.
6. Morbid Anatomic and Bacteriologic Features of Case of Acute Gangrenous Cholecystitis.
W. G. LIST, Gallipolis, Ohio.
7. Advantages of a Museum in the Education of Medical Students.
D. HUNTER McALPIN, New York City.
8. Classification for Pathologic Museums.
H. C. GILLAM and L. HEKTOEN, Chicago.
9. Animal Pathology in Relation to Public Health.
D. E. SALMON, Washington, D. C.
10. Tenia Flavopunctata, with Exhibition of Complete Specimen.
FREDERICK A. PACKARD, Philadelphia.
11. Pathologic Formation of Corpus Luteum Tissue.
LEO LOEB, Chicago.
12. Report of Case of Mixed Tumor of Kidney (Adeno-cysto-myx-angio-rhabdo-myo-sarcoma).
W. T. HOWARD, JR., Cleveland, Ohio.
13. Report of Case of Angiosarcoma of Right Cerebral Hemisphere.
ROGERS G. PERKINS, Cleveland, Ohio.
14. Tumors of Intercarotid Gland.
W. L. BIERRING, Iowa City, Iowa.
15. Demonstration of Gross Lesions of Nervous System.
W. G. SPILLER, Philadelphia.
16. Histopathology of Tubal Pregnancy.
MAXMILIAN HERZOG, Chicago.
17. Demonstration of Photographs Illustrating Mental Diseases.
J. W. BLACKBURN, Washington, D. C.
1. Address of Chairman.
ELMER LEE, New York City.
2. Some Practical Points in Connection with the Physiology of Digestive Organs.
A. L. BENEDICT, Buffalo, N. Y.
3. Movements of Intestines.
A. BERNHEIM, Philadelphia.
4. Normal Respiration of the Still-Born.
DANIEL LICHTY, Rockford, Ill.
5. Some Dietetic Fallacies.
JOHN MADDEN, Milwaukee, Wis.
6. Some Observations on the Excretion of the Alloxuric Bodies.
MARK MILLIKIN, Hamilton, Ohio.
7. Properties Which are Possessed by all Foods in Their Relation to Nutrition, and the Relation of Alcohol to Nutrition.
WINFIELD S. HALL, Chicago.

SECTION ON PHYSIOLOGY AND DIETETICS.

ATLANTIC CITY MEETING



BRIGHTON CASINO.

THE special adaptability of Atlantic City for conventions is attributable to several very important facts. First, the weather during the Summer months is cool, and saline breezes from off the ocean are refreshing and delightful, when at other points it is sultry, stifling and altogether objectionable to large gatherings. Second, the spacious auditoriums, at the immediate disposal of large meetings, together with numerous and closely located hotel accommodation, are within so convenient a radius that personal communication may be had, at all hours, without loss of time or inconvenience to those who may desire to visit one or more of the various Section Meetings of the convention assembled.

ATLANTIC CITY'S ADVANTAGES.

As a meeting place for the AMERICAN MEDICAL ASSOCIATION, June 5-8, Atlantic City has, unquestionably, more advantages, socially and otherwise, than any other prominent point at which this worthy body could select to convene. The magnificent Boardwalk, directly upon which are the leading hotels, within a few moment's walk of the great Marine Hall, under the roof of which the main convention will assemble, affords the pleasure of passing to and from the various hostelries along the ocean front at an elevation such that the eye may cover the vast expanse of waters and the beautiful horizon in the distance, with the fresh breezes ever blowing from off the ocean. The Marine Hall, a thousand feet from shore, and directly over the sea waves, is one of the most modern and spacious auditoriums upon the American Continent. The seating capacity of the building is adequate, and the acoustics are of the very best. Visitors can see and hear from every portion of the vast hall, above and below, without the least inconvenience, whatsoever. The design of the great upper circles, provided with the latest and most convenient folding seats, is as perfect as art and mechanism can produce, and the entrances and exits are superb. While the roar of the breakers and surf may be heard for a considerable distance from the strand, there is absolutely not the least sound of the sea reaching the auditorium of the

Marine Hall, and ordinary addresses may be heard at every portion of the building as distinctly as at any inland room.

ARRANGEMENTS.

The Committee of Arrangements, together with the various hotel proprietors, has spared no pains to make this particular meeting an event in the annals of the city. Every conceivable plan to enhance the pleasure and comfort of the guests has been resorted to, and it is expected that not a moment's time will be lost, between business and recreation. It will be understood, however, that, although the Amusement and other Committees are prepared to entertain the visitors and their families in every conceivable manner, there will be no program of festivities during Convention or Section Meeting hours, to disturb the general and important routine of business. Everything is expected to give way to the all-absorbing object of the Association's Convention, which has been scheduled, that business and recreation may be delightfully interwoven during the brief sojourn of the members at the City-by-the-Sea.

HOTELS.

All hotels, halls and places of meeting are connected by phone, and an established ten-cent coach-fare will permit of easy access from point to point, where the Boardwalk is not used for passing from one ocean-front hotel to another.

TRANSPORTATION.

In the matter of transportation the Committee has arranged a one-and-one-third fare for the round-trip, to and from Atlantic City, covering any point of country from which members of the Association may desire to come. The following communication will lucidly explain; the particulars of which it might be well for members wishing to avail themselves of the opportunity to note as to the necessary names and data herein shown.

1. Tickets will be sold on *certificate* plan from May 30 to June 7, inclusive, for one fare and one-third for round trip. A *first-class one-way ticket, together with a properly filled certificate*, must be obtained at the starting-point.

2. The properly filled certificate—not a receipt—must be presented to Dr. W. Blair Stewart and the special agent on either June 6, 7, or 8, to be countersigned. This countersigned certificate will purchase a return ticket for one-third of one full fare, when presented to the proper offices here. Return ticket will be good up to and including June 22.

3. This reduced rate is good only where the fare one way amounts to 75 cents or over.

4. Any one neglecting to obtain the proper certificate at the starting-point or neglecting to have it countersigned on June 6, 7, or 8, will *positively be refused a return ticket except at full fare*.

With an extension of time, from May 30 to June 23, and the Convention proper closing on June 8, members can, if time and inclination warrant, remain at Atlantic City for a stated time, can visit Philadelphia the following week, during the National Republican Convention, or elsewhere before returning to their homes. The



THE INLET.

extension of time will also allow members to visit the alumni meetings and commencement exercises of the Philadelphia and New York Colleges, reached from Atlantic City by short railroad travel over the most modern tracks and in the most luxurious coaches of any railroad in America or on the European Continent.

ACCOMMODATIONS.

In the matter of hotel accommodation too much can not be said for Atlantic City. There is not to-day, at any one American resort, so many hotels, boarding cottages, and boarding-houses, as at Atlantic City. There is not at any other seaside resort a finer class of ocean-front hotels than are to be found at Atlantic City. They are spacious and elaborate, replete with every modern improvement and convenience, and are conducted by men of life-long experience. They are specially designed and built for comfort and sea observation, with broad and lengthy verandas for promenade and seating conveniences, and which, during the winter months are enclosed in glass casings, forming perfect sun parlors, from which the sight of the beauties of a winter storm upon the ocean may be enjoyed, as from the artificially heated apartment of a palatial home. At Atlantic City there is to be found none of the "flunkeyism" and "home-made tape" that abounds, alas, at too many resorts of the upper ten. The guests are charged, at a fixed price, for accommodation, and are provided with the most elaborate indoor amusement. Here the guest arrives at a plain, spacious railway station, where he may select his hotel coach, without hearing the least "barking" from the vehicle stand, quietly enter his carriage and be driven to his hotel, where he finds comfort from the moment he sets foot within the portals of the



establishment. "Polite service" is the motto of Atlantic City's hotels, and from the moment he registers he feels at home, and something like the freedom of the City of London to some distinguished ambassador permeates his whole system, and as he proudly passes from the luxurious dining-halls of his hotel to the Boardwalk, where delightful breezes fan his erstwhile heated brow, he carries with him a happy consciousness that he is as good as any other man—possibly a bit better.

Atlantic City can house and accommodate one million of persons. Outside the immediate Cottage Colony, where a large number of the leading business men and gentry of New York, Philadelphia, and other large cities reside during the summer months, almost every cottage is a boarding one, where at reduced rates the great overflow of humanity, at the busiest seasons, find excellent accommodation for long or short periods. There are absolutely and strictly first-class hostleries where luxury abounds to any extent, and there are hotels of less pretense, still first-class and most admirably conducted. There are still hotels of a lesser degree of accommodation at prices commensurate with the purses of their patrons, all of which are conducted with the utmost degree of civility and cleanliness. The hotel rates vary, of course, according to location and accommodation, and all are operated under the most exacting rules and regulations of municipal government.

HOSTELRIES.

There are more than a hundred really first-class hotels within ten or twelve squares' walk of the great Marine Hall, reached by the Boardwalk and its spacious avenues approaching the ocean. Two great telephone systems, with more than seventy-five miles of call wire, connect with every hotel, and easy-riding coaches transfer passengers from any point of the city to the convention hall for ten cents each. There are also trolley and automobile facilities of the latest and up-to-date convenience, and all at a regulated and low rate of fare. The hotels of Atlantic City are most elaborate and spacious, and are conducted by men of unquestionable experience and the hospitality and entertainment extended their guests are prominent among the features of the resort. Prices range from the very lowest resort charges known to but moderate ones for strictly first-class accommodation.



YACHTING AT INLET.

AMUSEMENT.

In the matter of diversity of amusement and pastime much has been arranged by the Committee for the recreation of the members and families of the A. M. A. between the hours of scientific meetings. The program of entertainment includes musicales at hotels, pier parties, short excursions by trolley, theatrical and musical evenings, and various Boardwalk entertainments that can not fail to impress the visitor with the fact that his trip to Atlantic City will be fraught with business and pleasure combined.



IRON PIER.

SCHEDULE OF RATES.

Appended are some of the most prominent hotels, for which the following rates have been handed the Committee on Entertainment:

NAME.	CAPACITY.	RATES PER DAY.	
		SINGLE.	DOUBLE.
Albemarle	350	\$2.50	\$4.00
Atglen	200	2.00	3.00—\$3.50
Avon Inn	200	2.50—3.50	4.00—6.00
Brexton	300	2.50	4.00
Brighton	300	3.50—6.00	8.00—12.00
Berkley	300	3.00	5.00
Belmont	300	3.00	5.00
Bleak House	300	3.00—5.00	5.00—6.00
Boscobel	150	2.50	4.00
Cornell Inn	200	2.00	6.00
Chalfonte	250	3.00—4.00	6.00—7.00
Canfield	50	2.00	4.00
Colonial	80	2.50	5.00
Dennis	425	3.00—5.00	6.00—10.00
DeVille	300	2.50—3.00	5.00—6.00
Edison	50	2.00	3.50
Garden	300	3.00—5.00	5.00—8.00
Grand Atlantic	600	3.00	6.00
Glaslyn	300	3.00	5.00
Holmhurst	300	3.00	5.00
Haddon Hall	450	3.00—5.00	6.00—10.00
Hotel Esmond	150	2.00—3.50	4.00—6.00
Irrington	200	2.00	4.00
Imperial	300	2.50—3.00	4.00—6.00
Iroquois	250	2.50—3.00	5.00—6.00
Lelande	250	2.50	4.50
Lorraine	200	2.00—3.50	4.00—6.00
Lorraine	250	3.00	5.00
Luray	400	3.00 up	6.00 up
LaBelle Inn	125	2.00—2.50	4.00—5.00
Morton	250	2.00—3.00	4.00—6.00
States Villa	65	2.50—3.00	4.00—5.00
Majestic	250	2.50—3.00	4.00—5.00
New England	350	3.00	5.00
Oriental	150	3.00	5.00
Ponce de Leon	300	2.50—3.00	5.00—6.00
Penhurst	150	2.50—3.00	5.00—6.00
Pierrepoint	350	3.00—4.00	5.00—6.00
Raleigh	300	2.50	4.00
Raymond	125	2.00	4.00
Runnymede	200	2.50	4.00
Revere	100	2.50	5.00
Roman	100	3.00—5.00	6.00—8.00
Rudolf	600	3.00—4.00	8.00
Richmond	250	2.50	4.00
Royal Palace	500	3.50 up	7.00 up
Sea Bright	100	2.00—2.50	4.00—5.00
Shelburne	350	3.00—4.00	6.00—7.00
St. Charles	325	3.50	6.00
Senate	250	3.00	5.00
Strand	250	2.50	5.00
Seaside House	300	3.00—4.00	6.00—8.00
Scarborough	250	3.00	5.00
Stickney	150	2.00	3.50
Traymore	400	3.50—5.00	7.00—10.00
Westminster	200	2.50	4.00
Wiltshire	300	2.50	4.00
Windsor	300	3.50 up	7.00 up

CHELSEA.

Board walk connects with Meeting Hall.	
Chelsea	400
Gladstone	300
Ravenroyd	85
St. John	125
Savoy	300

ATLANTIC CITY, N. J.

The event of the meeting of the AMERICAN MEDICAL ASSOCIATION at Atlantic City, on June 5-8, has, upon the part of the Committee of Arrangements, suggested a few facts pertaining to the early history and present advantages of this favorite resort. "Truth is stranger than fiction," and it may well be said that the story of Atlantic City's birth, growth and present greatness reads like a romance.

Within the recollection of the man but scarcely past the meridian of life, Absecon Island, upon which now stands the city, with its palatial hotels and residences, its magnificent municipal government, and its finished modern improvements, existed as a desolate isle, upon whose barren sands and dreary coast washed the billows of the Atlantic Ocean, and over which screeched the seabird, and through whose sage grass and scraggy underbrush ran the proverbial New Jersey jack-rabbit.

Atlantic City was founded in 1854, but lay more or less dormant until after the Civil War. The scant patronage during the late '50s and the early '60s consisted principally of aquatic sportsmen and the few others who cared to make a pilgrimage across barren sands and the wooded tracts of South Jersey.

At this epoch Cape May and Long Branch had been fully established as seaside resorts along this portion of the Atlantic coast, with transportation facilities, which, if not up to those of to-day, were quite in keeping with other railroad branches leading to the sea. In the face of this opposition men of grit and determination set out to plant the banner of success on Absecon Island. No pioneer ever set foot upon a more dreary-looking surrounding than did the original developers of Atlantic City. But they buckled on the armor of pluck, and with the sword of enterprise started boldly forth to meet the foe, and with a rapidity almost unknown in the annals of improvement, a city rose before the world that has astonished beholders, and that now, but a third of a century since actual improvement began, has reached a point of perfection and prominence that places it side by side with the best-known and leading resorts of the Old World, and certainly far ahead of any other seaside resort on the American Continent.

Not only is Atlantic City the most delightful spot for summer recreation, the Eden of our Coast, and the one oasis of the erstwhile New Jersey barren desert, but it is positively a health-giving winter resort. The bare idea two or three decades ago of spending a winter season



A BOARDWALK PAVILION.

at the seashore would have stamped the author of the proposition as a fit candidate for a madhouse, and sent imaginary tremors down the spinal column of humanity. In fact, half a century ago, or less, few persons cared to visit the ocean, excepting for a brief sojourn. It was not a popular resort beyond the extreme heated periods, and even then the few who did make the pilgrimage were more or less frightened to enter the billows without firmly grasping safety ropes and under the closest care of a bathing-master. The sea was not popular with the masses. The bone and sinew of humanity, those people who always make up the successful element of railroad support, preferred the green hills and running rills of nearby country resorts. Hence special inducements had to be resorted to. Social organizations and clubs of various sorts were induced to visit Atlantic City, which brought the advantages of the beautiful climate before the people. With this came faith in the future of the resort, and this faith brought enterprising capitalists, who built modern hotels, and great railroad projectors spanned the barren sands and wild, wooded country with modern facilities of travel, and with this easy access to the sea came to Atlantic City an entirely different class of visitors. Large tracts of ocean frontage were purchased by outside capitalists, and these were platted out, sold, and built upon by other newcomers, and a strong municipal government was established, with absolute protection to man and property that has never diminished nor been allowed to border on demoralization.

The hospitality of Atlantic City is proverbial. The liberal manner in which the authorities and citizens welcome large bodies of individuals in conventions assembled within her gates, the sanitary and roomy hotels, cottages and boarding-houses to be found for the comfort and convenience of guests are perhaps unequalled by the most famous seaside resorts of Europe.

CLIMATIC FEATURES.

Nature, here, is the great physician. The saline atmosphere of Southern California mingles with the balmy breezes of the Adriatic. The chilling blasts of inland winters, with lasting snows, blizzards and almost unbearable temperature are things unknown to Atlantic City. It is in close proximity to the Gulf Stream, which, curiously as it may seem, sheds its glorious influences over but one spot along the American Coast without material change, and that one particular

environ is Atlantic City. The undercurrents of the ocean between the two outer borders of Absecon Island—Egg Harbor and Absecon Inlet—are positively a revelation in sea temperature. Bathing at Atlantic City begins earlier and continues longer than at any other seaside resort along the northern coast of the United States, and in this respect equals, so far as comparison can be made, the famous resorts along the Pacific Slope, with an advantage over any of these in the absolute safety of bathers who are not too over-daring in their amphibious sport.

The month of June, in the early part of which the AMERICAN MEDICAL ASSOCIATION will honor this resort with its Convention, is the most delightful portion of all the year. All traces of the lingering winter have passed, and mid-summer with its mid-day sun-rays has not yet arrived. The days are balmy and the evenings of a medium temperature that no pen can depict. The evening sky, as the sun sinks in the western horizon, is a picture worthy the brush of a master artist, and as twilight approaches, the foamy billows, breaking over velvet sands almost beneath the feet of the Boardwalk pedestrian with their weird and fascinating roar, are among the most pleasant associations of the visitor's sojourn at the City-by-the-Sea.

PROMENADES AND STREETS.

The grand, forty-foot wide, steel Boardwalk, reaching from one end of the city front to the other, and costing, with incidental expenditures, nearly one-fifth of a million dollars, is the admiration of all who see it. It is railed with three-ply substantial metal safety fencing, and will accommodate at one time without in the least interfering with promenade, more than a million persons. The velvet sands stretching from this wonderful esplanade are totally devoid of gravel or petrification of any sort, and the bathing grounds are as near perfection as the world ever knew.

The streets and avenues are thoroughly macadamized and the pavements are broad, and handsomely laid in cement and flagstone. Magnificent lawns and catchy architecture predominate throughout the better resident portions of the city, and improved driveways extend from end to end of the island, a distance of about seven miles.

THE CONVENTION HALL.

The great Marine Hall, in which the Convention proper, upon the occasion of the assembling of the AMERICAN MEDICAL ASSOCIATION at Atlantic City, will meet, is nearly a thousand feet outside the Boardwalk



A BATHING SCENE.

and directly over the ocean, with a broad and elegant promenade extending two thousand eight hundred and eighty feet into the ocean, at the outer end of which is a three-story pagoda, each floor reached by broad and easy approaches, with seating accommodation for upward of a thousand guests, and where the most delightful view of the far ocean with distant vessels and a kaleidoscope of marine beauty can be obtained, rivaled at no other spot along the American Coast. There are four beautiful ocean piers, upon which hourly attractions are provided, consisting of the choice professional talent of the Union, and upon which tens of thousands of delighted visitors are seen at all hours of the day and evening. The most attractive bands of music are programmed for concerts of the highest order of excellence, and a continual series of festivities are kept up day and evening.

The practically ceaseless, indefatigable working of the Committee and the citizens of Atlantic City to welcome the members and friends of the AMERICAN MEDICAL ASSOCIATION promises to eclipse anything ever attempted at a public resort. Every amusement and attraction within the city limits will be prepared for their entertainment and, figuratively speaking, the freedom of the city will be presented to each and every member.

The Committee of Arrangements has most carefully selected from among the leading hotels, including the ocean front and immediate vicinity of the Convention Hall, a list of hosteleries with suitable prices, and with such other arrangements for fishing, sailing, crabbing parties and carriage drives as the extensive facilities of the city afford.

RAILWAY SERVICE.

The luxurious railway service from New York and Philadelphia, with close connection and without change of coach from the great cities and tracks of the East, West, North and South, reflect the highest credit upon both the Pennsylvania and Reading Trunk Railway Systems. The New Yorker can reach Atlantic City in three hours, and the Philadelphian in less than sixty minutes. Pittsburgers can eat a late breakfast at their own homes and sit down to supper, ten or eleven hours



YOUNG'S PIER.

later to the music of the billows at this, the Queen seaside resort of America. Washingtonians can reach her bahny realms in from four to four and a half hours, and the Bostonian in ten pleasant hours' ride. In twenty-nine hours the Chicago lover of sea air and heaven's ozone can reach this paradise of health and resort, and so on with other cities East, West, North and South.

In the matter of transportation to and from Atlantic City, the most important arrangements have been completed with the various railroads of the land. Heretofore excursion rates have been confined to a ten-day limit, in which case far-off visitors have not been allowed time to make the round trip with any degree of satisfaction. But, in this particular case, the Committee announces with much pleasure that a liberal extension of time has been obtained, and which it is believed, will prove to be one of the leading features of the far-off pilgrims' journey to the Mecca of ocean resorts. It must be remembered that at Philadelphia, a short hour's ride from Atlantic City, the National Republican Convention will meet on the 15th of June, at which point and date the returning voyager may remain until a late hour on that date before taking his seat in the railway carriage conveying him to his home.

In closing, a word should be added as to the facility for reaching Atlantic City from Philadelphia, New York and elsewhere. Until within the past two years it has been absolutely necessary for passengers from outside the State of New Jersey to cross the river by ferryboat, necessitating a tiresome transfer through Philadelphia, with the possibility of delay and re-booking—inconveniences that bordered upon horror for certain guests in their journeys from distant points. But this has been entirely obviated by the completion, as a portion of the great Pennsylvania Railroad, of a magnificent bridge, spanning the Delaware, over which trains from New York and Philadelphia convey passengers directly from all points.

OCEAN SPORTS.

The sailing fleet, stationed at the inlet, consists of the finest craft that ever plied in and about the waters of a resort. The guest of Atlantic City may here enjoy an inland sail where a spanking breeze



THE BOARDWALK.

ATLANTIC CITY, N.J.

WHERE YOU CAN PLAY GOLF EVERY DAY IN THE YEAR

THE HOME OF THE CLUB OF ATLANTIC CITY

18 HOLE COURSE IN FINEST CONDITION HANDSOMELY AND MODERNLY EQUIPPED

THE SCENE OF GOLFING CONTESTS BETWEEN THE MOST SKILLFUL PLAYERS IN THE COUNTRY

THE COUNTRY CLUB.

from off old ocean affords all the pleasure of sea sailing without the obnoxious effect of sea sickness. Or, he may pass through the Inlet and ride the billows of the Atlantic Ocean, with an exit and entry that is absolutely safe, and all under the masterly direction of an experienced and licensed helmsman, who knows every inch of the surroundings. The lover of piscatorial sport can, at this resort, enjoy himself to his heart's content. The fishing banks, so-called, are so near to Atlantic City, that one can eat a moderately early breakfast at his hotel, be transported to the fishing grounds, enjoy

several hours of this grand sport, and return in time for dinner with fish galore. Every variety of sea fish common to the Eastern Atlantic coast is here taken in unusually large quantities, and the hook-and-line fishing from off the piers is particularly good at times.

Several lines of steamers ply between Atlantic City and the adjoining seaside resorts, leaving each end of the island hourly, and are in direct connection with the trolley cars at either point. The Western Union Telegraph Company maintains a direct connection with New York and Philadelphia from seventeen of the

leading hotels, together with a complete ticker service in each of these points, as well as on the piers and throughout the city, furnishing a brief of the stock market and the current events of the day. Two excellent telephone lines are in operation, as well as the two national telegraphic corporations doing business, the year round.

There are twenty-two churches, including all denominations and creeds. There are seven elegant school-houses with large and airy rooms and supplied with the latest seating facilities, under the immediate direction of an efficient principal and well-selected teachers. The streets are paved with the best material; the municipal authorities of Atlantic City are composed of the cream of its business citizens; and its police force is known the country over, as among the best and most efficient of any seaside resort on earth. The fire de-

partment is one of the finest to be found in a city of its size in America, and a better stock of horses, or more elaborate apparatus could scarcely be found anywhere.



STEEL PIER FROM BOARDWALK.

partment is one of the finest to be found in a city of its size in America, and a better stock of horses, or more elaborate apparatus could scarcely be found anywhere.

THE GOLF LINKS.

One of the crowning features of Atlantic City's environs is the magnificent home of the Country Club, with its elegant golf grounds. The links have eighteen holes, overlooking Lake's Bay, and are in close proximity, with a five-mile-wide meadow where game is plentiful. In the picturesque distance the ocean and variegated horizon make a glorious silhouette to the east, while the western wildwood and evergreen pine give the surroundings a most delightful appearance. This club has recently been entered as an associate member of the U. S. G. A., and the new honor bestowed upon it

COMING MEETINGS.

As a convention Mecca Atlantic City is making for herself a proud record. Among the many gatherings booked for the present season of 1900, at this writing, are the following:

May 12—Diocesan Convention of the Protestant Episcopal Church of New Jersey.

May 18—General Conference of the Methodist Protestant Church, National.

May 27—Ancient Order of Hibernians, State Convention.

June 1, 2—Congress of State and Provincial Boards of Health of North America.

June 1, 2—Baltimore & Ohio Association of Railway Surgeons.

June 1-4—American Academy of Medicine.

June 4—American Medical Publishers' Association.

June 4—National Confederation of State Medical Examiners and Licensing Boards.

June 4—New Jersey Medical Association.

June 4—The Association of American Medical Colleges.

June 5—AMERICAN MEDICAL ASSOCIATION, National.

June —United States Brewers' Association, National.

July 11—B. P. O. Elks, Grand Lodge.

July —Billposters' Association of the United States and Canada.

August —National Fraternal Congress.

August 2, 3—Reunion Knights of Columbus.

September —State Firemen's Relief Association.

October 16-20—Supreme Grand Commandery, Knights of Malta.

August 23—National United Post Office Clerks' Association.

AMERICAN MEDICAL ASSOCIATION RECEPTION COMMITTEE

James D. Southwick, Chairman.

John C. Benson, Secretary.

Clement J. Adams.
Harold F. Adams.
James M. Aikman.
Harry Bacharach.
W. M. Barnes.
Francis W. Bennett.
S. D. Biekle.
Francisco M. Bolton.
Charles J. Brownley.
Benjamin D. Coley, Jr.
James K. Carmack.
E. C. Chew.
Franklin P. Cook.
Albert Darnell.
William Edgar Darnell.
Michael A. Devine.
Thomas J. Dickerson.
William B. Dill.
Walter E. Edge.
George P. Eldredge.

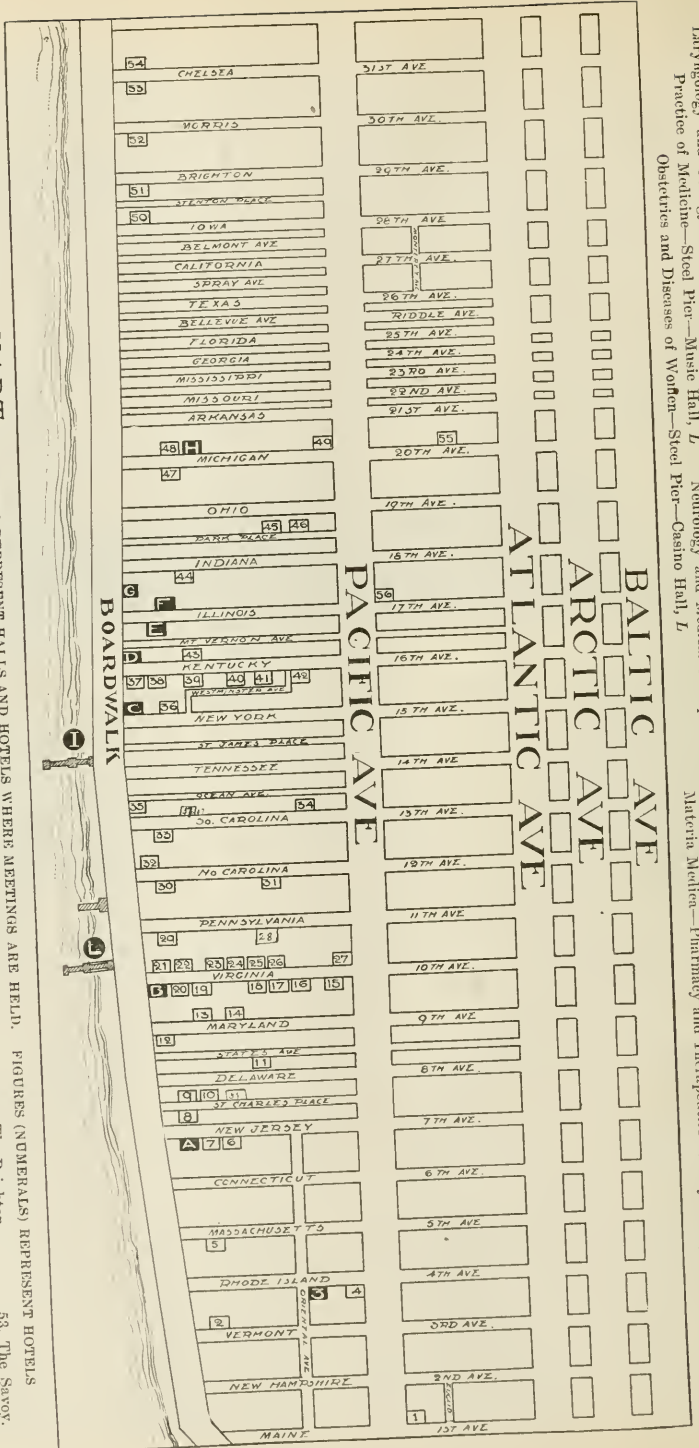
Allen B. Endicott.
Charles Evans.
John H. Fleming.
Charles C. Fortner.
John J. Gardner.
John H. Grover.
Brinckle Gummy.
John W. Hackney.
John F. Hall.
Clinton K. Harris.
William C. Hawley.
Alfred M. Heston.
J. Addison Joy.
H. R. Lawrence.
Henry W. Leeds.
Alfred C. McClellan.
William H. McCormick.
Philip Marvel.
Emery Marvel.

Samuel P. Morris.
Charles R. Myers.
Daniel W. Myers.
Jacob C. Myers.
James North.
K. D. A. Parrott.
William Pedrick, Jr.
Samuel E. Perry.
S. S. Phoebus.
William M. Powell.
Charles C. Raith.
William F. Ridgeway.
Max Riebenach.
Lewis G. Salmon.
Harry S. Scull.
M. Sedinger.
Earnest W. Shackelford.
William F. Shaw.
Clifton C. Shinn.

Mortimer P. Shoemaker.
William M. Simpson.
James W. Snowball.
Lewis R. Souder.
Ferd Stadler.
Robert E. Stephany.
W. Blair Stewart.
Joseph Thompson.
Harry F. Tietjen.
Harry S. Wallace.
Charles E. Wagner.
J. Bart Webster.
John S. Westcott.
William C. Westcott.
Allan White.
Josiah White.
Harry Wooton.
Stuart Wyeth.
C. B. Young.

ASSEMBLY HALLS — HEADQUARTERS EXECUTIVE COMMITTEE — HOTEL DENNIS

State Medicine—Pannhurst Hotel, H Surgery and Anatomy—Steel Pier—Ball Room, I Physiology and Dietetics—Jalesworth Hotel, B Diseases of Children—Academy of Music, C
 Laryngology and Otolaryngology—Traymore Hotel, F Stomatology—Senate Hotel, 8 Cutaneous Diseases and Surgery—Rudolph Hotel—A Ophthalmology—Windsor Hotel, E
 Practice of Medicine—Steel Pier—Musie Hall, L Neurology and Medical Jurisprudence—Brighton Casino, G General Assembly—Young's Pier—Main Hall, I
 Obstetrics and Diseases of Women—Steel Pier—Casino Hall, L Maternity Medicine—Pharmacy and Therapeutics—Lurray Hotel, D



REFERENCE OF CHART

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| <ol style="list-style-type: none"> 1. Royal Palace. 2. Oranial. 3. The Senate. 4. The Seabright. 5. The Leleande. 6. The Brexton. 7. The Pierpoint. 8. The Rudolph. 9. The St. Charite. 10. The Raleigh. 11. States Villa. 12. The Laurence. 13. Seaborough. 14. The Imperial. 15. The Canfield. 16. Grand Atlantic. 17. Avon Inn. 18. Cornell Inn. 19. The Majestic. 20. Ponce de Leon. 21. The Irvington. 22. Whitshire. 23. The Strand. 24. The Morton. 25. The Raymond. 26. The Belmont. 27. The Albemarle. 28. The Holmeshurst. 29. The Seaside. 30. Haddon Hall. 31. The Colonial. 32. The Chalfonte. 33. New England. 34. La Belle Inn. 35. Bleek House. 36. Hotel Esmond. 37. Berkeley. 38. The Stuckney. 39. Hotel DeVille. 40. Ramnuyvode. 41. Boesebel. 42. Westmaster. 43. Robinson. 44. The Lantry. 45. The Edison. 46. The Gladstone. 47. The Dennis. 48. The Sheburne. 49. The Pannhurst. 50. The Gladson. 51. Hotel Chelsea. 52. Ravenovoyd. 53. The Savoy. 54. St. John's. 55. The Arglen. 56. The Garden. 57. Young's Pier. 58. Roman. | <ol style="list-style-type: none"> 1. Royal Palace. 2. Oranial. 3. The Senate. 4. The Seabright. 5. The Leleande. 6. The Brexton. 7. The Pierpoint. 8. The Rudolph. 9. The St. Charite. 10. The Raleigh. 11. States Villa. 12. The Laurence. 13. Seaborough. 14. The Imperial. 15. The Canfield. 16. Grand Atlantic. 17. Avon Inn. 18. Cornell Inn. 19. The Majestic. 20. Ponce de Leon. 21. The Irvington. 22. Whitshire. 23. The Strand. 24. The Morton. 25. The Raymond. 26. The Belmont. 27. The Albemarle. 28. The Holmeshurst. 29. The Seaside. 30. Haddon Hall. 31. The Colonial. 32. The Chalfonte. 33. New England. 34. La Belle Inn. 35. Bleek House. 36. Hotel Esmond. 37. Berkeley. 38. The Stuckney. 39. Hotel DeVille. 40. Ramnuyvode. 41. Boesebel. 42. Westmaster. 43. Robinson. 44. The Lantry. 45. The Edison. 46. The Gladstone. 47. The Dennis. 48. The Sheburne. 49. The Pannhurst. 50. The Gladson. 51. Hotel Chelsea. 52. Ravenovoyd. 53. The Savoy. 54. St. John's. 55. The Arglen. 56. The Garden. 57. Young's Pier. 58. Roman. |
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The Journal of the American Medical Association

Vol. XXXIV

CHICAGO, ILLINOIS, MAY 26, 1900.

No. 21.

Original Articles.

CARCINOMA IN EARLY LIFE.*

WITH SPECIAL REFERENCE TO EARLIER METHODS IN
INTRA-VITAM DIAGNOSIS.

BY WALTER L. BIERRING, M.D.

Professor of Pathology and Bacteriology, State University of Iowa;
Pathologist to the University Hospital.

IOWA CITY, IOWA.

Carcinoma is usually regarded as the malignant tumor of later life, having its legitimate age limit at 35, though it is most frequently met with after 40 years of age.

With increasing study of the malignant neoplasms, age is gradually losing its hold as a criterion of difference between sarcoma and carcinoma, the former being found at almost any age, while carcinoma is beginning to be noticed more frequently during the earlier decades of life.

Having had the opportunity of examining the material from nine cases of carcinoma between the ages of 23 and 35 years, I have incorporated the same in the subject of my paper, and drawn from them such points as were of pathologic interest.

CASE 1.—Mrs. A. F. R., presented herself in the private practice of Dr. L. W. Littig, who has kindly furnished the clinical data. She was admitted to University Hospital, Dec. 6, 1898, and was 23 years old, married, and had one child 3 years old. The family history as regards tuberculosis and neoplasms was negative. Her health was good to within six months of admission, after which time she had pain in the pelvic region and offensive discharge from the vagina.

Physical examination of the thoracic and abdominal organs, with the exception of the uterus gave negative results; vaginal examination revealed an indurated, warty, slightly ulcerating growth involving the cervix uteri, extending a short distance on to the anterior and posterior vaginal walls; displacement of the uterus did not exist.

A clinical diagnosis of epithelioma of the cervix uteri was proposed and operative removal advised. Following operation, Dec. 8, 1898, of abdominal hysterectomy, no unfavorable post-operative symptoms appeared, except a rather unusual interference in the complete healing of the abdominal incision, by the appearance, a short time after the operation, at the site of suture wound, of a papillomatous, granuloma-like growth which gradually increased in size and within five months presented a warty ulcerating growth the size of a lemon, which had all the macroscopic characteristics of a surface carcinoma or epithelioma. This growth was removed by a second operation on May 11, 1899.

The examination of the uterine growth revealed a complete involvement of the cervix uteri by the tumor

mass, which presented a histology of delicate fibrous stroma separating irregular, narrow bands or rows of pavement epithelial cells, the latter showing numerous karyokinetic figures, and at the edges of the tumor area, indications of extensive infiltration into the muscular structure of the corpus uteri. The diagnosis was carcinoma.

The microscopy of the secondary growth removed from the site of abdominal incision presented a similar arrangement of large, irregular alveoli of pavement epithelial cells, enclosed by a delicate fibrous connective tissue stroma like that in the primary growth.

CASE 2.—This case was in the service of Dr. J. C. Shrader, at Mercy Hospital, in Mrs. M. G., aged 26 years, married, with no children. Her family history as regards cancer was negative. Her general health was good, but during the past five years she had been annoyed by pruritus of the external genitals, accompanied by the slow development of a warty, ulcerating growth at the point of irritation.

Physical examination revealed an ulcerated, painful area on the left labium majus, with papillomatous, indurated edges, being $1\frac{1}{2}$ inches long by $\frac{3}{4}$ inch in width; two enlarged lymph nodes were noted in the left inguinal region.

Operation for removal of primary growth and involved lymph nodes was performed Nov. 15, 1897, and there has been no recurrence to date.

The microscopic examination revealed the typical picture of epithelial proliferation from the surface, and formation of distinct nests or pearls of pavement epithelial cells in the deeper tissues as common to, and indicative of, squamous-cell epithelioma.

CASE 3.—This case occurred in the service of Dr. J. W. Dalbey, in the University Hospital, in O. E. C., a male laborer, aged 28 years, and single. His family history as regards cancer was negative. The right lower eyelid presented an ulcerated area three-quarters by one-half inch, with proliferated edges, which, according to the patient, had been gradually developing during the past five years. This was removed by operation on July 6, 1899, primary union following and no recurrence.

Microscopy revealed irregular columns of pavement epithelial cells extending down from the surface, with well-marked epithelial nests, beneath the surface, giving the characteristic histologic picture of pavement-celled epithelioma.

CASE 4.—The patient was seen in the medical service of Dr. L. W. Littig, in the University Hospital, viz.: R. R. T., aged 30 years, a farmer and single. When presented, Nov. 9, 1897, he gave a history of indefinite symptoms with reference to disturbances in digestion, and distress in the epigastric region; during the two months previous to entrance he had noticed a tumor-like enlargement below the left rib-border. There was no marked localized pain.

Physical examination of the thoracic organs was neg-

*Read before the Des Moines Pathological Society, Nov. 14, 1899.

ative; in the epigastric and left hypochondriac regions a defined area of dulness was noticeable, having a transverse diameter of $3\frac{1}{2}$ inches, palpation revealing a movable, circumscribed growth not influenced by respiratory movement, and separable from the hepatic and splenic areas of dulness.

A diagnosis of tumor abdominalis was proposed, the nature of this by reason of the age of the patient, being left indefinite, and exploratory operation advised. The latter was not granted and the patient passed from observation until death occurred, Feb. 8, 1898.

The post-mortem examination, by request of the relatives, was confined to the abdominal cavity. General emaciation was very marked; panniculus adiposus was greatly diminished. On opening the abdomen a large mass the size of a child's head was found involving the greater curvature of the stomach and the transverse colon; the mass, with adherent organs, was removed; the liver presented a high grade of fatty infiltration but no evidence of metastatic involvement; the spleen was not enlarged, and the kidneys were negative.

Closer examination of the tumor mass showed such an intimate connection with both the large intestine and the stomach as to render it difficult to distinguish from which organ it had its origin. The mucous surface of the stomach was smooth, the wall presenting a diffuse thickening which gradually merged into the tumor mass. In the lumen of the transverse colon extensive ulceration was noted corresponding to the tumor area.

In the microscopic section, representing a section through the mucous membrane of the stomach and into the substance of the tumor mass, the mucous membrane appears atrophic, and the tubular glandular structure is almost obliterated; in the submucosa, irregular tubules are seen, filled with cubical epithelial cells: deeper, elliptical and oval alveoli are noticeable, filled with cells, while narrow columns of cells—sometimes composed of single rows of cells—are seen radiating and infiltrating the fibrous stroma in all directions. Fatty degeneration in the larger cell collections is noted, and numerous karyokinetic figures are seen. The diagnosis was adenocarcinoma, most probably of stomach origin.

CASE 5.—This occurred in a patient of Dr. W. D. Middleton, at the University Hospital, viz.: W. R., aged 32 years, also a farmer and single. When admitted, he presented a large, ulcerating growth of the right side of the face, extending down on to the side of the neck for a distance of two inches, exposing the inferior maxillary bone in several places; the growth was of two years' standing. Microscopic section of particles removed from different portions of the growth gave a typical picture of epithelioma.

Coley's mixture of erysipelas and prodigious toxins was used in the therapy without appreciable benefit and the patient died in the hospital, two months after entrance. An autopsy was not granted.

CASE 6.—This case occurred in the practice of Dr. R. W. Hill, Davenport, Iowa, to whom I am indebted for the following: Mrs. N., aged 34 years, gave a history of several years of constipation, leading to almost complete obstruction when first observed by the attending physician. There was no emaciation, no localized pain, no distinct tumor, but a stenosis due to neoplasm was diagnosed and operation advised.

Laparotomy revealed an obstruction of the descending colon just above the junction with the sigmoid flexure, due to a neoplastic growth encircling the intestine. Resection was performed, removing about five inches of the colon and sigmoid flexure, the end of the descending

colon being fastened to the abdominal wall, to form an artificial anus, while the resected end of the rectum was inverted upon itself. Death occurred five days after operation, from peritonitis.

The gross pathologic appearance of the resected portion of intestine reveals a dense tumor mass enveloping the lumen of the intestine to the extent of two inches, constricting the same so that it admits but the passing of a finger; the entire growth being about the size of a lemon. No ulceration of the mucous surface is present; the cut surface of the tumor presents a dense structure in which numerous areas of mucilaginous softening are noticeable.

Microscopic examination of a section including mucous membrane and a large extent of the growth proper, shows no change in the mucosa, but in the submucous area are noted numerous oval-shaped alveoli more or less completely filled with short columns or cubical epithelial cells. Aside from the alveoli, areas are noted which are quite devoid of cells, and are filled instead with a delicate fibrous material giving the reaction of mucin. The stroma of fibrous connective tissue shows but slight retrograde change. A diagnosis of acinous carcinoma undergoing extensive myxomatous degeneration, was made.

CASE 7.—Miss G. W., aged 34 years, a dressmaker, was admitted Jan. 4, 1899, to the surgical service of Dr. W. D. Middleton, at the University Hospital. Her family history with reference to cancer was negative, and her health good until one year ago, when a small lump was noticed in the right breast, which rapidly enlarged and has been accompanied by sharp lancinating pains.

Physical examination revealed a large, rather circumscribed, slightly movable tumor mass involving the entire area of the right mamma; the surface about the nipple was retracted and over the gland proper, broken by numerous sinuous openings from which milky purulent-like discharge was escaping.

Operation was performed Jan. 5, 1899, comprising extirpation of the tumor and the gland, with three enlarged axillary lymph-nodes.

The cut surface of the tumor presents a growth of semisolid consistency, extending in various directions from the nipple into the substance of the gland, the size of the tumor being about that of a small cocoonut.

Microscopic sections stained in hematoxylin and eosin method, and by Van Gieson's method, reveal elliptical, oval, and irregular alveoli filled with cubical epithelial cells, surrounded by bands of dense fibrous tissue, the fibrous stroma and cell collections being about evenly distributed. The stroma presents occasional small areas of mucoid degeneration. Central areas of cells in the larger alveoli show marked granular and fatty changes. Numerous karyokinetic figures are seen throughout the cell areas. A diagnosis of acinous carcinoma was made.

On March 8, 1899, a secondary recurrent nodule of chestnut size, was removed from the site of the scar of the first operation, and possessed the same structural characters as the primary growth.

CASE 8.—This case occurred in the surgical service of Dr. W. D. Middleton; admitted Feb. 1, 1899. Mr. J. A. G., aged 35 years, married, jeweler, gave no family history of carcinoma, but a history of an attack of acute articular rheumatism of six months' duration, two years preceding admission; during this severe abdominal pain was a prominent symptom. Eight weeks previous to admission he noticed a palpable swelling just below the rib-border in the right mammary line. When first noticed it was of the size of a hen's egg, but gradually enlarged

and was the site of considerable pain which radiated out into the abdomen. Emaciation and anemia were marked.

Physical examination of the thoracic organs gave a negative result. In the right hypochondriac region a palpable, movable tumor, orange-size, was felt. Percussion showed it as not separable from the liver area of dullness, and influenced by respiratory movements. There was no icterus, constipation, nor ascites. Exploratory operation was performed Feb. 21, 1899, by Dr. Middleton, and revealed, on exposure of the abdominal structures, a large tumor mass the size of a child's head, in the region of, and apparently originating in, the hepatic flexure of the colon, and adherent to the under surface of the liver and pyloric extremity of the stomach. The extensive adhesions precluded any possibility of removal, and the abdominal wound was closed after removing from the most prominent and accessible portion of the tumor two small pieces for microscopic examination. A histologic section revealed the picture of adenocarcinoma.

The patient, shortly after operation, returned to his home in northern Iowa, where death occurred within three months. An autopsy was not obtained.

I wish to add to the foregoing an interesting instance of early carcinoma which recently came to my notice in the practice of Dr. G. L. Day, Lone Tree, Iowa. Mrs. W., aged 27, married. Soon after the birth of her child two years ago, a nodular ulcerating growth was noted by the attending physician in the upper part of the rectum. During the last year hemorrhagic ascites prevailed, and in three different tapplings sixteen liters of fluid were removed. Death occurred Nov. 21, 1899. Autopsy revealed a most extensive carcinomatosis of the peritoneal cavity, to which the metastasis was confined; the abdominal structures were all adhered and matted together into one dense mass, the infiltrated omentum having a thickness of two inches. The primary growth in the rectal wall and metastatic manifestations presented the typical macroscopic and microscopic appearance of adenocarcinoma with accompanying myxomatous degeneration.

In the list of examples of early carcinoma noted, the ages 23, 26, 27, 28, 30, 32, 34 and 35 years are represented. Four of the growths had their origin from surface epithelioma and five from glandular epithelial cells.

Of the cases recorded in literature, intestinal carcinomata have been most frequently observed, but involvement of other tissues common to cancer has been reported by trustworthy observers. Since the publication of Mathieu's classic article, in 1884, it has been more generally admitted than before that cancer of the stomach can occur before the age of 35, once regarded as the earliest possible period. Mathieu² himself reported, in 1895, a case of cancer of the stomach in a man 25 years of age. Dock³ has reported two cases of the same affection occurring at 20 and 24 years of age. In a review of carcinoma developing from dermoid cysts of the ovarian region, J. G. Clark⁴ cites three cases at 21, 26 and 29 years respectively. A most remarkable series of precocious cancer is reported by de la Camp,⁵ including 4 cases of a carcinoma ovarii in a girl of 19 years, carcinoma ventriculi in a boy of 14, and 1 of 16 years of age, also a case of carcinoma of the colon in a boy of 16. This author at the same time made a careful search of the literature on the subject, collecting 9963 cases, and of these 19 occurred before 20 years of age. W. Roger Williams¹⁶ collected the record of 11,934 cases.

and found 0.99 per cent occurring before 30 years, and 2.36 per cent. before 35 years of age. Cumston⁶ recently reported 3 cases at 19, 24 and 28 years, occurring in the liver, uterus and ascending colon. A Trayer (*Correspondenz Blatt für Schweizer Aerzte*, Oct. 15, 1899) reported the rare occurrence of carcinoma of the kidney in a man 20 years of age. Many cases are published in so casual a way that enumeration and analysis are out of the question.

Carcinoma in early life often has a slow course, and like that of later years may be latent for a considerable length of time. That cancer in early life is becoming more frequent is very evident; whether it keeps pace with the general increase in carcinoma will be difficult to determine. Certainly a collective study of the statistics reveals the unfortunate fact that the mortality rate of carcinoma is on the increase. Roswell Park⁷ calls attention to the statistics of New York State, showing 2363 deaths in 1887 against 4456 in 1898. In England and Wales, where careful records are kept, the rate of occurrence of cancer has increased from 1 in 5646 population in 1840 to 1 in 1306 in the year 1896, an increase of five times in fifty years. This increase can hardly be ascribed as due to improvements in methods of diagnosis, for rather the reverse is the case, since many cases which were formerly diagnosed as cancer are now properly classified where they belong in other lists.

While the etiology of cancer remains obscure, there is but little hope that the future will offer any abatement in this progressive increase. As careful observation continues to note the occurrence of carcinoma in the earlier decades of life, there is removed from the list of predisposing causes, the influence of age.

It has been an attractive explanation to attribute to the lessened physiologic resistance in connective tissue the rôle of permitting atypical proliferation of epithelium beyond its normal limits. With advancing age the submucous, subcutaneous and interstitial connective tissues undergo atrophic changes, while the covering or lining epithelial elements seem to retain their usual vitality. When glands reach the limit of their functional rôle in the organism, the danger from carcinoma is most marked, while it diminishes again when complete atrophy has taken place. When cancer occurs thus in the developing decades of life, the above influences can hardly be considered.

Bearing on the subject of etiology I must refer again to the peculiar secondary, recurrent growth, noted in Case 1. The removal of the primary growth, with uterus and appendages, was technically as perfect as it could possibly be in any case. There was not the slightest involvement of the peritoneal cavity, and yet, shortly after the operation, there appeared in the abdominal suture wound a secondary tumor, identical in structure with the primary one. The nature of the constituent elements left no doubt as to its metastatic nature, yet if a similar instance were to occur in connection with any of the infections how readily it would be explained. While I do not pretend to advance this as any direct evidence of a parasitic cause or spread of living virus, it does seem to me to mean more than the simple transmission of active epithelial cells from primary to secondary site.

In the entire field of pathology, no subject has proven more alluring to physician and investigator than the etiology of carcinoma. It was no wonder that the development of bacteriologic methods gave a mighty impetus to the search for an etiologic agent, the result of which is well known. Numerous forms of cell inclusions—cancer bodies—have been observed and variously

interpreted. Renewed and repeated attempts have been made to find the curative agent among the protozoa which are to enter the cells and render the same infective. Such workers as Hansemann, Rippert and Schwarz have continued to oppose any such adoption, and it would seem as if that most careful and critical work of Pianese⁸ has about taken the bottom out of the theory. By the use of unique staining methods and very careful technique this painstaking Italian has demonstrated, in proliferating cells, both inflammatory and neoplastic, changes and bodies which appear identical with the various forms of cell-inclusions of other observers, but which are demonstrated to be naught but evidences of different forms of cell degeneration.

An interesting contribution is that of Leyden and Schandinn,⁹ who have found in the ascitic fluid of malignant neoplasms—carcinoma—a new ameba-like body of the family of rhizopoda, which appear as round bodies in the fluid, having clear and yellow granules, with ameboid movement, and pseudopods of unusual length, life and mobility being retained four to five hours after removal on to the slide. The authors do not advance any definite etiologic connection with carcinoma, yet regard their appearance as quite significant.

Italian pathologists, led by Sanfelice¹⁰ and Roncali,¹¹ are still champions of the infectious theory, and their recent publications deal exclusively with certain organisms which they place among the blastomyces, a familiar example of which is the ordinary yeast plant. They regard the organism which they have isolated from tumors in man, and successfully inoculated into animals, as largely identical with the various bodies long observed and variously interpreted as protozoa, cell inclusions, and later as cell degeneration products. Roswell Park finds the work of the Italian pathologists creditable and convincing, and it is to be expected that the New York State Laboratory, in Buffalo, whose special mission is the investigation of tumors, will soon issue some exhaustive work on the subject. If blastomyces occur in cancers in Italy, they can probably also be demonstrated elsewhere.

As yet it is evident that the real cause of carcinoma has not been demonstrated. Perhaps it will be necessary to completely modify our culture methods. Perhaps our optical aids are inadequate in magnifying power, but unless the light comes soon, the nineteenth century will close with the genesis of cancer as much a mystery as when the century began.

Carcinoma continues to be a strictly surgical disease, and in this light I have thought it in place to refer to some of the earlier methods applicable in intra-vitam diagnosis, with special reference to the following: 1, characters of cancerous effusions in serous cavities; 2, necessity of an early microscopic examination of tumor particles, and 3, the proper interpretation of the histologic picture.

The early appearance of ascites and effusions in serous cavities involved by carcinoma, renders the fluid a good object for examination. The first scientific contribution on the subject was offered by Rieder,¹² who called especial attention to the cells found in effusions, to which subject Dock¹³ has also added a most interesting article. I have endeavored to carefully examine all effusions from carcinoma cases it has been my privilege to see, and while my material has been somewhat limited, I have noted the various cell forms described by former observers, and have drawn from these studies the following points:

The specific gravity of cancerous effusions is rarely

above 1015, and in that way is distinguishable from tuberculous exudates in which the specific gravity is usually higher, ranging from 1022 to 1025. Since exceptional instances of a lower specific gravity in tubercular pleurisy have been reported, this differential test must be used with a certain caution in diagnosis. The cells are by far the most characteristic feature about the effusion, the most perfect description of these having been furnished by Rieder. Cells having the appearance of lymphocytes are rare; multinuclear leucocytes are uncommon. Cells containing numerous fatty granules are frequent, the accumulation of granular material being confined principally to certain areas in the cells. Giant cells or aggregations of cells are a special feature, some of the former containing twenty to twenty-four nuclei. The most remarkable feature of the sediment is presented by the great number of karyokinetic figures, which are very numerous, presenting as common forms the equatorial plate and anaphase stages; another very characteristic point noted is the presence of atypical mitosis in the larger cells.

Atypical mitosis is an interesting study and has been demonstrated in all active proliferating pathologic processes, but with especial import in carcinoma.

In ordinary serous effusions, as in serous pleurisy and tubercular peritonitis, the large majority of cells are multinuclear leucocytes; furthermore, there are noted numerous small cells having the characters of lymphocytes, a few large mononuclear cells and some fibroblasts. The large cells with mitosis and atypical mitosis seen in cancerous effusions do not, as a rule, have their counterpart in ordinary exudates, which statement bears a slight modification, owing to the reported finding by Dock,¹³ in the exudate of pleurisy, of large cells showing karyokinesis.

As a diagnostic guide, it is necessary to state that the number of cells showing mitosis and asymmetric mitosis in cancerous effusions is much greater than in those of simple or tuberculous inflammation, and by this quantitative distinction, it would be possible to make a differential diagnosis.

The large cells that have been referred to are principally of the type of endothelial ones, resembling cells seen in scrapings from serous surfaces, with the exception that the latter do not show cell-division-figures.

One can hardly hope to determine the exact histologic character of a growth occurring on a membrane, from isolated cells found in the serous effusions. If it were possible to demonstrate the Leydenia gemicipara, described by Leyden and Schandinn in cancerous ascitic fluids, an additional aid in diagnosis would be furnished.

MICROSCOPI EXAMINATION OF TUMOR ELEMENTS.

The value and import of a knowledge of the nature of a growth, previous to surgical interference, must be apparent to every one, especially since it is becoming manifest that carcinoma may occur at almost any age. Portions of tumors can usually be obtained in a large number of cases. Surface carcinomata, both cutaneous and mucous, are accessible. Uterine scrapings are a great aid. Particles may be observed in stomach washings and in the stools and urine.

While the clinical signs in many instances may be very plain, a microscopic corroboration is always desirable. Frequently the specimens examined in this work represent superficial sections, so that certain caution is necessary in correctly interpreting the histologic picture.

Herzog¹⁴ has called attention to a case in which three pieces were removed from a tumor of the larynx, all of which were called fibroma, while the extirpation of half

the larynx revealed the typical picture of carcinoma. The uneven white elevation seen in the larynx in carcinoma may be merely a deposit and infiltration of fibrin.

In examining uterine scrapings I have noted that while a superficial piece might reveal simply a sort of adenomatous hyperplasia, a deeper section furnished the diagnosis of carcinoma. This would apply whenever adenocarcinoma would be likely to develop, and for the differentiation, histologically, of simple adenoma and adenocarcinoma, I would suggest that the following points be noted: 1, presence of atypical adenomatous glands; 2, absorption of stroma and agglutination of the glands in loops of the same gland; 3, the proliferation of the lining epithelium of glands; 4, filling of gland spaces, rupture of lumen of gland, and proliferation of epithelial cells into the surrounding stroma.

As illustrating a mistake that may be made in connection with ulcerating processes, I would cite a case recently referred to Dr. C. M. Robertson's clinic—a man, 34 years of age, presenting a large ulcer in the region of the soft palate, of six weeks' duration. Naturally the first thought of the clinician was of its being syphilis, but infection being so strongly denied by the patient, and no signs of primary or secondary lesions being detectable, it was set aside for the time being. Examination for tubercle bacilli was negative, tuberculosis of the respiratory tract was not to be detected, and so epithelioma was determined upon, especially as the edges of the ulcer showed a marked proliferation. A small piece, one-eighth of an inch square, was removed from the proliferating edge and subjected to microscopic examination. Section revealed a downgrowth of epithelium from the surface, and two areas of epithelial cells away and separate from the surface, from which it was essential to say that the picture indicated epithelioma.

In the meantime an antisyphilitic treatment had been instituted and the ulcer began to heal rapidly, thus plainly indicating the mistake—one that, in fact, is often made in superficial examination of proliferating epithelial processes, where the direction in which a section is cut may give misleading microscopic pictures resembling epithelial proliferations into the deeper tissues, and emphasizing most strongly the obtaining of deeper sections from representative portions of the growth for diagnostic purposes.

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CONTAGION OF HERPES TONSURANS.—Several cases of herpes tonsurans were traced to the barber shop and through one customer to his dog, which had become infected by a monkey in the same house. Berger, who reports the occurrence in the *Derm. Cbl.* for April, arrested the epidemic by prompt destruction of the infected articles in the barber shop. He suggests that stricter hygienic measures be exacted of barbers, who should raise their prices to correspond, and he also warns against the fondling of household pets.

EXPERIMENTS AND OBSERVATIONS IN SCARLET FEVER.*

BY W. K. JACQUES, M.D.

CHICAGO.

Since Chicago has achieved the distinction of being a great city, scarlet fever, in forms more or less severe, has been present. During the summer and autumn of 1897, Dr. I. N. Abt found it prevalent in a light form among the poorer classes of Poles and Bohemians in certain parts of the city. The cases were so light that physicians were seldom called, and no intelligent action was taken to restrict contagion. An epidemic resulted. The health department, while realizing the danger, was crowded by more serious matters, and the afflicted communities enjoyed the blessing of becoming immunized while the disease was in its mildest form. From these localities the fever has gradually spread until it has included the entire city.

In the autumn of 1898, when the reported cases of scarlet fever were greatly increased, Dr. Wynkoop of the city laboratory, while examining a culture from a scarlet fever patient, sent him by Dr. Findley, noticed a coccus which he first took to be a form of the pus coccus. But on growing, it manifested such peculiar characteristics that he began to pursue a careful study of the germ in the laboratory. At a certain stage of its development it became a large coccus, the center of which staid in the shape of a double crescent. While this germ was still under observation by Dr. Wynkoop, Dr. Class described his diplococcus scarlatinae, in a paper before the Chicago Medical Society. While Dr. Wynkoop used the term "crescent" and Dr. Class "diplococcus," I concluded, after a study of many cultures from scarlet fever cases, that both were different forms of the same germ. This attempt to name an organism from some particular stage of its development was responsible for the uncertainty concerning it.

This germ has a wide morphology. Sometimes one stage and then another will become accentuated, according to environment and nutrition. Sometimes conditions are favorable to its growth in chains and the culture will show the streptococcus form. In another case it will grow as a staphylococcus, and in still another as a diplococcus. Again it becomes oblong and almost a bacillus. Early bacteriologists attempted to classify micro-organisms according to shape and arrangement, and they were divided into families of streptococci, staphylococci and bacilli, etc., but in this case we have a germ that may be either or all.

Bacteriology is still too young for us to be bound too strongly by precedent. Professor Koch formulated what he considered the law to which the causative germ of a disease should conform. While this law is applicable to some diseases, many more do not fulfill all the requirements, yet experience is demonstrating that germs are the essential causes of disease in those which do not conform as well as in those which do.

As above stated, the morphology of this germ, which I have been finding in scarlet fever, is one of its most interesting features. The size of the coccus depends on its environment and the medium on which it grows. In the same culture, it will sometimes vary from the smallest point observable under a one-twelfth oil-emersion to a coccus one-third the diameter of a red corpuscle. It appears that these cocci multiply by division, and that the multiplication takes place in various sizes of the germs. When inoculated on a culture-medium, they usually grow to the favorable dividing point and then

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divide rapidly so that an examination shows a field of nearly uniform size. If the culture is permitted to develop, the older germs attain a large size and show the crescent form on staining. In a culture of the germ inoculated on the Löffler serum, and incubated five to ten hours, there will be an abundant growth of large cocci sometimes arranged as staphylococci. In the same culture there are sometimes found short chains of six to twelve. This is the usual form of growth, but either the staphylococci or streptococci arrangement may predominate. This coccus when stained appears to have a small hole in it. As it enlarges, this hole is seen to be a dividing line of material which does not take the stain. This gives the coccus the appearance of a pair of crescents with their points turned toward each other. This is the last and largest stage of growth. At times the germ much resembles the staphylococcus albus, having a clean, definite cell wall. Frequently there seems to be a glue-like exudate covering the surface of the cocci. When a colony is touched with a platinum needle, this exudate can be drawn out in strings and seems to modify the surrounding medium so that it will take the stain to a greater or less degree. Sometimes the germs of the culture pass into a stage in which the germ wall seems to almost lose its definite structure, and the germ appears a refractive jelly-like mass.

I have examined from six hundred to a thousand cultures from inflamed throats each year for the past six years. During the winter of 1898 this coccus began to appear; at first only in cultures from scarlet fever patients and those who had come in contact with the disease. During the following year its frequency increased, keeping pace with the increase of scarlet fever. The infection has now become so general that fully 80 per cent. of the cultures that come to my laboratory contain this coccus.

As abundant clinical observations have proven that the contagion of scarlet fever lies in the scales, I began a careful examination of these. In twenty cases, from which I collected scales, abundant growths of this germ were obtained. Drs. Gehrman, Wynkoop and myself conducted the following experiment: An emulsion was made from scales taken from a patient recovering from scarlet fever. A twelve weeks' old hog was injected with 10 c.c. of this. An emulsion was also made from scales given to us by Dr. Class and another hog inoculated. The animals showed but little effects from the inoculations. They were larger than we could handle well, but were the best we could secure. It required the combined efforts of two to take the temperature and, after taking it the second day, it was not taken again. The animals were watched daily, but as there was no loss of appetite or other evidence of their being affected, we concluded to try a larger injection. When we examined the animals preparatory to making another injection, twenty-one days after the first, we found they were both scaling profusely. Cultures from the scales revealed the presence of the inoculated germ.

A third animal was obtained and placed with the other two. A rise of temperature followed lasting several days, when this animal also scaled off. A piece of its skin was taken and the germ found in the blood. The children of adjoining apartment houses showed a disposition to use the barn as a play-house and it was not considered safe to continue the experiments. The isolation necessary, the difficulty in obtaining suitable animals on which to experiment, and the limited amount of time we were able to devote to observations made the results less accurate than we could wish, but they are of

some value in indicating lines for future investigation. The chief difficulty in the way of acquiring definite knowledge of the scarlet fever germ is the great care necessary to conduct experiments, as well as the best laboratory facilities and, more important than all, subjects for experiment.

Clinical observation has established the fact that scarlet fever begins with inflamed fauces followed by general constitutional disturbance and characteristic rash; that these symptoms are followed by scaling of the epidermis and that in these scales lies the element of contagion.

Having found the germ present in the initial lesion, and in the scales, it was most important that the connecting link should be found in the blood. I began to examine blood by sterilizing the earlobe with alcohol and then puncturing it. In the first two cases I found the germ present by spreading this blood over the surface of a blood-serum culture-box, such as is used in the health department. Then instead of spreading the blood over the surface, I allowed it to remain as a drop on the surface and incubated the box. Several failures followed, which I attributed to the antitoxic qualities of the blood, or the fact that the germs were not present in the blood when it was taken. In one case, when the rash was just appearing, I collected blood on a sterilized swab, which was dropped into beef bouillon. In two out of three of these cases the germ was found. The taking of blood from the ear not being above criticism, on account of contamination from the skin, I determined to obtain it from venous puncture. This was done in two cases and the germ found in both. But the securing of blood in this manner is painful and not easy in private practice.

In considering the evidence as to whether or not this germ is the essential cause of scarlet fever, we should first study it under laboratory conditions and thus ascertain whether it gives evidence that it is capable of multiplying in the human body. We should then trace the germ through the body and observe its effects on the different tissues.

If the germ has shown itself very sensitive to environment in the laboratory, we should expect this also in the tissues in which it multiplies. If there is a varying degree of susceptibility in the human family, this fact must be taken into account in the study of the disease. If the germ possessed a definite virulence and always affected the human body in the same manner, its study would be a comparatively simple matter; but in scarlet fever we have a germ which is variable in its virulence, and to which there is the widest degree of susceptibility in the human family. Not only are but few individuals susceptible, but even these vary in susceptibility. The various tissues afford a different environment and present different conditions for the multiplication of the germ; also varying degrees in their resisting power, as well as different conditions for the destruction of the germ.

In tracing this infection through the body, we shall begin with the usual site of the invasion, i. e., the mouth. The human mouth, being the entrance to the respiratory passage, is continually fanned by large quantities of air. The mucus which covers the throat is a more or less nutrient medium. The glands and adenoid tissues around the air-passages are of a more or less low grade of vitality. The mucous membrane which lines this cavity is a tissue subject to inflammation. Large numbers of germs inhabit the healthy mouth; many of these become pathogenic when conditions permit. They remain as harmless saprophytes until condi-

tions of susceptibility, such as congestion from cold, deficient renal elimination or other means of lowering the vitality in the surrounding tissues, producing the results which their cycle of activity brings about. In my studies I have found that the angina produced by the scarlet fever coccus in no way differs, except in degree, from the anginas which accompany the disease. The angina produced by scarlet fever infection, however, possesses certain characteristics that do not follow the usual invasion of the pus cocci. There is an intense redness of the tissues; the throat is very sore; and there is a tendency to the involvement of the glands, and it is nearly always accompanied by high fever.

These symptoms do not end in from thirty-six to forty-eight hours, as in ordinary tonsillitis. They do not terminate in the formation of pus; but the inflammation, as before stated, has exactly the same course as that which accompanies scarlet fever. Should the invasion multiply to the extent of producing scarlet fever, there is nothing about the throat but what would be in perfect harmony with the usual angina which accompanies this disease.

When this infection invades the trachea sufficiently to produce stenosis, I have found, in the six cases that have come under my observation, that a prognosis must be given which essentially differs from that of an invasion produced by any other germs causing this condition.

In the invasion of the Klebs-Löffler bacilli, under the magical effects of antitoxin, the tube may be removed in three or four days in the majority of cases. The staphylococcus also has a short period in which the tube must remain. The streptococcus causes a more lasting inflammation, requiring the tube to be worn from six to eight days.

Stenosis of the larynx or trachea from scarlet fever causes the longer wearing of the tube than in any other infection. If the tube is removed in six, eight or ten days, the trachea seems to collapse and stenosis remains, which appears to be more from the relaxed condition of the trachea than from swollen tissues.

In each of the six patients I have intubated this winter, for scarlet fever stenosis, the tube was removed and again replaced from three to twelve times. As I have become more familiar with the nature of this infection, I allow the tube to remain for a longer period of time. Two of these intubations were in patients in whom there were well-marked manifestations of scarlet fever. The other four were in children from whom cultures showed a malignant growth of the scarlet fever coccus, but they did not have the disease; yet the same clinical symptoms followed in the trachea that appeared in the scarlet fever patients.

We have seen that we can have an extensive multiplication of this germ in the mouth, in the mucous membrane of the throat, extending into the glands of the neck and trachea, and yet not have scarlet fever. However, should the germs be enabled to pass into the blood and there find a condition for their multiplication, what symptoms would probably follow? Here it is necessary to study the conditions of environment which this tissue, the blood, presents for the multiplication of the germ. The blood is a highly nutrient medium, always at the same temperature, and may be said to represent the composite product of all the cells of the body. In addition to this, it contains the nutrient material for their support. Were this all it contained, we could readily understand that it would be a fluid which would be a most suitable medium in which pathogenic germs could

multiply. For the defense of the body there are cells which circulate in the blood, one of whose functions is to destroy hostile germs. This, then, in addition to the antitoxic qualities of the blood, constitutes the defense which the body has against the invasion of pathogenic germs. The rapid circulation of the blood brings it into constant communication with every cell in the body, and in this manner they are almost instantly made aware of any addition to it. Should pathogenic germs begin an invasion in or on the surface of any of the tissues, the product of their life is at once taken into the blood current. It notifies all cells throughout the body of the invasion of a hostile enemy, and they are at once stimulated to the production of antigermin, or a defensive antitoxin.

We can thus understand that the blood is most highly antagonistic to germ invasion. At the same time, when germs invade it, their distribution to all parts of the body is but a matter of seconds. Therefore, following the enormous multiplication of the scarlet fever germ in the fauces, numbers of them enter the blood current. If this medium is sufficiently resistant, they are destroyed before any great amount of multiplication takes place. If this is not the case they multiply and are distributed to all parts of the body, and owing to the nature of the exudate which covers them, they would be likely to collect and cling in the capillaries of the tissues. They would carry with them the same irritating effects which we notice in the multiplication in the pharynx, and this would continue as long as they possessed life.

Therefore, the phenomenon which would follow the invasion of this germ in the blood would be entirely in harmony with the rash which characterizes scarlet fever. The condition of the blood in children, where the demand on it is so great for the rapidly growing tissues, and where the mucous membrane of the throat is so tender and easily invaded, indicates why they should be more susceptible than the more stable tissues of the adult.

The resemblance of this germ to the staphylococcus albus when growing under laboratory conditions, suggests the query as to whether or not it is the staphylococcus albus itself which, under a different environment, has adapted itself to the invasion of the blood and thus causes scarlet fever.

Evolution is much more rapid in germ life than in the higher forms, because their cycle of activity is so short. Change of environment may produce change in form and function. This we see illustrated in almost all of the pathogenic germs. The effect of residence in the human tissue may cause it to assume increased virulence and malignancy. For example: puerperal infection containing the ordinary forms of streptococci or staphylococci becomes most dangerous when carried from patient to patient. The study of these germs in the laboratory can give but a meager idea of their possibilities when growing in susceptible human soil. This may also be true of the staphylococcus albus.

The residence of germs in the human body causes them to take on qualities which can not be demonstrated by ordinary laboratory methods. In the laboratory we see, growing on moist filter paper, a fungus which, under these conditions, grows in the branching form of the fungus family and seems to be an innocent mold. Yet this same fungus was and is the bacillus tuberculosis originally taken from a patient suffering from this disease. By change of environment the bacillus was brought back to its original form of a branching fungus.¹

¹ See Haeppel's Principles of Bacteriology.

The great variability in the poisonous qualities of the bacillus anthrax, caused by changing environment, may also be cited as one, and the fact that the cholera bacillus does not become malignant until it multiplies in the presence of decomposing filth is still another illustration of what environment will do.

Therefore, the study of the diplococcus scarlatinae in the laboratory alone can give but a partial idea of its possibilities when introduced into the environment of the human body. Judging from the wide range in the morphology and adaptability of this germ, it does not seem impossible that it was originally the staphylococcus albus and has been modified by its human environment.

In the study of scarlet fever it is most important to appreciate the value of susceptibility in the production of the disease. I think we are justified in calling the blood the essential tissue in which the multiplication of the germ takes place to produce scarlet fever. When we consider that this fluid represents the cell production of the entire body, we can appreciate how it must vary in its resistance to germ invasion, not only from day to day but from hour to hour. Exhaustion, loss of sleep, lack of food, vitiated air or any debilitating cause which modifies the nutrient medium of the blood will affect its resistance.

After the cells throughout the body have been stimulated to the production of a resisting quality, they maintain a continued immunity. Nurses who have had scarlet fever may contract sore throats from virulent cases. Families where all the members have had the disease may also have severe anginas caused by this same germ.

The finding of this scarlet fever coccus in cultures from the throat has a different meaning from that of the Klebs-Löffler bacillus, because it is a different germ, multiplies in a different tissue and is carried in a different manner. In the case of the residence of the germ in healthy mucus, no disturbance of functions follows. When the tissues of the pharynx are invaded, similar phenomena result as in other germ invasions, but this germ in its minute form possesses the power to pass through the barrier of mucous membrane into the blood, where it multiplies, if this medium is in proper condition. The stay of the germ in the blood in patients who recover is very short, because every effort is put forth to destroy the invaders. Leucocytes are poured into the blood current and every cell is stimulated to produce antigermin. Then follows the more gradual process of absorbing the inflamed areas which may still contain the germs. While they are thus rapidly destroyed in all the internal tissues which are accessible to the blood, the skin, which is in a continual state of exfoliation, still contains the germs. During the rash period, the external layers of the skin are filled with germs; their irritative effects cut off nutrition and, as a result, those epidermis scales which are not reached by the blood during the process of recovery are filled with the minute germs. These are carried to other susceptible persons by various means, and the process repeated.

A harmless method of producing immunity by the stimulation of the cells in children exposed to scarlet fever would lessen the fear and the fatal effects of that disease as it has done in diphtheria. As soon as we have sufficient knowledge of the germ and the conditions under which it grows, this will be accomplished. Immunity against scarlet fever is enjoyed by more than 99 per cent. of individuals. Those who have suffered from the disease seldom or never have it again. Thus we see

that immunity is the rule and susceptibility the exception.

In the production of immunity against disease the germ is the most important factor. In the malarial districts of the South, the negroes become immune by continually being in the presence of malaria. In this manner, or by non-fatal attacks, immunity in cholera, typhoid fever and diphtheria is produced. That immunity is conferred by an attack of the disease is already known. From the wide distribution of the germ at present, nearly all susceptible individuals must contract the disease and become immunized. In the production of artificial immunity, the problem is to bring about the cell stimulation in such a manner as not to endanger the life of the patient. In individuals who are slightly susceptible, a residence of the germ as a saprophyte probably accomplishes this, while a sore throat is necessary in those whose tissues of the throat are susceptible; and scarlet fever follows in those who are still more susceptible. In the present epidemic, those who have had an angina in which the scarlet fever germ predominated, have not had scarlet fever.

In the attempt to produce artificial immunity the nature of the germ should be kept in mind. In my laboratory experience, and from clinical observation, I should say that it is an irritating, fever-producing germ and not a toxic or toxin-producing one, the pathologic conditions being caused by the multiplication of the germs themselves and their irritating presence rather than from any toxin which they produce. In this it differs from the Klebs-Löffler bacillus, which is a toxin-producing germ and not a fever or irritating one. In this respect the scarlet fever germ resembles the typhoid bacillus. Bacteriologists say that the difficulty in getting an antitoxin for typhoid fever is because they are unable to obtain a toxin of sufficient strength to stimulate the cells of the animal to produce an antitoxin. This same difficulty will stand in the way of producing an immunizing serum for scarlet fever.

However, another way of causing protection suggests itself to me. In scarlet fever, the site of the invasion usually includes the entire mucous membrane of the pharynx, and from this extensive surface the germs are enabled to enter the blood in overwhelming numbers. Surgeons have often noticed that wounds in other members of a family, where there is a case of scarlet fever, become inflamed and are often slow to heal, but the disease does not follow. On the other hand, the introduction of scarlet fever germs into the vagina of a recently delivered woman is extremely fatal. Therefore, the ease with which the infection enters the blood is a most important factor. In wounds there is a barrier of swollen capillaries gorged with leucocytes which stand between the germs and the blood. In a puerperal case, and also in the throat, there is an open door almost directly into the blood.

Being aware that experiments in inoculation have been disastrous, I had to be careful in this work. My first experience was the inoculating of the puncture after giving diphtheria antitoxin. A little girl was scaling from scarlet fever when her mother contracted diphtheria. The circumstances of the family were such that isolation of the younger brother could no longer be maintained, and I immunized the two children. With the consent of the father I inoculated the site of the puncture in the boy with scales from the sister. A slight rash followed, beginning at the site of the puncture and spreading over the body. The scaling was very much less than in the sister.

The child of a physician became slightly burned. The father had attended scarlet fever patients during the winter. The wound became inflamed and a rash followed with a rise of temperature to 101 F. No throat symptoms were present in either this or the previous patient. I think it rather hazardous to inoculate the germ directly into the blood current, and it seemed to me that the infection in the case of the burn was the mildest.

It is my purpose to experiment with the following method whenever an opportunity presents itself: Raise a small bleb by means of a fly-blistér; with a hypodermic needle inoculate the serum without breaking the blister, if possible. If the patient is susceptible, the germs ought to multiply in this serum, and before passing into the blood, they would have to get through the barrier of inflamed capillaries filled with leucocytes. In this manner their entrance would be slow and the blood could gradually take up the products of germ multiplication in the serum, while the cells would be stimulated to the production of a defensive antigermin.

I have purposely avoided the conflicting literature on scarlet fever. Two things are necessary in a contagious disease, i. e., the germ and a susceptible person. From my standpoint it is impossible to produce the disease under laboratory conditions, as the multiplication of the infection requires not only a living blood environment but this must have, in addition, a peculiar quality which permits the production of the disease. Therefore, the bacteriologist in his laboratory can get at but a small portion of the evidence. A chain is only as strong as its weakest link, and the links of evidence in this chain must not be separated. The microscope must be taken to the living environment and the germ studied under the conditions in which the disease is produced.

No doubt further study and experiment may cause me to change some of these views, but at the present time they are the most reasonable explanations of the clinical phenomena in scarlet fever. If the criticism they provoke prove them false, the discussion may lead to the truth and compensate for the preparation of this paper.

4316 Greenwood Ave.

DISCUSSION.

DR. ADOLPH GEHRMANN said that he does not believe, from the examinations, that he has been able to make out that this coccus, from its microscopic appearance, is sufficiently characteristic to say that it is always the Class coccus. His observations have shown that a bacterium, giving the same appearance, and in a great many cases more cultural characteristics, has been found in other conditions, especially on the skin of individuals who have not been in contact with scarlet fever patients, and in some rather unusual places. For instance, he has found a coccus giving the general characteristics of the Class coccus, in vaccine material a number of times. He has found it in samples of urine and in other specimens in conducting general examinations. Dr. Gehrmann gave his reasons, at considerable length, why he does not think the Class coccus is the only and sole cause of scarlet fever.

DR. WILLIAM J. CLASS called the attention of the Society to the published work he had done with reference to the germ of scarlet fever.

DR. LUDVIG HERTOEN said that it has been held theoretically that scarlet fever is not a toxic disease, but its lesions are those of a toxic one. In the organs of patients dead from scarlet fever, the same necrosis and degenerative changes are found in the lymphatic glands, spleen, bone-marrow, liver, etc., as are found in such diseases as diphtheria, etc., of the toxic nature of which there can be no question. Investigations with reference to the etiology of scarlet fever must go further than a mere investigation of the morphology of a coccus.

DR. L. MAYWIT narrated two cases of scarlatinal sore throat that he saw in a family. Cultures were made and the Class

diplococcus was found. In one case the temperature varied from 103 to 104 F., and in the other from 102 to 103 F., and this elevation of temperature lasted four or five days in each patient. Repeated examinations of the urine were made and albumin was found daily for six or seven days, after which it disappeared. The children had no albuminuria before the onset of the fever, and none after, so he thinks the albumin must have been caused by the scarlet fever germ. The eruption was not marked in either case. Both children recovered.

DR. W. K. JACQUES, in closing the discussion, said that he has found the diplococcus of Class present in great numbers in the throat, the blood, and in the scales of scarlet fever patients. Indeed, he has found this germ as frequently in cases of scarlet fever as is the Klebs-Löffler bacillus found in diphtheria.

DISTILLED WATER AS FOOD.*

BY EPHRAIM CUTLER, M.D., LL.D.
NEW YORK CITY.

Food is any substance received into the human system from without, which normally becomes a biologic part of the system and is needful to life. It includes minerals, as air, water, salt, etc. Aerated distilled is also meant here, and not the ordinary chemical laboratory distilled water, condensed in a closed reservoir. The distillate should have a fall of not less than two inches in open air for aeration, otherwise it may be an abomination of the meanest taste.

HOW TO HAVE IT.

Philadelphia is the great medical center, and yet my patients have been unable to buy anything but laboratory-distilled water. So the best way is to make it. The writer tried to get all the domestic water stills in the market to report on, but was unsuccessful. As he is writing this paper interprofessionally and clinically, he asks to testify simply to what he knows and let the still-makers arrange for their own testimonials. While many stills are in the market, they are too expensive for the average person and too complicated. Between the lines their advertisements read as if they were made for making money, not water. The merchants give an idea that distilling water is an exceptional and difficult thing, obtainable only through their wares, each being the best and all others poor, if not worthless.

A few moments of reflection shows that aerated, distilled water is most abundantly present in the open air, as rain, clouds, dew, fog, mist, invisible vapor; also in solid state, as frost, hail and snow. From all surfaces of water—fresh or salt—or of substances wet in water, water is by nature's evaporation distilled. From the ocean distilled water rises in the air, is held in solution, carried by the winds inland to the mountains and hills, where it is condensed by cold into rain, clouds, etc., and is swallowed up by the earth, or falls in the forests, slowly forming springs, pools, fairy rills, brooks and rivers, whence it runs back to the ocean or inland lakes, to be distilled again. This process has gone on so long that all collections of outletless waters become loaded with the salts and other minerals, as would be expected in the residuum of distilled water, simply because salts and minerals are not volatile like water, which rises as steam even at temperatures below zero (F.). (See works on steam.) Thus the ocean and the Dead Sea have become salt. This natural distillation has existed for ages, on a most tremendous scale, and will continue as long as God wills. It is difficult to see how anybody can monopolize water stills, they are so universal.

The principles of distilled water production, artifi-

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cial, are: Evaporation and condensation in a reservoir. The former is had by heat, the latter by surrounding the reservoir with cold water or cold air.

I remember seeing, when a boy, almost a stream of clean, pure, glistening water fall from the under surface of the cover of my mother's wash boiler, when she removed it to gratify my boyish interest in its seething contents. I think a few drops fell on me, and I found out it was hot water. I wondered where it came from, for I saw there was no contact with the boiling suds, and it was clear water. It was a problem to me then, and I think my boy mind must have solved it at that time, as distilled water condensed by the contact of air which,

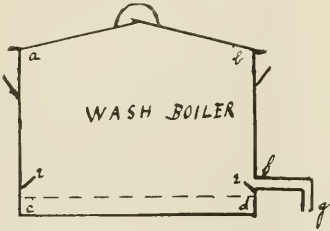


Fig. 1.—Vertical section of wash-boiler still, a, b, c, d; e, e, one-inch flange; f, opening; g, tube.

rising as fast as it was heated, was replaced by cooler air, condensing the steam. Every time I saw a wash boiler at work I verified this observation. This principle of making distilled water became a fixed one with me, but it lay dormant and was not utilized for about forty years, when a patient of mine was going to Idaho to teach school and I did not want her to drink the alkali water. I told her to have a common wash boiler soldered all around inside, four inches from the bottom, with a strip of tin one inch wide, at an angle of 45 degrees. At one



Fig. 2.—Vertical tank still; ab, 12 inches; ac, 28 inches; CL, 4 1/2 inches; LL, 1-inch ledge.

end of the boiler this ledge was to be left a little lower for drainage. The tinsmith was to put in a one-half-inch tube running outside for four inches, to drain into a receptacle, at least two inches lower for aeration. The other details were so simple that she had sweet water instead of bitter. The principle of this still is clearly manifest: The steam, condensed by cooler air in the boiler walls, ran down in tiny drops to the ledge and thence into the receptacle. In London, 1889, a like still was made for Sir W. A. Mackinnon, the highest medical official of the British army, who approved of the principle and said he wished he could have had one in

India. I have published illustrations of this still several times.

The still made in London had not surface enough; it got too hot, so it would not condense.

When Fig. 3 was run on the cover over the fire box of our kitchen range it condensed 10 ounces an hour or 2 gallons daily, more than enough for one patient; but placed over the cover next the first named, it distilled just the same amount with the advantage of being out of the cook's way. Increase the height and the product is increased, and perhaps in a greater proportion, as the higher the still the farther away from the fire. This can be done by adding a bottomless still of the same size and placing the cover on top as before. Fig. 3 was made, with a copper bottom, of common tin, for \$4.25, by a plumber.

Suggested forms of this still.—Have a closed, clean tin or galvanized-iron stove or furnace pipe 10 to 25 feet long set upright out of doors, close to the house. Have a small air hole at the top, also an exit tube at the closed bottom next to it for delivery and aeration of the distillate to the receptacle. Connect the steam through an opening four inches from the bottom, from a common tea-kettle or other source. Or run the tea-kettle or other steam into a common wash boiler, through an opening in the cover which has a drip tube.

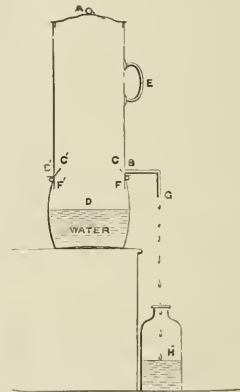


Fig. 3.—Water still as used by E. C. Air the condenser. Height, 2 ft. 6 in. A, handle to cover; E, side handle; C, C, 1-inch flange; B G, distillate tube; H, receiver.

If steam is easily had, it can be run into a rejected water back-tank—which plumbers are glad to throw away—set vertically outside. These examples are enough to demonstrate the principles of air-condensing water stills which, for their simplicity, cheapness and usefulness should be as free as air, and should be found on ship-board and all places where pure water can not be obtained. The product from sea water, obtained from Fig. 2, is palatable, pure and delicious.

The difficulty with rain water is that there are so many forms, organic and inorganic in the air—morphology—that the taste is impaired. If the rain is filtered, as in mountain springs away from man and beast, the result is delicious and curative as patients testify to the curative effects of pure spring water.

DIETETIC PRINCIPLES OF AERATED DISTILLED WATER.

Negative.—It is not a poison or I would have been dead long ago, as I have for years used all the distilled water I could get. Its osmosis is harmless. A German physician, Dr. Koppe, claims that the turning white of

the epithelia of the alimentary canal by distilled water shows it to be poisonous. There is some truth as to the color, as seen on washer-women's hands turning white in the suds, from long immersion, but I never knew of one being poisoned. I wonder how our German secured his information. For about twenty-five years I have studied the morphology of hydrant, well and ice waters. Rarely, if ever, have I found epithelia absent. Many are so common and well preserved that their presence has become a matter of fact, taken for granted as daylight. Epithelia have a wonderful vitality soaked in water and have no washer-woman's white color. I wish our learned German friends would see if we are right in saying that probably epithelia loaded with diphtheritic or scarlet fever vegetations in hydrant water may communicate these diseases, also as cholera, smallpox, typhoid fever, etc. My patients have freely used distilled water and none were poisoned, in fact have recovered from so-called incurable diseases. Allowing the dictum aforesaid, Nature reproduces epithelia so rapidly as to meet the need, wet or dry, but this is nominal metabolism.

Positive.—Distilled water cleanses the tins that contain or condense it, brightly. This might show that hydric acid = HO = distilled water, is more active than undistilled to dissolve salts and metals—that is to say, having no salts in solution is a great clinical advantage as distilled water will more readily dissolve out granular, crystalline and massive gravels that accumulate: 1, in the blood in rheumatism or gout; 2, in the lungs in asthma, fibroid consumption and chronic bronchitis, colds and coughs; 3, in the kidneys, intestines, liver, vagina, mouth, blood-vessels—arteries; 4, in and on the skin; 5, on the teeth as tartar—in fact all the calculous diseases, no matter what the location.

ROLE OF CALCULI, INCLUDING ALL GRAVELS.

They are formed normally in the body systemic in the performance of its functions. Normally they are saline bodies held in solution, and are dispensed with after use by the skin, urine, feces. This is said advisedly from many years of observation by others and myself. If from any reason calculi are deposited from their solutions in the blood, urine, feces or the skin—whose sweat, tasting of salt, is one proof of these salts—then the respiratory tract vicariously attempts to eliminate these calculi from the system and so irritates the air-passages and causes coughs and colds—as one of Nature's ways to get rid of the calculi as intruders on the peace of the kingdom of the body systemic.

If the lungs and nares do not succeed in the removal, the over-worked kidneys, intestines and skin take a hand and do the best they can, and yet we call these lung, nephritic, intestinal and dermal efforts—diseases—when they are nothing but Nature's efforts to save the health and life of the body systemic. Now the most common sense thing to do in helping Nature to cure these so-called diseases is to wash out the calculi with water, God's great gift to man. It stands to reason that distilled water, having no saline bodies in solution, will dissolve out more gravel than ordinary well or hydrant waters, even if filtered.

A few years ago, Dr. R. H. Sayre, of New York City, returned from Paris saying the French told him this doctrine, and he informed them he had heard it in America.

SOME PRACTICAL EVIDENCE.

A few years ago a veteran captain, War of 1861, had

the signs of fatty degeneration of the kidneys, voiding calculi. The Geneva Spring water was his drink. A large uric acid calculus brought him \$5.00 from the water company and was referred to in advertisements as positive evidence of the marvelous removal of stone by this water. But the man grew worse and went to Dr. J. A. Cutter's hands, who, finding there were some 232 grains of solids to the gallon of the Geneva water, correctly inferred that the water kept the calculi forming in a system which before was saturated with salts. Captain C. was put on distilled water for drink and chopped meat diet. His health was restored and now no calculi are voided. I deem distilled water far better than lithia waters, on the ground of cures and the uselessness of adding more salts when the system is so saturated as to deposit granular, crystalline and massive gravels or calculi inside the viscera and tissues.

CASE TO SHOW THE DIFFERENCE BETWEEN COCHITUATE WATER AND DISTILLED OR SPRING WATER WITH LESS THAN TEN GRAINS TO THE GALLON.

Professor M., of Boston, an old patient of 1876, in the pretubercular state, about 1894 had a severe and harassing cough which, under the circumstances, caused apprehensions of the return of tuberculosis. But the morphology of the blood was not tuberculous nor pretuberculous. The sputum showed gravel—granular, free and encysted—in giant mucous corpuscles distended by the gravel, also crystalline and massive—i. e., like broken glass—and pigment matters. He was, as to drink, treated with spring—as above—and distilled water. Fourteen days later the gravel had mostly disappeared from the sputum and with it the cough.

These opinions are based on a study of the morphology of hydrant and well waters for twenty-five years. My conclusions are that water by itself or inhaled in the air passively and constantly is a food, indispensable to all mankind; that, if so, why feed "calculi" patients on waters which add to the already overloaded collections? that distilled water properly aerated is the best for such rheumatics and asthmatics; that if Germans have been poisoned by distilled water, it is a very remarkable idiosyncrasy in those who have figuratively more vitality, more strength and actually enjoy more rights than Americans; German patent medicines are used by American physicians largely, beneficially, undisturbedly, while cis-Atlantic patent medicines and appliances can not be employed by American physicians; that water is a solvent in biology; that the purer it is, the better will water wash out the viscera, dissolve calculi, ease the flow of blood through the more than 100,000 miles of capillaries in the system, promote osmosis, soften tissues, accelerate secretions and excretions, equalize all circulations, aid cerebration, cardiation, digestion, metabolism; that distilled water is free from bacteria, yeasts, epithelia loaded or not with cryptogamic diseases; that whatever gets in from the morphology of the air of the kitchen can not be so deleterious as some aver, because the culinary queens inhale it all the time, harmlessly.

The writer hopes it will become the fashion to "treat" people with distilled in place of undistilled water and spirituous liquors, as he found it appetizing, satisfying, going to the right spot, clean tasting and beautiful to the eye as well as the palate, wholesome and never intoxicating (toxa=poison) as our experience proves with the Americans and English, though Dr. Koppe asserts it has. I respect him but do not accept what he says, as it does not tally with the facts here given.

CHRONIC CONSTIPATION A SYMPTOM RESULTING FROM A DISORDERED STATE OF THE SYMPATHETIC NERVOUS SYSTEM. ITS CAUSES AND CURE.

BY CHARLES E. STEWART, M.D.

BATTLE CREEK, MICH.

Chronic constipation, although commonly considered a disease *per se*, is in reality only a symptom indicating the presence of some more general disorder. This symptom, if such we may be permitted to term it, is one which accompanies a great many disorders, being most frequently met with in persons having some other digestive disturbance. Whenever encountered, it is an indication of some inhibitory power acting through the motor, vasomotor, secretory, or sensory mechanisms of the alimentary canal. These mechanisms, being involuntary in nature, are under the control of the sympathetic nervous system; consequently the primary cause of the constipation must be sought for in some inhibitory influence acting on any or all of the mechanisms referred to.

A brief survey of the anatomy and physiology of the sympathetic system will make clear the anatomic relationship existing between the cerebrospinal and the sympathetic system, and also their control over the functional activities of the alimentary canal.

The sympathetic system, although not wholly removed from the influence of the cerebrospinal, as will be seen later, has to a certain degree an independent action of its own, by means of which it controls nutrition and visceral rhythm. The sympathetic system consists essentially of: 1, a series of small ganglia located on the posterior roots of the spinal nerves close to their emergence from the cord; 2, a series of ganglia located on either side of the vertebral column, extending from the base of the skull to the coccyx, these being joined together by means of nerve-fibers, at the top by the ganglion of Ribes, and at the bottom by the ganglion impar, thus making a continuous chain of ganglia, commonly known as the gangliated cord, or vertebral ganglia; 3, three large gangliated plexuses located in the thorax, abdomen, and pelvis, known respectively as the aortic, abdominal and pelvic plexuses, or prevertebral ganglia; 4, an innumerable number of smaller ganglia located in relation with the various viscera and blood and lymph vessels, known as the terminal, automatic, or visceral ganglia, and 5, a large number of nerve-fibers. These are of two kinds, communicating and distributory. The former connect the ganglia with each other and with the cerebrospinal nerves; the latter connect the prevertebral ganglia with the automatic ganglia located in the viscera and circulatory system. The spinal nerves are connected with the vertebral ganglia by means of the white rami communicantes, which pass out from the anterior roots of the spinal nerves, some fibers passing to the vertebral, others directly to the prevertebral without communicating with the vertebral ganglia. There are also gray rami, consisting of non-medullated nerve-fibers, passing back from the vertebral ganglia to join the main nerve trunk of the spinal nerve, part of the fibers passing back to the cord as vasomotor fibers to supply the vessels of the cord and its coverings, the remainder passing with the main trunk of the nerve to supply the blood-vessels of the periphery.

The white rami are composed of visceral and vascular fibers, which are medullated. The gray rami contain fibers which are non-medullated, and are vasomotor in their function. The white rami are of special import-

ance in connection with the question under consideration, in that they influence the functional activities of the alimentary canal. Certain of these medullated fibers of the white rami pass from the cord between the second dorsal and the second lumbar nerve, to supply the viscera and blood-vessels, which, according to Gaskell's nomenclature, are called splanchnics. These have been divided into three sets, according to location: 1, thoracic; 2, abdominal; 3, pelvic. The abdominal splanchnics consist of three main nerves, or trunks, designated the greater, lesser, and smaller splanchnics. The first is formed by branches from the sixth to the tenth thoracic ganglia. It pierces the crus of the diaphragm, and joins the solar plexus. The second or lesser splanchnic is formed by branches from the tenth to the eleventh ganglion. It pierces the diaphragm and joins the solar plexus. The third or smallest splanchnic arises from the last ganglion, pierces the diaphragm, and terminates in the solar plexus. These three nerves frequently communicate with one another, and all end in the aggregation of sympathetic nerve substance located posteriorly to the stomach and surrounding the celiac axis.

From this, the greatest of the sympathetic nerve-centers, fibers are distributed to all parts of the abdominal viscera. Its functions are to control the secretory, vasomotor, nutritional, and visceral ganglionic activities. The secretory functions of the intestinal glands are directly under the control of Meissner's plexuses, which are located in the submucous coat of the intestine, and are influenced by the solar plexus.

The vasomotor functions are controlled by means of fibers reaching the blood-vessels through the splanchnics, the greater splanchnic being the largest vasomotor nerve of the body. The nutritional and visceral ganglionic activities of the intestine, while under direct control of the visceral or automatic ganglia, are predominated over by the solar plexus. The independence of action possessed by the visceral ganglia is observed in the rhythmic peristalsis which occurs in the intestine when removed from the body. This is well illustrated in the intestine of the dog.

Auerbach's plexuses, between the longitudinal and circular coats of the intestine, extending from the esophagus to the rectum, are automatic motor centers, and it is through the influence of these that it is possible for peristalsis to take place in the intestine after removal from the body. When these centers are uninfluenced by any stimulus, there is a condition of aperistalsis.

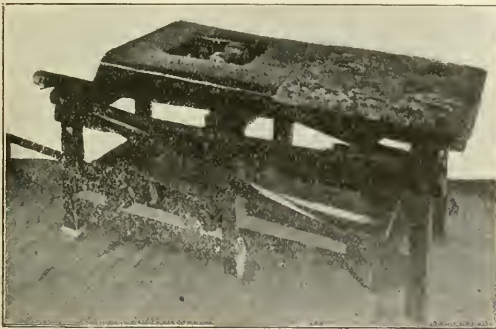
While the automatic motor ganglia are found in both the large and small bowel, there is considerable difference in the rapidity of the peristaltic wave in each. The nerves influencing the small intestine cause rapid peristaltic movements, while those controlling the large bowel and rectum cause slow movements. This difference in activity between the large and the small bowel is undoubtedly due to the difference in innervation; the small bowel is influenced by fibers from the solar plexus, while the inferior mesenteric ganglion of the sympathetic system influences part of the transverse and the descending portion of the colon, the sigmoid flexure, and the rectum. It is a well-known fact that the peristaltic action of the alimentary canal is largely under the influence of the blood-supply, the latter in turn being controlled by the vasomotor nerves.

The relative amounts of oxygen and carbonic acid gas contained in the blood determine to a considerable degree the rapidity with which peristalsis takes place. The greater the amount of oxygen present in the blood, the

less the peristaltic movement; and the greater the quantity of carbonic acid gas present, the greater the peristaltic action. In the absence of other stimuli, and when blood containing a normal amount of blood-gases passes through the intestinal blood-vessels, the usual normal peristaltic movements occur.

The abdominal splanchnics, which contain inhibitory, motor, vasomotor and sensory nerve-fibers, when stimulated, materially alter the peristaltic movements of the small intestine. When the blood-supply of the intestine is normal, stimulation of the splanchnic inhibits peristalsis; when there is an increased amount of blood in the intestinal vessels, stimulation augments peristalsis. The opposite is true when there is an increased amount of arterial blood circulating through the intestinal vessels. The inhibitory fibers are easily exhausted by an increased amount of venous blood. The stimulation of the splanchnics after death always causes peristalsis, which is in all probability due to the fact that there are motor fibers present which remain excitable for a longer time than the inhibitory fibers. The vasomotor function of the splanchnic is observed by the constriction of the blood-vessels which takes place when it is stimulated. When the nerve is severed, there is dilatation of the intestinal vessels. The sensory function of these nerves is observed in the painful conditions arising in certain disorders of the abdominal viscera.

While the functions of the alimentary canal are almost entirely under control of the sympathetic system, the cerebrospinal system has a modifying influence through the action of the vagus on the stomach and the upper portion of the small intestine, and the action of the sacral nerves on the sigmoid flexure and rectum.



KNEADING MACHINE.

In certain diseases of the central nervous system, obstinate constipation results from a disordered state of the reflex mechanism governing the sigmoid flexure and rectum. As a result of this condition, the large bowel is unable to unload itself, while the small intestine keeps forcing its contents onward, thereby overloading the fecal reservoir, and producing obstinate constipation.

Constipation, then, may be considered a symptom characterized by prolonged retention of feces in the alimentary canal, caused primarily by inhibitory influences acting on the motor, vasomotor, secretory, and sensory mechanisms of the alimentary canal. As these mechanisms are chiefly controlled by the sympathetic system, constipation might properly be termed a neurosis of this system.

The etiologic factors in the production of the dis-

orders which give rise to the symptom constipation are many, and, as previously indicated, are those which exercise an inhibitory influence on the motor, vasomotor, secretory, and sensory mechanisms of the canal. The motor mechanism may be disturbed either generally or locally; generally, by anything causing an atonic condition of the muscular or glandular activities of the canal, as cancer, diabetes, chlorosis, anemia, etc.; locally, by strictures, sacculæ, tumors, gravid uterus, enlarged prostate, or anything which locally interferes with peristalsis. Localized pain from hemorrhoids, fissures, tumors, etc., is also an etiologic factor in the production of constipation. This is undoubtedly caused by the individual shrinking from evacuating the bowels because of the accompanying pain. This failure to evacuate soon interferes with the visceral rhythm, which, together with the retained fecal matter distending the canal, soon renders the musculature inactive. Although capable of acting independently, the vasomotor and secretory mechanisms in the main act in unison. This is due to the close relationship existing between the two mechanisms, each being more or less dependent on the other.

Since the amount and character of the secretion depends largely on the amount and character of the blood, a condition of intestinal anemia means an absence of intestinal secretion, which has a tendency to produce intestinal constipation. In these disorders in which there is a diminished amount of secretion, as fevers, and diabetes, constipation is a common symptom. In persons whose occupation keeps the perspiratory glands overactive, constipation is of common occurrence. Failure to respond promptly to the demands of nature in this respect interferes with visceral rhythm and soon results in a constipated condition of the bowels.

Constipation is more common in females than in males, due in part to the more sedentary and indoor occupation of the former, and in part to woman's manner of dress, which limits the action of the intestine, and is also a causative factor in the production of enteroptosis. Chronic constipation is a symptom in active and chronic disorders of the brain and cord, as meningitis and myelitis, and is also observed in tetanus. Diet undoubtedly plays an important rôle in the production as well as the relief of this symptom. It is a well-established fact that dyspepsia, with its long train of varying symptoms, of which constipation is a frequent one, has improper food for its origin in the majority of cases.

Drugs, which are almost universally used for the relief of constipation; but their use usually relieves the symptom by producing another of an opposite character, and one just as disagreeable to the patient. Instead of removing or curing the causative factors, purgatives, by their stimulation of the motor and secretory mechanisms, temporarily increase the sluggish peristalsis, thereby giving temporary relief. After the effect of the drugs has been expended, the original state of sluggishness, but to a greater degree, is usually reached, requiring a more powerful purgative to produce evacuation. This drugging process is frequently kept up until both the patient and the physician nearly exhaust themselves in trying to effect a cure.

Sometimes it is difficult to decide whether or not a person is suffering from constipation, because of the fact that what may be a normal number of evacuations for one person is inadequate for another. However, in a very large percentage of cases, one normal evacuation in twenty-four hours is considered sufficient, while two

evacuations in this period, or one in forty-eight hours, may be considered normal for a smaller percentage. In some one movement per week seems to be sufficient. Besides the retention of fecal matter, there is generally a sense of fulness, lassitude, mental depression, or headache; the tongue is usually coated; the breath may or may not be foul. These conditions are usually relieved as soon as a free evacuation is obtained, but will return again if fecal matter again accumulates. If the bowels remain constipated for a considerable length of time, symptoms of autointoxication are likely to appear. Under such conditions there is likely to be great depression, loss of appetite, sick headache, and even melancholia.

The diagnosis is usually easily made, the patient referring to this particular symptom along with a list of others common to digestive or other disorders. In some cases the diagnosis is not so readily made, and careful physical examination is required before the true condition of affairs can be learned. Diarrhea sometimes accompanies some of the worst cases of fecal impaction, due to the hardened fecal material producing severe irritation, which excites peristalsis, resulting in frequent expulsion of part of the bowel contents.

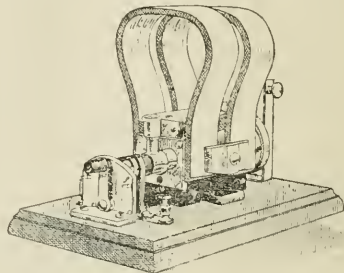
The prognosis of chronic constipation is favorable unless there is some change in the canal which is not readily remedied. The prognosis is usually favorable, being most so for those patients who can obtain treatment in a thoroughly equipped and scientifically conducted medical institution. While there is perhaps no other symptom so readily relieved by the use of drugs, it is a fact that the fewer drugs used in its treatment the better, for in the vast majority of cases their use is an irrational procedure. It is true that drugs usually promptly relieve the symptom and the patient is satisfied for the time being, but sooner or later the difficulty will return with renewed vigor, and a stronger purgative will then be needed to effect an evacuation. The remedies which once gave such prompt relief have not only failed to effect a cure, but, on the other hand, have been the means of contributing to the causative factors already at work in the production of this symptom.

Constipation, like any other symptom of a general disorder, must of necessity be relieved by directing the remedial agents at hand toward the removal of the cause. The methods of treatment which have been found to be most satisfactory in the cure of chronic constipation are unfortunately such that many of them can not be employed by the general practitioners so as to give the most satisfactory results. Many of these patients require the combined effects of a most carefully regulated diet, hyriatic and electric applications, mechanical and manual Swedish movements, and carefully regulated exercises.

In the treatment of chronic constipation the question of diet is of paramount importance. It is through this channel that the foundation of most digestive disorders is laid. Dyspepsia, so universal in America that it is sometimes termed "the American Disease," is largely caused by dietetic errors, the principal one being undercooked and imperfectly disintegrated starchy foods, giving rise to amyloaceous dyspepsia. Fermentation from this cause results in the production of poisonous substances, these in turn giving rise to autointoxications. These poisonous substances circulating in the blood have a deleterious influence on the delicate structures of the nervous system, which react in various ways, giving expression to the almost innumerable symptoms common to the different forms of digestive disturbance. The use

of condiments and highly seasoned foods has a powerful influence in causing inactivity of the bowels.

The writer is of the opinion that the diet is one of the first factors to be considered in the establishment of a cure for chronic constipation. The patient should be instructed to adopt as nearly as possible an aseptic dietary. This should consist of foods containing the proper amount of carbohydrate, nitrogenous, and fatty food substances required to nourish the body properly. The carbohydrate foods, which make up the largest share of our food, should be taken in the most easily digested and assimilable form obtainable. Foods containing a very large percentage of starch should be thoroughly cooked. Ordinary cooking by means of boiling is not sufficient, for the raw starch by this process is simply changed to amyloextrin, or soluble starch. The soluble starch, however, can be further digested by means of



dry heat. When starch is subjected to a very high degree of dry heat, or moist heat under pressure for a sufficient length of time, it is converted into erythro- and achro-odextrin. The latter, when subjected to the action of the saliva, is converted by the ptyalin into maltose, a product capable of immediate absorption. Food prepared in this manner is so readily digested and absorbed that it relieves the stomach and intestine of the burden of retaining a large amount of starchy material which, under the favorable conditions frequently met with in disorders of digestion, is so prone to undergo putrefactive changes. By the use of such thoroughly cooked starchy foods these fermentative changes are lessened, or entirely checked. The question of nitrogenous and fatty food substances is also an important one. The animal kingdom is relied on to a large extent to furnish these two important elements. The readiness with which animal foods undergo putrefactive changes renders them questionable, especially for those cases in which fermentative changes readily take place. The nitrogenous and fatty material, which can readily be obtained in sufficient quantities and proper proportions from grains, including the legumes, and edible nuts, does not have the tendency to decompose that the same foods from the animal kingdom do. Besides possessing this important qualification, grains are also a very wholesome and economic source of food-supply. When one buys a pound of zwieback or rice, he is not paying for 70 or 80 per cent. of water, as he does when he buys a pound of beefsteak. On the contrary, he is getting more than 80 per cent. of food; he is also obtaining his food direct from nature's garden, and not allowing it to be utilized by some other animal no more capable of storing up energy from it than himself. The use of such pure foods, properly cooked, can not have other than a normal influence on the digestive tract.

Another source of food-supply which might be drawn upon more extensively to good advantage is fruits. In these the quantity of nourishment is not great, but what is present is readily digested and assimilated. Nature does in the fruit, during the ripening process, what art does in the cooking of starch by dry heat, i. e. she converts the starch into sugar. Besides the sugar—and a greater or smaller amount of nitrogenous and fatty food substances—which varies according to the variety, fruit contains succulent juices which promote an abundant flow of the digestive fluids, and furnish the body with a considerable amount of pure water and salts, both of which are essential to proper metabolism. Most fruit juices also have an inhibitory action on germ growth. From the three sources of food mentioned, viz.: fruits, grains, and nuts, an ideal dietary can be selected for both the sick and the well. It was the original diet of man, as outlined in Genesis, and a dietary that will make a sick man well and keep him well. George Cheyene, in his essay on "Health and Long Life," written in 1725, says, "Animal food and strong liquors seem not to have been designed for man in his original make and frame, but rather indulged, to shorten the antediluvian length of life, in order to prevent the excessive growth of wickedness."

In selecting a dietary for a patient troubled with chronic constipation, such dry foods as zwieback, browned rice, etc., are found to be palatable, easy of digestion, and at the same time to present bulk enough to excite gentle peristaltic movements. Nuts, in order to be of service, should go through a special process of preparation. At the present time such specially prepared nut foods as protose, nuttolene, malted nuts, granuts, bromose, and a number of others, can be found on the market. A careful analysis of these nut foods has been made in our laboratory, and they have been found to be sterile and wholesome, and to contain nitrogenous and fatty material in proper proportions to meet the demands of the human economy. A diet consisting of granose, browned rice, protose, steamed figs, prune marmalade, and ripe fresh fruits such as apples, strawberries, oranges, etc., almond butter, and cream, is so palatable, nourishing, and easy of digestion that the most fastidious epicure could find no fault with it.

The patient should be instructed to use no liquid with his meals, other than that which is contained in the food. A glass of cold water half an hour before each meal, and as much hot or cold water as is desired $2\frac{1}{2}$ to three hours after each meal, will prove beneficial. He should also be instructed to eat the dry food at the beginning of the meal. The dryness of the food will necessitate thorough mastication and insalivation, resulting in the thorough digestion of the starch.

After arranging a proper dietary and giving the patient explicit directions concerning it, treatment should be instituted at once to relieve him of the accumulated mass of fecal material. This can usually be done by means of cleansing enemas of warm water, using from one to two quarts at a temperature of 100 to 102 F.; if this fails, two ounces of olive or sweet oil followed by a strong solution of soap-suds, one to four pints, at a temperature of 100 to 102 F. The cleansing enemas should be employed for three successive days, and should be followed by the graduated enema, which is given as follows: The first day after the last cleansing enema use seventy-two ounces of water at a temperature of 102 F.; the second day, 64 ounces at 98 F.; the third day, 56 ounces at 92 F.; the fourth day, 48 ounces at 88 F.; the fifth day,

40 ounces at 84 F.; the sixth day, 32 ounces at 78 F.; the seventh day, 24 ounces at 74 F.; the eighth day, 16 ounces at 70 F.; the ninth day, 8 ounces at 64 F.

The effect of this treatment is to keep the lower bowel from becoming obstructed, and at the same time to give tone to the walls of the bowel by gradually reducing the temperature and the amount of water used. The impressions thus made on the mucous membrane of the bowel reflexly excite the splanchnics, which in turn, through Auerbach's and Meissner's plexuses, excite normal peristalsis. This treatment should be taken at the same time each day to establish a rhythmic movement of the bowel. The cold also stimulates the secretion of the liver, and the portal system, which in turn affects the intestinal circulation. Besides the graduated and cleansing enemas, other hydratic procedures, such as the hot enema, the cold enema, the *umschlag* or moist abdominal bandage, the cold sponge both, cold mitten friction, cold douches, and alternate hot and cold douches to the abdomen, wet sheet pack, and cold sitz bath, are very effective through their influence on the sympathetic centers and splanchnic nerves in exciting the various functional activities of the intestine. The Scotch douche, which consists of rapidly alternating applications of heat and cold, when applied to the abdomen, has a strong tonic influence on the abdominal muscles and also on the involuntary muscles of the intestine. So far as external applications are concerned, the Scotch douche is the one par excellence in exciting to greater activity the motor, vasomotor, and secretory functions of the abdominal viscera.

Abdominal massage, both manual and mechanical, is a very valuable aid in strengthening the abdominal and visceral muscles. Special movements to replace viscera are also valuable. An atonic condition of the abdominal muscles favors enteroptosis, which might properly be termed an etiologic factor in chronic constipation. By properly executed massage movements the abdominal muscles are strengthened and the viscera replaced. In cases of prolapsus of the stomach, after replacement by means of carefully executed manual Swedish movements the organ may be retained in place by the natural abdominal supporter. Great relief is frequently experienced by the use of this support.

The support should be adjusted while the patient is in a reclining position.

The value of abdominal massage in the treatment of chronic constipation has received insufficient attention, undoubtedly from the fact that there are comparatively few scientifically trained masseurs. The bungling work frequently done by many masseurs, instead of giving satisfactory results, has frequently resulted in increasing the patient's discomfort. When given properly massage works wonders in relieving a constipated condition of the bowels: by it the blood-supply is increased, the musculature is toned up, normal secretory functions are established, all of which aid in the re-establishment of a normal peristalsis.

Mechanical devices have been constructed, which, when judiciously employed, give excellent results. Of these the one employed in giving abdominal kneading is of great service in relieving constipation. The apparatus consists of a table with a large aperture near the center of the top. In this opening plays a series of six vertically-placed bars. Each bar is separately connected with an eccentric, to give it an independence of motion. When in motion, these bars have an undulatory movement. The top of the table is so constructed that with

each vertical movement of the bars it moves back and forth, thus bringing the entire abdomen in contact with the kneading bars.

Cannon-ball massage is a valuable adjuvant to other forms of mechanical and manual treatment. This treatment may be employed by the patient himself. It consists in rolling a four-to-six-pound cannon-ball covered with leather over the colon from right to left.

Electricity, although little utilized for the relief of the condition under consideration, in many cases can be used with good results. This is particularly true of the sinusoidal current, which can be used with great advantage where there is an euteroptosis due to relaxed abdominal muscles. When the abdominal muscles are relaxed, the stomach, bowels and other viscera become pendant, and drag on the branches of the prevertebral ganglia of the abdomen, resulting in reflex disturbances which give rise to pain and other symptoms, among which constipation is not an infrequent one. After replacement of the viscera, the application of the slow sinusoidal current to the abdominal muscles, produces results which can not be accomplished by any form of passive exercise.



CANNON-BALL MASSAGE.

By means of a rectal electrode introduced into the rectum, and a pad electrode placed over the abdomen, the musculature of the lower portion of the alimentary canal can be gently exercised by the rapid sinusoidal current. This form of treatment gives most excellent results in those cases in which there is a semiparalyzed condition of the musculature of the rectum due to failure on the part of the patient regularly to evacuate the bowel.

Exercises calculated to develop the body as a whole, and especially to develop the abdominal muscles, are of great importance. If the general musculature of the body is in an atonic condition, that of the alimentary canal is likely to be in a similar condition, and vice versa.

It is indeed surprising to note the readiness with which a functionally disordered sympathetic system will respond to such rational measures as have been outlined, and when these are directed toward assisting the *vis medicatrix naturæ*, the most gratifying results are obtained.

ONE OF the features of the Exposition of Hygiene at Naples is a reproduction of the heating, lighting and water-supply arrangements of a Pompeian house. Naples now boasts of the finest water-supply in the world since the waters of the Serino have been piped into the city, and the transformation of most of the famous Naples slums into handsome boulevards during the last ten years is an interesting feature to be seen in connection with the exposition.

THE PATHOLOGY OF CRIMINAL ABORTION.*

BY MAXIMILIAN HERZOG, M.D.

PROFESSOR OF PATHOLOGY IN THE CHICAGO POLICLINIC.
CHICAGO.

The pathology of criminal abortion has to establish: 1. The causal nexus of premature expulsion of the ovum with the employment of internal medicinal or external mechanical means, adopted for the accomplishment of the desired criminal attempt. 2. To account for the illness or death of the mother during or after abortion.

The latter part of our subject, that referring to death of the mother, is comparatively easy to handle, because in the latter event cases have been frequently thoroughly investigated. The employment of modern histologic and bacteriologic methods to clear up the pathology of such cases is within easy reach. It is different when we approach the other part of our task. It is a notorious fact that only a small minority of the non-fatal cases, more particularly of the cases not complicated with serious, threatening disease of the mother, ever come to the notice of reputable, scientific members of the profession. Consequently our observations are made on a very small fraction of the cases, of which necessary details are, as a rule, lacking. Our data, therefore, lack reliability when we want to draw correct conclusions or establish general principles. Nor is the numerical insufficiency of the material that may be studied, compared with the enormous total figure of cases, the only ground why our conclusions must be unsatisfactory. The main reason lies in the fact that we know so little about the intrinsic cause of causes which normally lead to the beginning of the act of parturition at full term.

By far the largest number of criminal abortions are brought about by internal, medicinal agencies which enjoy the reputation of being "reliable abortifacients."

Lewin, in a recent extensive monograph on "Abortion by Poisons and other Means," considers in general and in special the dynamics of these abortifacients. In the subsequent consideration of the physiologic and pathologic effects of these abortifacients, we follow the views of the distinguished pharmacologist who has gone over the subject in a very thorough manner.

Lewin states that there are certain medicinal and other preparations which have the property to primarily or secondarily exert a pathologic influence over the uterus and the ovum contained in it. We possess certain poisons which can influence the uterus in such a manner that phenomena similar to those in parturition are produced and that the ovum becomes detached from the fruit bearer. But all internal means which, if taken in sufficiently large doses, may bring about this cycle of changes, are substances poisonous to mother and child alike. They have the property to bring about morbid disturbances of physiologic functions. Even a premature irritation of the muscularis uteri itself must be looked on as something pathologic attaining its highest degree in tetanic contraction. Abortifacients can neither theoretically nor practically be looked upon simply as means to produce prematurely a normal labor. In fact the labor and expulsion are generally brought about secondarily. The primary factors are the damaging pathologic influences disturbing the nutrition, or killing the embryo outright. Internal abortifacients generally act first by indirectly disturbing the nutrition of the embryo, by making the mother sick or even moribund, by producing hemorrhages and by detaching the ovum from the uterus. Artificial abortion by internal means is to

*Read before the Physicians' Club of Chicago, March 26, 1900.

be judged in the same light as spontaneous abortion in consequence of disease of the mother such as syphilis, typhoid, etc. The hemorrhages caused by internal abortifacients occur between the fetal membranes, into the amniotic cavity or into the placenta; they lead to a loosening or to a separation of the ovum.

Other pathologic processes noticed in connection with the internal use of abortifacients are hyperemias in distant organs of the mother, inflammatory processes in the gastrointestinal tract, the pelvic organs and in the ovum and its envelopes. Some abortifacients primarily and particularly act on the gastrointestinal tract and extend their influence secondarily only to the pelvic organs.

As a rule, the ovum is expelled when the toxic effects of the internal abortifacient reaches its climax, or shortly after this period.

A few of the more commonly used internal means to induce criminal abortion may be cited to show how these substances act as poisons producing grave pathologic processes, damaging both mother and child. The pathology of some of these drugs and chemicals has been studied in a number of fatal cases and also experimentally on animals.

Phosphorus, used extensively as an abortifacient in some countries, for instance in Sweden, brings about the general symptoms and changes of systemic poisoning and acts as an abortifacient by producing hemorrhages which detach the fetal membranes. This has been shown experimentally on pregnant bitches.

Oleum ruæ produces gastroenteritis, metritis and hemorrhages.

Tansy (*Tanacetum vulgare*) has in fatal cases brought about convulsions, cyanosis, spasmodic respiration, hemorrhages from the lungs and bloody discharges from the uterus and vagina.

Aloe, when used in doses large enough to bring about abortion, produces inflammation of the pelvic organs subsequent to gastroenteritis, nephritis, and hemorrhages between the fetal membranes.

Oleum sabine, one of the most powerful means to bring about tetanic contractions of the uterus on account of its supposed action on the lumbar centers, produces hemorrhagic inflammation in the gastrointestinal tract and in the kidneys. In a fatal case of abortion produced by Savine, a perforation of the stomach was found post-mortem.

Ergot, which has been used for more than a thousand years, in China, and which is first mentioned in Germany as an abortifacient in 1573, causes tetanic uterine contractions, contraction of arteries in general, increase of the blood-pressure, general convulsions.

From the studies which I have made on the normal and abnormal uterine placenta and the placenta in tubal pregnancy, I am inclined to believe that the first step in bringing about spontaneous abortion is very frequently a hemorrhage into the intervillous space and hemorrhages into the spongy layer of the decidua serotina. These hemorrhages come from the utero-placental sinuses, and their effect must be, as a rule, a loosening, eventually a separation of the ovum. It appears to me that a number of internal abortifacients act in the same manner. They first produce poisoning of the mother with circulatory disturbances and changes in the blood-pressure; these then lead to intervillous hemorrhages and hemorrhages into the spongiosa of the decidua serotina and loosening of the ovum. In this manner the pathology of the induction of premature delivery by internal abortifacients would be entirely analogous to the initiatory steps in spontaneous abortion.

Criminal abortion is often brought about by external and mechanical means and manipulations, instrumental separation of the fetal membranes, perforation of the amniotic cavity, introduction of a foreign body into the uterus, etc. As long as these manipulations do not lead to an infection or a serious trauma, with or without an infection, there is little to be said about them from a pathologic point of view.

If, however, as so frequently does, serious trauma and infection occur, then we meet morbid processes and changes which are of much pathologic interest. The question may here be asked: Is the danger of infection after criminal instrumental abortion greater than after the legitimate induction of premature labor? The danger in the former case is *per se* not greater than in the latter case. But criminal instrumental abortions rarely, if ever, are performed by careful, conscientious aseptic physicians, but, as a rule, by unscrupulous uneducated individuals unacquainted with the theory and practice of modern asepsis. For this reason criminal instrumental abortions are so frequently followed by septic complications. Grave traumatism is also one of the complications often met with in successful as well as unsuccessful attempts at criminal abortion.

Marsais collected 68 cases of wounds of the uterus produced in the performance of instrumental criminal abortion. Maschka reported 5 cases of fatal perforation of the uterus during attempts to rupture the membranes. Death occurred from septic peritonitis. Hektoen, Denslow Lewis, Henrotin and a large number of others have published reports of such cases of rupture of the uterus. The instruments used for manipulations to induce premature delivery in making perforating wounds have sometimes slipped away from the operator and have entered the pelvic or general abdominal cavity. The accident of perforating the uterus may, *per se*, not be followed by any dangerous sequelæ or complications, and pregnancy may go on undisturbed or a uterine pregnancy may be changed into an abdominal one, the fetus escaping through the wound of the uterus into the general abdominal cavity. Cases of the latter type have been reported by Leopold and Henrotin. The factor which constitutes the great danger in serious or even minor traumatism produced in attempts at criminal abortion is the same that threatens in every manipulation to induce premature delivery, namely, the occurrence of infection. By far the majority of cases of instrumental criminal abortion, with or without serious traumatism, which end fatally succumb to sepsis, which manifests itself in the form of septic pelvic or septic general peritonitis. The local reaction is characterized by a seropurulent, or fibrinopurulent exudation found on the pelvic or abdominal peritoneum or on both. In cases rapidly fatal, the local changes are often circumscribed and confined to small areas. In subacute cases there may be abscess in the uterine muscularis, the parametrium and perimetrium. Lingering cases of sepsis after abortion often develop distinct metastatic abscesses in joints, and metastatic septic endocarditis. A form of circumscribed septic infection of the pelvic organs following criminal abortion, to which Henrotin has repeatedly called attention, is the ovarian abscess. For such ovarian abscesses following abortion the corpus luteum verum, or a corpus luteum cyst furnishes the fertile soil for the primary seat of the septic process. The latter may remain localized if operation through the vagina is done in proper time, or it may lead to a fatal general septic peritonitis. It has been my privilege within the last three or four years to examine a number of Dr. Hen-

rotin's cases of ovarian abscess following abortion, and I have found in such cases, as the cause of the septic process, staphylococci, streptococci, diplococci, and the colon bacillus.

Tetanus has also been observed following criminal instrumental abortion with severe traumatism. Sudden death in consequence of embolism has been recorded following intrauterine manipulations with instruments and intrauterine air, water, or glycerin injections.

If now we attempt to outline the general principles of the pathology of the criminal abortion, we may perhaps characterize them as follows:

1. Premature expulsion of the ovum, if it occurs as the result of the internal administration of abortifacients, is an integral part of the general toxic symptoms, changes and processes due to those drugs or chemicals, acting in their deleterious influence on both mother and child.

2. Premature expulsion of the ovum if it occurs after detachment of the membranes, perforation of the amniotic cavity, etc., is brought about, because after such manipulations which may or may not bring about the speedy death of the embryo, the ovum acts as a foreign body and stimulates the uterine muscularis to contractions, or because intervillous or interdecidual hemorrhages occur.

3. Septic infection in its broadest sense, following criminal abortion is—*ceteris paribus*—not fundamentally different in its general and special pathology, its sequelæ and complications from other septic infections.

I have almost entirely neglected a pathologic consideration of criminal abortion brought about by copious hot douches, irritating applications to the cervix, etc. I have not been able to find a firm physiologic basis for even a modest attempt at explanation of the causal nexus between these means and the desired or accomplished result. I have to repeat in this respect, in conclusion, what was said above in the beginning: The trouble in trying to clear up the intrinsic pathology of certain types of criminal abortion lies in the fact that we practically know nothing definite about the primary factors which initiate normal labor at full term.

COMPLETE OCCLUSION OF BOWEL.

BY DWIGHT E. CONE, M.D.

BINGHAMTON, N. Y.

Nov. 2, 1899, I saw Mrs. A. B. R., of Greene, N. Y., in consultation with Dr. Williams of that town, who gave the following history: An American, aged 63, her family history was good. She had been married for forty-five years and had one child forty-two years ago. She had been troubled with what she called "bilious" attacks ever since she could remember. About thirty-five years ago she had a very severe illness which was described as inflammation of the bowels and, though "given up" to die, she gradually recovered. Since that time her troubles with her stomach, or "bilious attacks," have been more or less constant.

On September 4, last, she was attacked with vomiting and free purging, and after a week felt some better. In a few days there was another and one week later a third attack lasting about one week, after which there was no more purging, but the stomach sooner or later rejected everything taken, nothing having been retained for more than ten hours.

She was attended by a homeopath for four weeks and, for the week previous to my seeing her, by a clairvoyant. Dr. Williams saw her for the first time about six hours

before my arrival. There had been rapid emaciation, due to inability to retain any nourishment except rectal enemas, while these had not been able to keep up the vital forces. Temperature was 99; pulse 84 and feeble. There was no headache, and but slight soreness over the abdomen, though no point of marked tenderness. The bowels were much distended with gas so that their outline could be easily discerned through the abdominal wall. There was no dullness on percussion, but tympanitis everywhere. The urine was practically normal. Everything given by mouth distressed her, with the exception of 1/10-gr. doses of calomel and a small quantity of peroxid of hydrogen and "alkalol" in water. There had been no movement of bowels for four weeks, except as enemata were given, and the question that confronted us was whether the obstipation was due to some obstruction or paralysis of the muscular coat. The vomitus consisted of whatever might be taken, together with a tasteless and odorless frothy mucus. On November 5 there was no change in conditions, except that the patient was weaker and more easily exhausted. A saturated solution of sulphate of magnesia to the extent of twenty-four teaspoonfuls—a teaspoonful every ten minutes—was given with no result. Gentle massage over the bowels seemed to give relief. A large enema brought some fecal matter and gas. On November 9, when I saw her for the third time, the pulse was very rapid and the vital forces nearly exhausted, the temperature being 97, the pulse 132. There was no fecal vomiting, although the stomach refused to retain even water. There was no pain, except distress produced by distension of the bowels with gas and pressure against the diaphragm. Deeming the case *in extremis*, I advised against any operative measures. The patient died November 10.

Autopsy was held November 11, with Drs. Williams of Greene, Hitchcock of South Oxford and myself present. The body was very much emaciated and the abdomen tympanitic from the distended bowel. An incision extending from the ensiform cartilage to the symphysis disclosed no subperitoneal fat. The cecum and colon, ascending and transverse, were enormously distended with gas, the small intestine but slightly distended. At the junction of the transverse and descending colon there was a constriction five-eighths of an inch in length and three-quarters in diameter, which completely occluded the lumen of the bowel. On the gastric side of the obstruction there were five old cicatrices, probably from ulcers which had existed at some time, but were now only in evidence by their scars.

There was about one quart of liquid feces in the large intestine, and probably much more in the small, but there were no enteroliths larger than a pea and very few of these. On the mesenteric side of the constriction there was a firm band of adhesion, fan-shaped, with its broad extremity attached to the parietal peritoneum. Attempts to loosen this attachment caused the bowel to rupture on the gastric side of the obstruction. The bowels were emptied of gas and feces and the diseased portion excised. The liver was displaced to the left so that the left lobe lay entirely to the left of the stomach, and the right lobe lay directly on the stomach, as did the distended colon. The stomach was empty.

All the organs in the body were healthy and normal with the exception of the point described in the colon. This constricted part consisted of cicatricial tissue only, indicating that it was caused by ulceration and destruction of mucous and muscular coats of the bowel, and subsequent contraction.

The chief points to me are: 1. Why did we not get fecal vomiting? 2. Why did she not have either localized pain, tenderness or headache? 3. Why had this existing condition of incomplete closure not sooner become complete? 4. Should anything have been done for this patient in the line of surgical operation at the time I saw her?

My answer to these questions would be as follows:

1. The fact that the obstruction was so far removed from the stomach and the enormous size of the bowel beyond the ileocecal valve will in a measure account for our not getting fecal vomiting. Also the pressure of the liver and the colon on the stomach prevented the accumulation of any amount in the stomach, forcing it back by mechanical pressure and thus not only preventing the accumulation of food, but also acting as a cut-off for anything regurgitating from the bowels. Another thing is the length of intestinal tract available for absorption.

2. It would be conjectural to say why she did not have either pain, localized tenderness or headaches. My theory is that in the attack in September last, enough irritation was produced at the ulcerated point to cause inflammatory action sufficient to entirely close the lumen of the partially occluded gut, thus producing complete intestinal obstruction, but so low down in the bowel that absorption still took place. Her diet had been very simple and so little of it was retained after complete closure that there was not enough excrementitious matter to produce auto-infection. The real mischief, in my opinion, was done thirty-five years ago, hence there was no acute congestion or pressure on nerve filaments, but simply the discomfort caused by the great balloon in the abdominal cavity.

3. As to why this existing condition of almost complete closure had not sooner become complete, her history was that for the past three years her bowels had been more regular and her health much better, until the attack in September. Still, the same caution in regard to the diet had to be observed. Now why it did not sooner cause a wreck, no one knows.

4. As to whether anything should have been done in a surgical way at the time I saw her, I presume many would say a resection should have been made at once. But we should bear in mind that Dr. Williams had seen her but a few hours before I saw her, also for the first time. We had nothing but her history as given us, and she was then so weak that she would have to rest after every sentence and then the sentence had to be short. Her emaciation was marked and there was no vital energy stored up, the reserve, as the result proved, being nearly exhausted. Again, a median exploratory incision would not have given room to operate on the diseased portion, and the only way would have been to close the central incision and make an oblique incision parallel with the ribs on the left side, directly over the constricted portion of the bowel. This would have been a formidable undertaking under any circumstances, even with a large reserve of vital force to rely on for recovery. Still, I feel now that were I to meet a similar condition again, I would urge an exploratory operation.

THE EDITOR of the *N. Y. Christian Advocate*, Dr. Buckley, recently said that "Christian Science," as a system of therapeutics, would have died ere this if it had not been put forward as a religion; and it would have died as a religion if it had not been put forward as a system of therapeutics.

QUININ AMBLYOPIA.

BY M. COPLAN, M.D.

EX-HOUSE PHYSICIAN, LEBANON HOSPITAL, NEW YORK CITY.
CLEVELAND, OHIO.

Mrs. S., with her boy, 3 years old, called at my office on Dec. 2, 1899, stating that her child had not been feeling well for the last few days, and that his bowels were very loose. The family history was negative, the child's complexion was sallow, with slight anemia, and a coated tongue. He looked dull and depressed and refused to answer any question, not taking any interest in his surroundings. Temperature per rectum was 98.8 F., pulse 106, respiration 38. His mother stated that his bowels moved about eight or ten times during the day, that he had no appetite, and had ceased to play as he once did.

I prescribed small doses of calomel followed by magnesium sulphate and an antidiarrheal and tonic mixture, put him on a liquid diet, told the mother that she must keep him in bed, and if he was not better to let me know.

On Dec. 3, at 9 a.m., I was called and found my little patient vomiting, with a flushed face, injected eyes, the surface of the body hot, and asking for water all the time. Temperature per rectum was 102 F., pulse 126, respiration 44. Thoracic and abdominal examination revealed a yellowish skin, enlargement of the liver and spleen, particularly the latter, and tenderness all over the abdomen.

The mother said that "the child felt very cold about an hour ago, and acted as if he would have had convulsions;" also that he complained of feeling cold before, and sometimes he shivered, but she did not pay much attention to it, thinking that it was due to the weather; she was unable, however, to say when he commenced to complain of feeling cold, and how often.

With the aid of the microscope I diagnosed it a case of malarial fever of the quotidian type. I ordered cool sponging and cold lemonade frequently, and prescribed the following:

R. Quinina sulph. 3
Syrup yerbe sante comp. 60
M. Sig. One teaspoonful t. i. d.

I ordered her, verbally, to give two teaspoonfuls the next morning, about 7:10 o'clock, after the child had taken some food; after that she was to follow the previous directions.

I called on December 4, about 2 p.m., and found my patient asleep, and being informed that he was much better and did not have any attack that morning, I left without making any further inquiry, promising to come earlier the next day. On the following day I saw him about 10 a.m., and was astonished to find him complaining of not being able to see, asking where he was and why they did not light the gas or the lamps.

On questioning the mother, I was told that she gave him two teaspoonfuls four times the previous day, and once on the morning of the same day, so that he had taken about 30 grains in twenty-four hours. On examination I found total blindness of both eyes. The ophthalmoscope showed a pale optic disc, and it was very difficult to make out the condition of the retinal arteries. I at once discontinued the quinin and prescribed strychnin, 1/200 gr. t. i. d. The patient recovered gradually, and on the fifth day, viz., on December 10, could see almost as well as he did before.

A similar case came under my observation during my service at the Lebanon Hospital, which history I will describe in brief:

Mrs. H., aged 30, was admitted to the hospital complaining of headaches and having chills and fever. We soon diagnosed a very obstinate case of malarial fever of the duplicated quotidian type, paroxysms taking place between 7 to 8 a.m. and p.m.; temperature ranging between 104 and 106 F. Quinin sulphate, in doses of 15 grs. three times daily, was administered without any effect. Pilocarpin hypodermically, ergot, liquor potass. arsenitis, methylene blue, piperin, succus lemonis, etc., was tried without preventing a single paroxysm. With the approval of Dr. Zemansky, the visiting physician, we gave her quinin sulphate, 30 gr., three times a day, and 45 grs. two hours before the paroxysm usually occurred; the results were most satisfactory, reducing the temperature in the morning to 100 F. and preventing the afternoon paroxysm entirely, the temperature coming down to 99 F.

On the following day, when I made my usual morning rounds, the patient cried out: "Doctor, I am blind, I can't see, where am I?" She had then received 150 grs. of quinin in twenty-eight hours. On examination we found total blindness of both eyes. Dr. Wm. Cowen, the hospital ophthalmologist, examined the patient and found the optic disc pale, and the retinal blood-vessels very much narrowed. We at once discontinued the quinin, and prescribed strychnin sulphate and digitalis, the patient recovering full sight on the eighth day.

Looking up the literature at my command on this subject, while many cases of quinin amblyopia have been reported in adults, very few have been reported in the very young. Burns¹ reported a case where a child, 3 years old, ingested 30 grs. of quinin in eighteen hours, causing amblyopia. Harlem² reported one where an adult took 100 grs. in a few hours, causing amaurosis. Elis³ reports a case where an adult took 120 grs. in twenty-four hours, causing total blindness. All recovered full acuity, except the last one, which only recovered some of his former vision.

780 Lorain Street.

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REPORT OF UNIQUE CASE OF APPENDICITIS, WITH SOME REMARKS ON TREATMENT.*

BY JAMES T. JELKS, M.D.

HOT SPRINGS, ARK.

On the night of April 26 I received a note from Dr. A. S. Garnett, asking me to see a patient with him, in consultation, a woman with the following history: On the Friday previous she was feeling very well indeed and climbed Hot Springs Mountain with a party of friends. Saturday night she was taken ill with pains in the abdomen, which demanded relief. Dr. G. A. Hebert was called and found her suffering with the pain and a temperature of 100 F. He gave her a dose of morphin hypodermically, which relieved her. Sunday she had some pain, with a temperature of 101 F., and this lasted through that day and night. Monday found her free from fever, with normal pulse, but slightly irritable stomach, and vomiting whatever she took. Her bowels responded to a cathartic Sunday night and Monday morning. Tuesday they refused to move, nausea increased, temperature and pulse were normal, and the abdomen began to distend. Wednesday the bowels were constipated and there was no escape flatus; the pulse and temperature were normal and there was consider-

able vomiting with the bowels greatly distended, little or no pain.

Wednesday night at 11 o'clock she vomited stercoraceous material, and it was at this time that I was sent for and met Drs. Garnett, Greenway and Hebert in consultation; I found the abdomen distended, and slight pain in the epigastric and appendicular region. The vomited material was unquestionably stercoraceous in character. The temperature was normal, pulse 65, full and regular. The face of the patient bore no mark of suffering nor serious illness, whatever. The gentlemen present had diagnosed intestinal obstruction possibly from bands of adhesions. This diagnosis was encouraged by reason of the fact that six years previously she had one ovary removed by the late J. H. Etheridge of Chicago. Her health did not improve after this operation, and one year ago, while in San Francisco, the other ovary was removed. At this latter operation many bands and adhesions were found, hence it was easy for us to believe in the probability of obstruction produced by bands, in the present illness.

In this light of the case I advised surgical interference in the hope of saving the life of the patient. The situation was explained to her and her husband and they readily consented. Thursday morning she was removed to the Ozark Sanitarium, and with the assistance of Drs. T. J. Crofford, of Memphis, A. S. Garnett, G. A. Hebert and John A. Gaines, of Hot Springs, I operated. An incision was made between the umbilicus and pubic regions two inches in length, through the old scar. I found the omentum adherent, hence I enlarged the incision upward until I got above the line of the omental adhesions. These adhesions were separated by the fingers, and I began to look for intestinal hernia over some band. The intestines were very much distended with gas, and very dark in color; in spots quite black. With the assistance of Dr. Crofford they were rolled out and covered with warm, moist, sterilized towels. We searched for twenty minutes or more expecting to find an intestinal hernia over the band or bands. Failing in this we turned our attention to the appendicular region, where we found the gangrenous and perforated appendix, which was removed in the usual manner and the intestines rolled out of the abdominal cavity. We found the peritoneum ruptured in three places, from overdistention with gas. The appendix having been removed, the abdominal cavity was thoroughly washed out with sterilized salt solution; the intestines also received a thorough washing in the same solution; they were now open in two places and, by the use of rubber gloves, they were easily stripped through my fingers and emptied of gas and feces. These openings in the intestines were closed by Lembert sutures and the intestines replaced in the abdominal cavity. Iodoform gauze was carried to the bottom of the pelvis, and around the stump of the appendix; the cavity again washed out with sterilized salt solution and the abdominal wound closed with through-and-through sutures of silkworm gut, and the patient carried to bed in an exhausted condition. Chloroform was used as anesthetic, with occasional changes to ether. Dr. Gaines, the anesthetizer, was compelled to give her two extra doses of strychnin, 1/20 gr. each, but she died at 8:20 p.m. No post-mortem was held.

This case teaches one lesson which was new to me, that a patient may be dying of general septic peritonitis with a normal pulse and normal temperature. In my experience this is unique. Had I known this patient was suffering from a septic peritonitis as the result of

*Read before the Mississippi Valley Medical Association, Chicago, 1899

a perforated and gangrenous appendix, I would not have operated, because such operations do no good, and bring the work of the abdominal surgeon into bad repute. We may set it down as a rule, to which there are few, if any, exceptions, that general septic peritonitis of thirty hours' duration always results fatally, and that surgery offers these cases no hope.

The question of treatment of appendicitis is a very serious one, and is not yet settled. Much has been written on this subject within the last few years. About twenty-five hundred books and monographs have been printed and the last word has not yet been said. As we see the patients they may be divided into two classes, those seen early before pus has formed or before perforation has taken place, and those seen later.

In forming an opinion as to operative or non-operative treatment, two other factors are also to be taken into consideration, viz.: the mortality when treated medicinally, and the operative skill and technique of the operator. Whether we will or not, these last two elements should have considerable weight in determining the line of procedure. For instance, given twenty cases of appendicitis occurring in the course of five years, in the ordinary village or town, are the majority of patients safer under the medicinal or surgical treatment? I am not discussing the ideal treatment under ideal surroundings and by ideal operators. That is probably settled. We have facts to face, not theories. Then what are these facts? A patient in an ordinary house, attended by the average village physician, is seen for two or three days and finally appendicitis is diagnosed, and if he does not operate the village surgeon is called in. Possibly in the course of his ten or fifteen years of practice he has operated on the abdomen as many times, and the doctors decide to operate. What are the facts here? Simply these: it is now too late for an early ideal operation and too soon for the late one. Still, celiotomy is decided on and carried out to the best of their ability. The patient may recover, most probably will die, and in that community operations for appendicitis are discredited. The next patient, when diagnosed early and offered the operation, remembers the result of the former case and declines until perforation and general septic peritonitis is set up, and then consents. The honest surgeon is willing to do all he can to save the patient and, perhaps anxious for the celiotomy and consequent prominence which it will give him, undertakes what is practically a hopeless task. In this community in the long run, which is the safer line for the majority of patients? We do not hesitate to say we believe the majority, under these circumstances, will do better under proper medicinal treatment than under surgical interference.

Again, given an ideal surgeon, with ideal surroundings, and ideal doctors who make an ideal diagnosis, i.e., in the first few hours of the attack, and insist on immediate operation, we dare say the majority of this class of cases under this set of circumstances are far safer with immediate section and removal of the appendix.

Do we get the cases this way? If we do not and have an aseptic conscience and average ability as surgeons, we say operate immediately. When the case is from four to six days' old, the answer should be different. Here we have a different set of circumstances to meet, and the patient will have a better chance for his life if we wait until the acute symptoms have subsided and operate between the attacks. We say between the attacks for it is probable that others will follow.

What are the statistics of medicinal treatment of appendicitis? The answer to this question depends on

what to the physician attending any case is an unknown quantity, viz.: the character of the infecting agent, and the powers of resistance of the individual. Could we before have known these conditions, the course we should pursue would be plain.

It may be said that when the patient is one with the so-called catarrhal form of the disease—I do not believe in using such an expression—he will get well under the administration of large doses of sulphate of magnesia. Practically all such recover. On the other hand, if they are what is known as the "fulminating kind," 86 per cent. die if not subjected to very early operative interference. We repeat that, given a case within the first twenty-four hours of its occurrence, in the hands of a surgeon who operates frequently, and whose technique is correct, with proper assistants and nurses, that patient will be safer with celiotomy than without; but when the patient is in the country or village, and seen late in the disease, and seen by the surgeon who does not operate on this class of cases often, we believe the majority of patients will do better without operation than with it.

Doctors are frequently captivated by the work of surgeons in large cities, and when the man says he operated in all cases, the surgeon in a small village thinks he must also do so. He forgets that his opportunities to operate come very seldom, while the other man probably operates for appendicitis, as I have seen them do, two or three times in one day.

The statistics of Dr. John B. Deaver, of Philadelphia, with 468 cases in two years, or Dr. J. B. Murphy, of Chicago, or Dr. H. M. Richardson, of Boston, must be far better than those of the surgeon who opens the abdomen but six or eight times a year. This being the case, we believe much harm may be and is being done by the cry that every case of appendicitis should be operated on as soon as seen, no matter what the stage of the disease or the skill of the attending physician or surgeon.

The result of operation in this disease depends again on whether the section is made during an acute attack, or after the attack has passed off. For instance, many operators have a mortality of 15 to 25 per cent. in acute cases, with no deaths in hundreds of cases operated on between attacks.

In a personal communication from Dr. John B. Deaver, he says that in 196 cases of chronic appendicitis subjected to abdominal section in the last two years, he had no deaths. In 264 acute ones, operated on in the same time—two years—the mortality was 17 per cent. Here we have one of the most successful operators in this country, and yet in acute cases his mortality is 17 per cent. Is the mortality in cases treated medicinally any greater than this?

We can not better close this paper than by giving some statistics recently gathered and published by Dr. Chas. J. Whalen, of Chicago:

Fiitz says that 26 per cent. and Stimson that 25 per cent. of all cases of appendicitis prove fatal. According to Fiitz, 60 per cent. of 176 cases of perforated appendicitis died during the first five days, 56 during the first four days, 28 during the first three days, and 8 during the second day, though a large number of cases of simple appendicitis are said to terminate favorably by resolution. Buel, in 1894, placed the mortality at 5 to 6 per cent., although he had collected 450 cases, with only 8 deaths. Deaver collected 200 cases with only 2 deaths.

Armstrong says that in the leading Montreal hospital, from 1853 to 1890, before operations were done—that is, in pre-operative days—the mortality was 23.8 per cent. He reports 517 cases, in which the average mortality was 12.8 per cent. Of

(this number 389 were operated on, and 128 treated without operation. In this latter list the mortality was 3.12; of 319, 81 were interval cases, in which there was but 1 death; of 305 operated on in acute stages, 63 died.

Relapsing Appendicitis.—Dr. Knemmel, of Hamburg, read a paper with this title, which was a review of 100 successful resections of the vermiform appendix. In addition to his own cases, the speaker had collected the statistics of a nearly equal number of cases of relapsing appendicitis in which the operation had been refused. In these cases the mortality after three years was greater than in the operated cases, while the morbidity consequent upon the recurring attacks made the second series of cases incomparably worse.

Dr. Sonneberg, of Berlin, reported 250 operative cases, exclusive of several of tuberculous disease of the appendix. There were 66 cases of simple and 128 of gangrenous appendicitis. In the 250 cases there were 43 deaths. This mortality of 17 per cent. represents the mortality of the disease, not of the attacks.

The 43 deaths were encountered in cases of the perforative form of appendicitis, with complications, as lung and pleural affections, thrombosis, peritonitis, etc.

Knemmel, of Hamburg, in his statistics mentions 51 cases of recurrent form, operated upon during the interval between attacks, with but 1 death. Samuel Lloyd reported 558 cases, of which 226 were operated upon, with 192 recoveries. In direct contrast to this, 265 cases were treated conservatively with only 60 recoveries.

Hawkins reports 264 cases which occurred at St. Thomas' Hospital, with 190 recoveries, making a mortality rate of nearly 27 per cent.; 59 of the cases had one or more previous attacks, of which 6 died, making a mortality rate of 10 per cent. under medical treatment.

Dear (*Med. News*, Dec. 21, 1895) maintains emphatically that early operation is the only justifiable procedure. He has operated upon 200 cases, with only 2 deaths, and these in the first hundred.

Herman Knemmel (*Berlin Klin. Woch.*, April 11, 1898) presents a clinical study of 104 cases of recurrent appendicitis in which operation was performed between attacks. There was not a death in this series.

Examination of the appendices which had been removed showed that in not one case had the organ become normal after the attack.

I have been able to collect 6500 cases, which I classified under the headings: Catarrhal, Suppurative, and Recurrent Appendicitis, of which 1400 were treated medically. Two hundred and fifty-two of these died, a mortality-rate of about 18 per cent. Of the remaining 5100, 987 were operable upon during the catarrhal stage. Fifty died, a mortality of 20 per cent. One thousand four hundred and eighty-three were cases of recurrent appendicitis, with 35 deaths, a mortality of 2.25 per cent. Many report series of 100 or 200 cases without a single death. This low mortality rate in recurrent appendicitis is due to the immunity to infection acquired by repeated irritation. It will be at once apparent to you that out of 5100 subjected to operation, 1483, or 29 per cent., were cases of recurrent form of the disease. As a last word, let us close with the following: Dr. W. W. Keen, of Philadelphia, in discussing appendicitis at the Denver meeting of the AMERICAN MEDICAL ASSOCIATION, concludes his remarks as follows: I protest against the use of opium in rare cases, as it has a tendency to mask the symptoms of the disease, and leads the patient to the grave. I protest against the argument of Dr. Niles, that every case ought to be operated upon, and the appendix is never to be left.

Out of 300 post-mortems on as many bodies, it was found that 100 of the individuals had had appendicitis at some time in their lives, and had all recovered from the disease. I challenge the assertion that through surgical operations all but 2 per cent. of cases can be saved. I challenge any operator in the room to take 100 well persons and operate on them without killing more than 2 per cent. We all fail, gentlemen. I do not know why, but we all fail. I do not believe in operating on all cases of appendicitis.

I would rather have a live man with an appendix, than a dead one without one. (Applause.) I do not believe with the

witty Frenchman that no case is complete without a post-mortem. (Laughter.) If the patient is no worse after forty-eight hours of observation, let him alone: Let him get well.—*Western Medical Review.*

218 Central Avenue.

MEDICINE AS A BUSINESS PROPOSITION.*

BY G. FRANK LYDSTON, M.D.

Professor of the Surgery of the Genito-Urinary Organs and Sphylology, in the Medical Department of the State University of Illinois.
CHICAGO.

So live that when thy time has come to join the innumerable caravan which moves to that mysterious bourne peopled by doctors who have died of innutrition, thou go not like the general practitioner called at night, scourged from his office, but, sustained and soothed by the motto "Never trust," approach thy grave like one who wraps his stocks and bonds about him and lies down to pleasant dreams.¹

Some months since I had the honor of addressing a medical club of Chicago, composed of prominent general practitioners. I chose for my theme "The Business Aspect of Medicine." The resulting discussion was so animated, and the participants were so interested in the subject, that I promised to amplify and publish my remarks—a promise that for many and sufficient reasons I have hitherto been unable to keep.

That there are a number of points in this address on which many of my professional brethren will differ with me—possibly with some degree of warmth—I am well aware. Having, however, the material welfare of the profession at heart, and believing that the ventilation of truths—even unpleasant ones—is healthful in the end, I will proceed as though expecting only favorable criticism.

Let the accusation of being Pharisæic be hurled at me, I will take this opportunity of admitting the somewhat obtrusive fact that in some directions I am part of the very machinery the operations of which I am about to criticise. It will hardly be asserted that what I have to say is a wail of distress—any grievances of my own that may be presented are merely illustrative, and being personal, are not hearsay evidence. A spirit of professional altruism, and not a desire to present a bill of little complaints that are out of harmony with self-evident personal results, is my incentive for this lecture. I have in mind the interests of the profession at large, and especially those of the rank and file, who, while they do not sound the cymbal so loudly as some of us college folk, yet constitute the bone and sinew of the profession. Should what is to follow prove somewhat peppery in spots, the mantle of charity should be thrown over what is, at worst, merely the personal equation of the pen.

FINANCIAL REWARDS OF THE PRACTICE OF MEDICINE.

As a general proposition it is safe to assert that the practice of medicine from a business standpoint is a failure. The successful exceptions merely prove the rule. It is also safe to assume that the elements of financial non-success are cumulative in their action—a fact that is easily proved by hospital and dispensary statistics. The average income of the physician is less than that of the high-class artisan, the telegraph operator in an important office; and far less than that of the wide-awake commercial traveler. This, like many other points that will follow it, is threshing over old straw, but such threshing is unavoidable.

The practitioner of medicine, like every man who re-

*Lecture delivered at the public meeting of the St. Joseph County Medical Society, South Bend, Ind., Jan. 30, 1900.

¹ With apologies to the shade of W. C. B.

lies on his own hand and brain for a livelihood, is entitled to a bit of earth that he and his may call their own, at least a modest competence, and a well-earned rest when his sun begins to set and the twilight of his life approaches. How many doctors are in a position to enjoy or even render less awesome their twilight days? As city doctors are all supposed to be rich—at least by the public, that does all it can to prevent their becoming so—it would be interesting to know what proportion of them, even in metropolitan medical centers, own their own homes or have property investments. A far smaller proportion than is just, I fancy.

The assertion has been made that the general poverty of the medical profession is due to a lack of appreciation and a contempt for the rights of the medical man on the part of the public at large. This, however, is a secondary matter which, being self-evident, overshadows the primary cause—the asinine stupidity of the profession itself. As a broad general proposition the reputable profession as a whole has about as much sense as the dodo, and, unless signs fail, will, sooner or later, meet the fate of that remarkable bird. How the profession can expect the respect and appreciation of the public when it has no respect or appreciation for itself is difficult of conjecture. The public can not be expected to keep clean the nest of the medical dodo. Furthermore, the public quite rationally values the stupid thing according to its self-appraisal.

Primarily, the practice of medicine is supposed to be founded on a mawkish, blanket-like sentiment of philanthropy, which is expected to cover both God's and the devil's patients—the pauper and the dead-beat—the honest man and the rascal—the rich and poor alike. The doctor is expected to wallow eye-deep in the milk of human kindness, scattering it broadcast for the benefit of humanity, but he is in nowise expected to even absorb a little of it, much less to swallow a gulp or two occasionally for his own benefit. By way of piling Pelion upon Ossa, the public, having discovered that the doctor sets little value on his own services, proceeds to eye him with suspicion; the tradesman is very careful how he trusts doctors. Of course, the tradesman has his own family physician "hung up" for a goodly sum, but—knowing doctors to be poor business men—the tradesman often cheats them in both the quality and price of goods. It is a great and goodly game that plays from both ends and catches the victim in the middle. The tradesman has one redeeming feature, however; he does his best to teach his doctor patrons a lesson. He either sends his goods C. O. D. or, if the doctor be one of the favored ones, he finds the bill in his mail bright and early on the 1st of the month. I often think my tradesmen must sit up all night in order to get their bills in bright and early on the 1st. If not paid by the 15th, a collector is usually at the doctor's office to see about it. Yet the professional dodo—my apologies to the shade of the "sure enough" dodo—will not learn. He goes on and on, neglecting his accounts, mainly because he is afraid of offending his patrons and driving them off to some other doctor who isn't so particular; and the worst of it is, there are plenty of contemptible fellows who draw their own salaries promptly when due, or present their bills for goods with frantic haste, who consider a doctor's bill a flagrant insult. Will nothing ever inspire the doctor with courage enough to despise and ignore such contemptible trash? Does he prefer the rôle of a lickspittle to that of an independent and self-reliant man?

As illustrations of the value the profession sets on its skill and learning, the amount of gratuitous work done

is striking. Our pauper—or pauperized—patrons are divided into several classes, viz: 1. The free hospital, clinic and dispensary class. This is on the increase. According to Dr. Frederick Holme Wiggin 51 per cent. of all cases of sickness in New York City are now classed medically as paupers, as against 1.5 per cent. twenty years ago! This is appalling. Of these alleged paupers it is safe to say that 75 per cent. are able to pay full or at least fairly good fees. Why should pauperism be shown so prominently in the matter of medical bills, as compared with other necessities of life? And why should the profession carry a burden that belongs to the public? 2. Free patients of the private class: *a*, those who can pay but will not, i. e., dead-beats and swindlers; *b*, persons whose circumstances are such that the doctor feels in duty bound to render no bills; *c*, persons who presume upon social acquaintance with the doctor to "hold him up" for friendly, perhaps informal, consultations.

It requires no great mental effort to see the terrible load the profession is carrying—self-inflicted, and often for fallaciously selfish motives, it is true, but none the less heavy. The college and free hospital may be the professional "old man of the sea," but so much the worse for the medical Sindbad. Whatever the explanation, private practice is on a par with dispensary practice with regard to the impositions practiced on the doctor. It is safe to say that, of the sum-total of surgical and medical patients of all kinds and social conditions under treatment in Chicago at the present time, over one-half are paupers—honest or dishonest. Pay the doctor for the work involved in this wasted and misapplied charity, and the medical profession would plunge into a sea of prosperity that might swamp it. And it is not only the rank and file of the profession that suffers. Ye celebrated professor, reaching out for glory, yea, into infinite space, clutching frantically at everything in sight, no matter how profitless—providing the other fellow doesn't get the case—often defeats his own ends. And the great man dies, and is buried, and we take up a collection for his widow, to meet his funeral expenses, and sell his library—six feet of earth make all men of a size. *Sic transit gloria mundi*.

And when like dog he's had his day,
And his poor soul hath passed away,
Some friendly scribe in tearful mood,
Will tell the world how very good
The dear departed doctor was—
And thus win for himself applause.

FALSE PRETENSES OF PROSPERITY.

One of the most potent causes of professional poverty is the mania of the doctor for a pretense of well-doing. He exhibits this in many ways. One of the most pernicious is an affectation of contempt for money. This it is that often impels him to delay the rendering of his accounts. Oftentimes his patient offers to pay all or part of his bill. With a lordly and opulent wave of his marmosaic hand the doctor says, "Oh, that's all right; any time 'll do." And the triple-plated medical imbecile goes on his way with a dignified strut that ill befits the aching void in his epigastric region, and is decidedly out of harmony with the befringed extremities of his trousers. And then the doctor apologizes to himself on the ground of a philanthropy that is but the rankest and most asinine egotism *en masque*. When will the doctor understand that payment deferred maketh the patient dishonest? When will he consider the necessities of his wife and children as outweighing the feelings of the patient who owes him money? When will he be a

man, and not a time-server and truckler to appearances? He would take the money did he not fear the patient might suspect that his doctor was not prosperous. He wishes the patient to think that the doctor and his family dine with the chameleons, or are fed by ravens. Yet the medical Elijah waiteth in vain for the manna-bearing birds—they know him for what he is, a counterfeit prophet who vainly yearns for the flesh-pots of Egypt—who has a ponderous and all-consuming desire for pabulum, and a microcephalic capacity for finance.

A large proportion of the profession in cities carries its false pretense of prosperity into all the affairs of life. An expensive establishment in a swell locality, a turnout that shall be the envy of all his competitors, the opera, social events galore, expensive dinners, subscriptions to this, that and the other thing in which he has, or should have, no concern—such is the system of blackmail that the doctor often allows to be levied on himself by that hydra-headed, brainless bugaboo termed "society." He submits to the blackmail because he is afraid society will think he is not prosperous unless he makes a splendid appearance, "and," he says to himself, apologetically, "they don't want a fellow who isn't prosperous, you know." A yearly trip to Europe or some swell resort comes in by way of trimming, and before our aspiring friend is done with his tribute to "society," he finds that he has more than he can do to make ends meet. If he only had the spirit of a Vanderbilt, it would do him as good a turn as would quite a bit of that gentleman's money, for he would say "society be d—d," and forthwith stand on his own bottom.

The gilded show of prosperity reacts against the doctor's interests in the same way as his refusal to accept money—the patient, judging by externals, thinks the doctor doesn't need money, hence tardily, if ever, pays his bills.

One of the worst results of a pretense of opulence on the part of the doctor is the inducement it offers to foolish young men to enter the profession. Thinking that doctors make their money easily, and plenty of money at that, young fellows, often illy-adapted to medicine, are frequently induced to join the already over-crowded ranks of the profession.

Speaking further of catering to appearances, how often the struggling young doctor takes unto himself a partner in his poverty, by marrying. Society has an unwritten law that unmarried doctors are not *au fait*. The young doctor feels that way too—and there is usually a sweet girl somewhere who agrees with him—but he doesn't see how he is to support a wife. However, he yields to the pressure of social custom and—two miserable people stand where one stood before. How long will it be before the profession meets the prevalent social opinion on the marriage of doctors with the contempt it deserves? The doctor, of all men, should not marry until he is well over the breakers and into the sea of prosperity. Any other view is mere twaddle, and founded on mawkish sentimentality and a strabismic notion of propriety. The doctor should disregard the opinions of the old women of society—whether the old women be with or without trousers. Why should he be disturbed by the raucous ruminations of these "psychic humpbacks."

LACK OF JUDGMENT OF HUMAN NATURE.

Doctors are supposed to be keen judges of human nature. I often think that this is absolutely without foundation. Defective knowledge in this direction is a very expensive luxury to the medical profession. The confidence-man and sharper can not fool the average

doctor into buying a gold brick, perhaps, but they can come very near it. The oily-tongued and plausible man with a scheme finds the doctor his easiest prey. The doctor has often hard enough work to wring a few dollars out of his field of labor, and it might be supposed that it would be difficult to get those dollars away from him, but no, it's only too easy. He bites at every thing that comes along—he often rises to a bare hook. Mining stocks, irrigation and colonization schemes, expensive books that he doesn't want, will never need and couldn't find time to read if he would, histories of his town or state in which his biography and picture will appear for \$100—proprietary medicine schemes, stock in publications of various kinds; he bites at everything going—he has *embonpoint cérébrale*. Oh, but the doctor is easy! I have very painful memories. The best investment I ever made was when I paid a fellow for painting a sign for the door of my consultation room, reading: "Notice—Persons with schemes will please keep out. I have some of my own to promote."

COLLEGE, HOSPITAL AND DISPENSARY EVILS.

It is rather a delicate matter, perhaps, for a college professor to touch on the evils of medical colleges in their relation to the business aspect of medicine, but I shall nevertheless speak plainly and to the point. While theoretically the better class of medical colleges were founded solely for the advancement of science, it is none the less true that self-aggrandizement has been the pedestal on which most of our disinterested giants in the teaching arena have stood, and are standing. Remove the personal selfish interest of college teachers and most of our schools would be compelled to close for lack of instructors. Let us be honest with ourselves, please. Not that self-interest is reprehensible—I hold the contrary. One may teach for salary, reputation, the love of teaching, or a desire for self-improvement, it matters not, for if he be of the proper timber he is the right man in the right place. Self-interest makes better teachers on the average than philanthropy, providing the primal material is good.

Granting that self-interest is the mainspring of the college professor, is he very "long-headed" from a business standpoint? I submit the following propositions as proving that the average college professor defeats his own ends: 1. He devotes to teaching time and labor over and above the exigencies of ordinary practice which, if devoted to cultivating the good will of the laity, would be much more profitable. 2. While cultivating the acquaintance and friendship of the alumni of his own school—a few each year—he alienates from himself the friendship of every alumnus of every rival school, the instant he begins teaching. 3. He assists in educating and starting in life, young, active competitors to himself. 4. He is compelled to devote a large percentage of his time to the gratuitous relief of medical students and physicians. He may give his time cheerfully, but he yields up his nerve force just the same. 5. Most college professors are less successful in the long run than the more fortunate ones of the rank and file who have never aspired to teaching honors. 6. Greater demands are made on a professor's purse than if he were in the non-teaching ranks of medicine. He, more than all others, is expected to put up a prosperous appearance.

The college clinic—especially of the surgical sort—is far-reaching in its detrimental effects on professional prosperity. Few or no questions are asked, and the millionaire is being operated on daily, side by side with the pauper, free. And the blame does not always lie with the professor who runs the clinic. General practitioners

bring patients to the free clinics every day, with full cognizance of their ability to pay well. Why doctors will persist in thus cheapening surgical art is difficult of conjecture—but they do it just the same.

Of course, the college clinic is supposed to be a theater of instruction. Often, however, it is but a stage on which comedy-dramas are enacted. A brilliant operation that nobody six feet away can see, and an operator bellowing at his audience like the traditional bull of Basham—in medical terms that confuse but do not enlighten, terms that are Greek to most of the listeners—this is the little comedy-drama that is enacted for students who have eyes but see not; who have ears but hear not. Instruction? Bah! Take the theatrical elements, and the plays to the gallery, out of some college clinics and there wouldn't be a corporal's guard in attendance.

Worse than the free clinics are the so-called charitable hospitals. Much has been said of dispensary abuses, but few have had the courage to say anything in adverse criticism of these institutions. While nominally founded to fill "a long-felt want"—and the number of long-felt wants from the hospital standpoint is legion—these hospitals are founded on strictly business principles, save in this respect—the people who found them feed on their innate capacity to get something for nothing. The first thing the founders do is to get a staff of doctors to pull the hospital chestnuts out of the fire. The members of the staff think that the hospital is performing the same duty for them, and everything is serene. And so the surgeon goes on operating on twenty patients—fifteen of whom are able to pay him a fee—in the hope that one among them all is *willing* to pay him a fee. Exaggeration? Well, I can not swear to the accuracy of the foregoing, but an eastern surgeon of world-wide fame once told me that for every patient who paid him a fee he operated on nineteen for nothing; and this man has no public clinic, either. Is it conceivable that the nineteen free patients are all paupers? Many of them go to my friend for operation, from very long distances. Ought the railroads and hospitals to have all the profits? Have we not all had similar experiences in a lesser degree? With the development of charitable hospitals far in excess of any legitimate demand, it has come to pass that surgery is almost a thing unknown in general city practice. Even the minor operations have left the general practitioner—to return no more so long as there are free hospitals and dispensaries. Where is the emergency surgery, of which in former days every practitioner had his share? Railroaded off to the "charity" hospitals to be cared for gratis.

In a recent conversation with a practitioner of thirty years' experience, I said, "Doctor, you used to do a great deal of general surgery throughout this section of the city. Have the hospitals affected your practice in that direction to any extent?" He replied, "Surgery with me is a thing of the past. Even emergency cases are carted off to the nearest hospital. If by chance one does fall into my hands, it is taken away from me as soon as I have done the 'first-aid' work." Personally I see very little use in teaching surgery to the majority of students who intend to practice in our large cities—they will have little use for surgical knowledge.

Here are three cases in illustration of the way our "charitable" hospitals antagonize the business interests of the profession:

1. A very wealthy farmer engaged me to perform an exceedingly important operation. It was understood that \$1000 was to be the honorarium. He was afterwards advised to go to a certain "religious" hospital

where he was operated on by an eminent surgeon who received nothing for his services. The patient paid \$15 a week for hospital accommodation, and \$25 a day to his family physician, who remained with him "for company." What a harmonious understanding between the patient and his family doctor—and what a "soft mark" that surgeon was. I had the pleasure of telling the latter of the gold mine he didn't find, some time later, and the shock to his system amply revenged the body surgical.

2. A patient who was under my care for some weeks and paid me an excellent fee, finally divulged the fact that he had meanwhile been living at a certain hospital as an "out patient," at an expense of \$8 a week. He had become dissatisfied with the hospital attention, he said, and, pretending great improvement, was permitted to get about out-of-doors.

3. A man on whom I operated and who paid me my full fee without argument or question, came to me directly from one of our large hospitals, where he had been sojourning for several months. That medical men in hospitals are imposed on is a trite observation. So long, however, as it appears to be the doctor's advantage to be on a hospital staff, plenty of men will be found who will be glad of the chance. As for the injury which the system inflicts on the profession at large, that is no argument with the individual. Human nature operates here as elsewhere. Knowing that the system is bad, we are all anxious to become victims.

In recommending the payment of salaries to hospital men, a recent editorial² claimed that such a plan will remedy all the evils incident to the professional side of hospital management. I do not agree in the opinion that the payment of salaries to the staffs of institutions for the care of the sick will alone correct the evils of such institutions. The writer of the aforesaid editorial is incorrect, also, when he says that an awakening is at hand. No, not at hand; it is coming though; the handwriting is on the wall. When the revolution does come, this is what will happen: 1. Hospital physicians and surgeons will be paid salaries. 2. Hospitals will take as free patients or patients who pay the hospital alone only such persons as rigid investigation has shown to be indigent. All others will be compelled to pay their medical attendants just as in private practice. 3. Certificates of indigency will be required of every free patient, such certificate being signed by the patient's attending physician—outside of the hospital—and at least two other persons in the community where he or she resides. 4. General and especially country practitioners will cease to deceive hospital doctors as to the circumstances of their patients. One medical man should not impose on another.

Too much trouble, eh? Well, my friends of the hospital and dispensary—for the same charges should apply to the latter—you must either take your medicine or the revolution will go farther and this is what will happen: The profession at large will boycott every man who runs a college clinic, and every hospital and dispensary man. It will fight colleges and hospitals to the bitter end.

The day is perhaps not far distant when doctors outside of colleges and hospitals will run their private practices on the co-operative plan, thus dealing a death-blow to the free clinic and dispensary. Every man of prominence will have his own private clinic and advertise it among his patients. What is fair for twenty or thirty men is fair and ethical for one. Each man can

² Cleveland Jour. Med., Sept. 15, 1898.

have his own hours for the poor; he can eliminate the unworthy ones and, best of all, he can refer all his dead-beat patients to his clinic. Pride may bring fees from patients to whom honesty is a thing unknown. The private hospital will run most of the public hospitals off the earth. There will be no room for anything but municipal hospitals run squarely and fairly for charity, and reputable private hospitals run frankly for pecuniary profit, in which the operation and the attendance fees are the chief factors. Such hospitals will benefit, not hurt, the profession. In passing, I wish to remark that the general practitioner will probably some day cease sending cases to men who make a specialty of diseases of the head, trunk and extremities. The surgeon who to-day grabs an operation case brought to him by the general practitioner, and attends a case of labor in the latter's neighborhood to-morrow, is not just the man to be trusted, yet there are many such—men who persistently decline to "render unto Caesar, those things which are Caesar's."

MEDICAL "TIN-GODS."

One of the most vital flaws in the business sense of the general practitioner is his penchant for hero worship. He hears of the medical tin god from afar, and burns incense on the altar of his greatness. The great man pats the humble doctor on the back, calls him a good boy, and tells him just where to take all his cases. Sometimes he offers to divide fees with him.

The medical tin god is truly a "self-made man in love with his maker." He has "genius stamped upon his brow—writ there by himself." His evolution is interesting. It is history repeating itself: Apsesthus the Libyan wished to become a god. Despairing of doing so, he did the next best thing—he made people believe he was a god. He captured a large number of parrots in the Libyan forests, and confined them in cages. Day after day he taught them to repeat, "Apsesthus the Libyan is a god," over and over again. The parrots' lesson learned, Apsesthus set them free. They flew far away, even into Greece. And people coming to view the strange birds, heard them say, "Apsesthus, the Libyan, is a god; Apsesthus, the Libyan, is a god." And the people cried "Apsesthus, the Libyan, is a god; let us worship Apsesthus, the Libyan." Thus was founded the first post-graduate school.

The medical Apsesthus and the deluded parrots of the medical rank and file are here, and here to stay, until both are starved out. And the modest general practitioner looks up to the medical tin god and wonders "upon what meat does this our Caesar feed that he hath grown so great?" The meat of industry? Perhaps. The meat of prodigious cerebral development? Seldom. The meat of opportunity? Yea, yea, my struggling brother, "and the devil take the hindmost." But, more than all, he hath fed on the meat that the parrots have brought him—Elijah's ravens were not a circumstance to those parrots. "In the kingdom of the blind, the one-eyed man is king." How long will the general practitioner continue to play parrot to the medical tin god of the charitable hospital, the very existence of which is a menace to the best interests of the profession—the profession for which the institution has no charity? In that happy time to be, there will be no tin gods. There will be a more equitable division of work, and every prosperous community will have its up-to-date private hospitals with up-to-date men at the head of them. As for the post-graduate teacher—good or bad—he is already defeating his own ends—he is exciting ambitions in the breasts of his pupils. Here and there among them is

an embryo McDowell, a Sims, or a Battey. The backwoods country produces good rich blood and virile brains. And the Sims, and McDowells, and Batteys of the future will be found in relatively small places, doing good work, and then—good-bye to the tin god and his horn, "for whosoever bloweth not his own horn, the same shall not be blown." And in that day the parrot shall evolve into an eagle, and the hawk had best have an eye to windward. Meanwhile, hurrah for the post-graduate school and its pupils, and more power to the tin gods.

SUPERABUNDANCE OF MEDICAL COLLEGES.

This business handicap is so self-evident that it is hardly necessary to touch on it. We raise the standard of medical education year by year, yet the mushroom colleges do not go—they are here to stay. If one-half the colleges were wiped out of existence, there would still be more than enough to supply the demand for physicians. We have done the best we could to breed competition by manufacturing doctors, and we are doing all we can to make that competition first-class—a queer business proposition in force of the oversupply of doctors. We are unjust, too, to the men we educate, by offering them inducements to enter an already overcrowded profession—but as long as human nature is as it is, I see no way out of the dilemma. This much is to be said of the medical profession, viz., no other profession has had such obstacles thrown in its upward path to a higher education as ours. It is easier for a college of "osteopathy," "vitopathy," "Christian Science" or any other quackpathy to get recognized by state legislatures than it is for regular medicine to get a hearing even on matters pertaining to public health. We are not business-like, and the public is not with us. We do not buy legislation and, I hope, never will; so the lawmakers are not with us.

INCONSISTENCIES AND ABSURDITIES OF ETHICS.

There was once a time when it appeared a goodly thing for the chosen few to get together like the "three tailors of Tooley street," and, after establishing to their own satisfaction the fact that they were indeed "the people," formulate rules for the guidance of the many. These rules were called "ethics." And the profession has been wrestling with its ethics ever since, trying to determine what it was all about, anyhow. The ethical garment of half a century ago no longer fits—it is frayed and fringed, and baggy at the knees; full many a patch has been sewed on it, in individual attempts to make it fit from year to year, until it is now, like the Irishman's hat, respectable by age and sentimental association only. And the public, the ever practical and heartless public, has also wondered what 'twas all about, and exhibits little sympathy for a profession which, while deriving of ethics, has "strained at gnats and swallowed camels." Who does not remember when all the wisecracks with number eighteen collars and number five hats, seriously discussed the relative propriety of "Specialty" vs. "Practice Limited," on professional cards? How times have changed. And then came the discussion by a learned society, of the ethical relations of "Oculist and Aurist" to "Practice Limited to Diseases of the Eye and Ear." And it was decided that men who had the former on their cards were not ethical and could not enter that society. Ye Gods! Is the fool-killer always on a vacation? Must we always see those long ears waving over the top of the ethical fence, built by the fat hogs to keep all the little pigs out of the clover patch? What is the public to think of a profession that winks its other eye at the man who prints on his cards "Diseases of Women Only," but rolls up its eyes like a dying rabbit at the

sight of a card reading "Diseases of Men Only?" What has raised the woman with leucorrhœa to a more exalted plane than that occupied by a man with prostaticorrhea, does not appear. Why so many inconsistencies, and why such hypocrisy! Sir Astley Cooper had his own private "hours for the poor." Our European brethren print their college and hospital positions and all their titles on their cards. Are they less ethical than we? Homeopathy is a dead duck over there, and quackery has a hard row to hoe in Europe—queer, isn't it?

Our system of ethics has not only been hypocritical, but somewhat confusing. The young man on the threshold of medicine doesn't know "where he is at." He is confronted by the unwritten law that only celebrated men and quacks may advertise. Small fry, who haven't the ear of the newspapers nor a chance for a college position, are tacitly ordered to keep their hands off. And the young fellow watches the career of the big man, who hides every other man's light under his own bushel, and marvels much. Especially does he marvel at the accurate photographs, life histories and clinical reports of his more fortunate confrères that appear in the newspapers without their knowledge. Experiences differ. I haven't yet got around to newspaper clinical reports, but it has been my fortune to be "written up" on several occasions. I do not recall that the newspapers drew on their imaginations for my photograph. I wish I might think so, and that their imaginations were distorted—the result was so uncomplimentary. So far as I can learn, nobody protests against being legitimately represented in the newspapers. Why not be honest about it? The hypocrisy of some men is sickening. Paying clandestinely for newspaper write-ups is despicable, yet some of the very men who protest that they "really don't see how that could have gotten into the papers" have paid for the advertising in good "coin of the realm." It is queer that the newspapers should write up the most minute details of the wonderful exploits of some poor fellows, together with their family histories, and publish their photographs, without their knowledge or consent—especially queer when we read in conclusion that "Professor John Doe is the greatest surgeon that ever lived." Why not come out and acknowledge that these are paid for? This would give an equal chance to all, and especially to young fellows who have money enough to pay for similar things. He who has not the price should not find fault with the fellow who has, for, "business is business." Meanwhile my young friends, remember that "big mountains may do what little mountains may not do."

When Koch's tuberculin was yet new, soon after it escaped, half-fledged, from the laboratory, only to be captured and made to perform like a trick monkey for the benefit of the laity, there came a ring at the "phone" of a prominent daily paper: "Hello, is that the *Daily Bazaar*?" "Huh, huh, it are." "Well, I'm Dr. Squirtum Galls. I wish you would send a reporter over here at once. I want to be interviewed on Koch's tuberculin." It is said that \$25 changed hands, but I don't believe it. The gentleman would never advertise—at that rate—"no sir-ree." My informant was once the sporting editor of the *War Cry*, and hence unworthy of credence.

And what wonderful contributions the newspaper-great-men are making to science! The daily paper is the place to study appendicitis and things. It is not long since I learned from a distinguished surgeon friend of mine, via a daily paper, that evidence of a blow having been received on the head is an imperative indication for craniectomy, whether symptoms are present or not.

In preference to the clandestine methods now in

vogue, would it not be better for men of authority to write signed articles for the newspapers and intelligently present medical matter to the public. But that wouldn't be ethical, would it? Such topics as "Advice to Young Men," "Letters to Young Wives," and "How to Keep Healthy," must be left to the quacks. We will confine ourselves to the surreptitious blowing of surgical horns and never mind the false notes. Meanwhile, let us stand back and watch the procession of modest men who never advertise—oh, no! At the head, with haughty mien, comes Professor Keene Carver, preceded by a herald in blood-red garb, blowing a large brass horn. Then comes the "bearded lady," whose blonde and breezy whiskers so delight the hearts of his swell society *clientèle*. He's a homeopath; you can depend on it. And here comes Rip Van Winkle—a middle-of-the-road "eclectic," gathering up his long and weedy beard to keep it from getting tangled up in the scientific barbed wire fence along the route. And here comes another sure-enough "regular," evidently a medicine man—so rare now-a-days. He is riding in a swell turnout and is on his way to his clinic. How do I know that Professor Windy Bowels is a regular? Because the gentleman who is riding beside him to his clinic is a reporter on the Chicago *Daily Jib-boom*.

I presume that the suggestion that I have made of the advisability of taking the public frankly into our confidence and giving it accurate information so far as its comprehension goes by signed articles in preference to clandestine advertising and the promulgation of fallacious ideas of medicine and surgery, will meet with bitter opposition. I nevertheless believe that a better education of the public is the only way to down quackery. The opposition will come chiefly from the surreptitious advertiser, who sees a prospect of other men getting the advertisement that he believes to be his proprietary right. Then there is the tribe of the Microcephali. The howl of protest will be long and loud from the pews occupied by these far-famed champions of medical orthodoxy. "We wouldn't put our discoveries or contributions in the newspapers—not ever." And gazing at their lemur-like front elevations we can well believe that they would have no trouble in establishing a "halibi."

Appropos of "discoveries," it may as well be understood that the public is bound to get the details of them sooner or later, and, when the time is ripe, the matter should be presented to it in a clear and intelligible form—comprehensible to the layman. The time is never ripe until the medical profession has weighed the discovery in the balance and rendered its final verdict on its merits. Taking the public into our confidence prematurely is bad business, and has always proved a boomerang.

(To be continued.)

CARE OF CONSUMPTIVES.—Among the good things said at the last meeting of the Medical Society of the State of New York, one of the best came from Dr. John H. Pryor of Buffalo, who illuminated the economic aspect of state cure of consumptives in these words: "What we ask for is that the consumptive shall be taken care of at the right place and at the right time until he is well, and not at the wrong place and at the wrong time until he is dead." It is merely a question of whether we shall pay early or late. The consumptive is a public charge. We can admit the obligation early and make terms, or we can postpone payment until judgment by default is entered, covering every item of the account.—*Md. Med. Jour.*

ARGUMENT AGAINST SENATE BILL 34, FIFTY-SIXTH
CONGRESS, FIRST SESSION, GENERALLY KNOWN
AS THE "ANTIVIVISECTION BILL."

BY WILLIAM H. WELCH, M.D.
PROFESSOR OF PATHOLOGY, JOHNS HOPKINS UNIVERSITY,
BALTIMORE, MD.

(Continued from page 1244.)

Who are to be subjected to the visits and inspection of these officials? It can be confidently asserted that the inspection will be practically limited to laboratories under the supervision of scientific men of established reputation, who have been selected by universities, medical colleges and heads of government departments for their recognized skill and knowledge. Dr. Bowditch has told you that he knows of no private vivisections by students, and I can say the same. Vivisection by physicians in their homes is very uncommon. The men who, as your chairman said on a previous occasion, do not need legal enactments are precisely the ones who are to be subjected to the annoyances of this system of inspection and in general to the vexatious restrictions of this bill, while, if the class of persons for whom this bill is said to have been framed really exist and now keep effectually concealed without any apparent motive, I do not see how this law is likely to reach them after their detection will lead to the infliction of a severe penalty.

Not only are the inspectors to make reports of the results of their observations which shall be published by the President of the United States, but "the Commissioners of the District shall direct every person performing experiments under this Act to make reports to them on the first day of January and July of each year, of the methods employed, the number and species of animals used, and the results of their experiments, in such form and with such further details as the said Commissioners may require: Provided only, That reports of any series of experiments alleged to be incomplete may be postponed by permission of said Commissioners for a period not exceeding six months. All such reports shall be published." (Sec. 5.)

Inasmuch as the new bill begins, after the enacting clause, with these words: "That hereafter no person shall perform on a living animal any experiment calculated to give pain to such animal, except subject to the restrictions hereinafter prescribed," it would appear that this latter provision regarding reports of experiments and their publication applies to experiments on invertebrates as well as vertebrates, for I know of no reason to suppose that an invertebrate may not suffer pain.

The period of six months allowed for the completion of experimental researches before the necessity of furnishing for publication reports thereon in whatever form and detail the commissioners require is so short that an experimenter will often be subjected to the hardship of either closing an investigation without satisfactorily completing it or of submitting to the outrage of having methods and results of half finished investigations spread before the public. It must be difficult for those unfamiliar with the conditions of scientific inquiry to fully appreciate these hardships. This requirement can not fail to injure the quality of scientific work and there are many useful investigations which would probably not be undertaken at all under such vexatious conditions. It is to be noted that in the previous bill the demand for reports on experiments was left to the discretion of the commissioners, whereas now these reports must be sent in at stated times and not in such form and with such details as the experimenter may wish, but in any form and with any details which the commissioners may require. Here, as with so many other provisions of this bill, the law can be so administered as to harass experimenters almost beyond endurance.

Those unacquainted with the real purposes and the methods of antivivisectionists would probably not anticipate one of the uses to which can be put the official records of licenses and certificates and the reports of experiments, but it is interesting to note that Sir John Simon, the most eminent of English sanitarians, formerly medical officer of Her Majesty's Privy Council, in his testimony in 1875, before the Royal Commission on Vivisection, clearly predicted this use or rather abuse. In replying to questions as to his opinion of a law embodying this system of licenses, inspection and official returns of experiments, he said (Report of the Royal Commission, etc., p. 77, London, 1876): "I think it would not be a security for animals, and I think it would give facilities for the persecution of physiologists. I think that physiologists under law of this sort would in these days run some risk of being treated as Vesalius was three centuries ago. . . . I should be very unwilling, I confess, to see physiologists put in a

position in which those who are now making clamour on these subjects should be able to hold them up individually to popular odium; and under this clause" (i.e., that relating to official returns of experiments) "that could be done." I have here the second edition of a book entitled "The British Vivisectioners' Directory; A Black Book for the United Kingdom," By Benjamin Bryan, with a Preface by Frances Power Cobbe, London, 1890. One sentence from Miss Cobbe's preface will serve to indicate that a main purpose of this book is to blacklist experimenters. In speaking of experimenters on animals she says: "Could the older non-scientific men and the tender-hearted women with whom they associate behold for one moment in some magic mirror, their employment of a few hours before over their torture troughs, they would be shunned and abhorred as unfit to belong to civilized society." The book is accompanied with comments full of misrepresentations and sometimes with gross misstatements of facts.¹ It is for you to consider whether you will place in the hands of antivivisectionists the opportunity to issue such appeals as this to elderly non-scientific men and tender-hearted women to ostracize a list of physiologists, whose names and experiments appear, accompanied by false and misleading statements, in a printed catalogue. It matters not that the list of names is in fact a roll of honor.

I desire to call attention, with especial emphasis, to a question about which more diversity of opinion has been expressed than concerning any other aspect of this bill. Will this bill, if it becomes law, prohibit important and useful experiments? Its advocates are vehement in their assertion that it is simply "restrictive and not prohibitive" and "concedes everything of utility," and they charge its opponents, who claim that the bill prohibits useful experiments, with misrepresentation or with ignorance of its provisions. The bill has been printed repeatedly in medical journals of this country, and has been fully discussed there. The accusation is unwarranted that protests against its enactment, which have been sent in hundreds to senators and representatives in Congress, by medical and scientific men and societies, are based on ignorance of the contents of the bill. There can be no doubt as to which side is the more competent to give a correct response to this question, the great body of medical and scientific men who answer it affirmatively, or those practically unfamiliar with animal experimentation and with physiology and medicine, who represent the negative.

I have already pointed out that this bill leaves it entirely to the discretion of two laymen, who constitute the majority of the District Commissioners, and who can not be shown to possess any special qualifications to judge of the matter, to determine whether any experiments on warm-blooded animals shall be performed in the District of Columbia. I need not recur here to the partial exemption of officers of the Government from the control of the District Commissioners. I have also shown how the numerous restrictions, such as the quadruply endorsed applications, the licenses, the registrations of places, the inspections, the requirement at stated periods of reports of methods, number and species of animals used, and results, the specifications as to purposes and conduct of experiments, place it entirely within the power of the administrators of the law seriously to hamper, and indeed actually to prevent, experimental investigations while nominally permitting them.

But aside from these prohibitive effects dependent on the manner of enforcement of the law, this bill in unmistakable terms expressly prohibits many important and useful experiments. The carelessness of construction and the vagueness, whether accidental or intentional, of certain provisions of the bill leave it uncertain whether some other useful experiments are forbidden or not.

¹An illustration of the way in which antivivisectionists misrepresent facts is furnished by a book entitled "The Nine Circles," which has the name of Miss Cobbe on its title-page, and for which she wrote the preface. At the Church Congress at Folkstone, October, 1892, Mr. Horsely called attention to this book in the following words: "In the book, all the experiments are grouped by Miss Cobbe as English and Foreign, respectively. I have taken the trouble to collect, from this gospel of Bishop Barry and Canon Wilberforce, all the experiments in which cutting operations are described as having been performed by English scientists, and in which I knew anesthetics to have been employed. These experiments are twenty-six in number. In all of them, chloroform, ether, or other anesthetic agent, was employed. But of these twenty-six cases, Miss Cobbe does not mention this fact at all in twenty, and only cites it without qualification in two out of the remaining six. When we inquire into the twenty operations in the twenty-six which we find in the original that again and again Miss Cobbe has, in making her extracts, had directly under her eye the words 'chloroform,' 'ether,' 'etherized,' 'chloroformed' 'anesthetized,' during every experiment the animal has been deeply under an anesthetic, and so forth." (*The Standard*, London, Oct. 7, 1892). Miss Cobbe subsequently explained that the book was "planned and compiled by her direction," but the actual work of compilation was done by another.

The only experiments on warm-blooded animals permitted by this act are those for "the advancement of physiological knowledge or of knowledge which will be useful for saving or prolonging life or alleviating suffering" or for "the acquirement of surgical experience likely to be of use in operations upon human beings" (Section 2, a), in which experiments "the animal must, during the whole of the experiment, be completely under the influence of ether or chloroform (or any other recognized anesthetic)" (Section 2, c). There are six, and only six, exceptions to these requirements, to-wit: 1, "Experiments may be performed under the foregoing provisions as to the use of anesthetics by a person giving illustrations of lectures in medical schools or colleges, on a certificate being given, such as is required for a license as herein-after provided in section seven, to the effect that the proposed experiments are absolutely necessary for the due instruction of the persons to whom such lectures are given, with a view to their acquiring knowledge or experience which will be useful to them for saving or prolonging life or alleviating suffering;" 2, "in so-called inoculation experiments or 3, tests of drugs or medicines, or 4, foods, or 5, in experiments relating to the communicability of disease, the animal need not be anesthetized nor killed afterwards, nor 6, in tests of surgical procedure need animals be kept completely anesthetized during the process of recovery from the surgical operation." (Section 2, c.)

I can not claim familiarity with all of the antivivisection bills which have been introduced into legislative bodies. I know that many are very curious productions, but I should be surprised to learn that there are any, stopping short of total prohibition, which have been more prohibitive in their provisions than this so-called "moderate and reasonable" bill before us. Who was it that, in copying the phrases of this bill from the British act, struck out bodily the three provisions in the latter, absolutely essential for the continuance of experimental work in its legitimate scope, granting permission, when the necessities of the investigations demanded: 1, for the performance of experiments without anesthetics; 2, for the survival of the animal after the operative part of the experiment, and 3, for the performance of experiments "for the purpose of testing a particular former discovery alleged to have been made?" Was it some one who tells us that this bill "goes to the farthest extreme of concession in the anxiety of its framers to yield to the wishes of scientific men so far as may be consistent with the principle of legal supervision?" Does anybody suppose that the exceptions concerning inoculation experiments, tests of drugs, medicines, or foods, experiments relating to the communicability of disease, and tests of surgical procedure can begin to take the place of all the experiments forbidden by the omission of the provisions mentioned? Misapprehension there may have been as to the effects of this bill, but it has not been on the side of those who have emphasized its prohibitive features.

I could spend the entire time allotted to me in enumerating useful experiments absolutely prohibited by this bill, but it must suffice to call attention to a few of the more important classes of prohibited experiments.

No scientific man who reads this bill and notes the definitions of the purposes for which experiments are permitted and the enumeration of the few kinds of experiments excepted from certain prohibitions can fail to be impressed with the fact that the whole emphasis is laid on immediate practical utility. The framers of the bill had evidently no broader conception of science than that short-sighted Philistine one which sees no value in scientific discoveries unless they be of immediate practical application. They seem not to know that the foundations of applied science rest on discoveries in pure science made without thought of direct practical utility. Experiments made solely with a view of advancing physiologic and pathologic knowledge without immediate reference to their practical applications are precisely the ones which have yielded the richest harvest of results applicable to the diagnosis and treatment of disease. Such was the history of the discoveries of antitoxin, of the principles of aseptic surgery, of the treatment of myxedema and cretinism by thyroid extracts, and of many other therapeutic and diagnostic procedures based on the results of animal experimentation.

Instead of some simple and comprehensive definition of the purposes for which experiments can be made, such as "for advancement of medical and biological knowledge and promotion of the healing art," we find the clumsy, unsatisfactory and vague phraseology already cited from Section 2, a. The only instance in the entire bill of the recognition of any other immediate purpose of experimentation than one relating to the treatment of disease is the permission granted in this paragraph to perform experiments "with a view to the ad-

vancement of physiological knowledge." The latest bill has even removed the word "physiological," found in all the previous bills, for the designation of one of the kinds of knowledge for the acquirement of which by students demonstrative experiments may be made in illustration of lectures. It is not customary to designate by the epithet "physiological" the kind of knowledge sought for in pathologic and bacteriologic experiments, and nevertheless, by no means all of these experiments are made for the purpose of acquiring knowledge directly "useful for saving or prolonging life or alleviating suffering." There is a science of pathology as well as of physiology. Together they make the foundation of scientific medicine. Each is most surely advanced by its cultivation for its own sake. The ultimate purpose of obtaining knowledge useful to practicing physicians and surgeons is far more likely to be secured by the experimental work of those experts who devote themselves to physiology and pathology as sciences than by experiments made with direct reference to their application to the treatment of disease. It is difficult to say whether the term "physiological" will be interpreted by the administrators of the proposed law in some broad unusual sense so as to include all pathologic, bacteriologic, hygienic and chemical experiments not performed for the immediate purpose of advancing knowledge "useful for saving or prolonging life or alleviating suffering." Certainly no such vagueness and doubt as to the interpretation of the law should have been permitted as regards these important classes of experiments.

The bill provides that the animal must be completely anesthetized during the whole of the experiments and, if the pain is likely to continue or any serious injury has been inflicted, must be killed before recovery from the influence of the anesthetic. (Section 2 c.) The previous bills contained the ridiculous requirement that only ether and chloroform could be used as anesthetics, whereas in the last bill permission is parenthetically granted to use "any other recognized anesthetic." Those acquainted with antivivisectionist writings must have observed the absurd notions contained therein regarding the distinction between anesthetics and narcotics, so far as the production of insensibility to pain is concerned. It is there stated that such narcotics as morphia and chloral, which on account of their prolonged narcotic effects are often useful and most merciful in animal experiments, do not even in large doses render animals insensible to pain. The so-called narcotics are administered to animals in doses relatively much larger than for human beings and in ways securing prompt effects, but to the antivivisectionist none of these is a "recognized anesthetic." I apprehend that the present phraseology of this bill is calculated to leave it to the decision of the Commissioners of the District of Columbia whether the use of certain narcotic substances, although in fact capable of producing insensibility to pain, shall be permitted in animal experimentation. Doubtless the judgment of this tribunal on this question will be eagerly awaited by the medical world. Anesthetics and narcotics differ among themselves in their effects on the circulation, respiration and other functions, and, while ether and chloroform are the most generally useful, the exigencies of a research may require the employment now of one and now of another without introducing any difference in the completeness of the insensibility to pain.

The use of curare as an anesthetic is forbidden by this bill. Curare is not in fact used as an anesthetic by physiologists, but it hardly seems necessary for Congress to pronounce on the question of its anesthetic properties. Bernard, who believed that curare does not produce insensibility to pain and whose theatrical description on this subject is extensively quoted in antivivisectionist literature, correctly stated, in the following words, the only way in which this question can be decided: "Man alone, after recovering from poisoning by curare, could tell, supposing that he preserved his memory, whether or not he had suffered." Since Bernard's experiments, over forty years ago, other experiments have been made, some of which show that curare in the doses used in the laboratory acts on the sensory as well as the motor nerves, and, what is most pertinent to the question, there have been instances reported of the accidental poisoning of men by curare, who recovered and in whom sensation was totally abolished, while the action of the drug was apparent. (Stephen Paget: Experiments on Animals, pp. 243-245. London, 1900.)

There are painful experiments, fortunately very exceptional ones, in which the objects of the experiment would be frustrated by the use of an anesthetic. Such experiments are permitted under certificates by the British law, but are prohibited by this bill—excepting inoculation experiments, tests of drugs, medicines or foods, and experiments relating to the communicability of disease. When one considers that the

discovery of the separate functions of the spinal nerve roots, probably the most fundamental discovery in physiology next to that of the circulation of the blood, is based on experiments under this category, the possible injury to science which may result from the absolute prohibition of this class of experiments is sufficiently apparent.

Perhaps the largest and most important class of useful experiments prohibited by this bill comprises those in which the purposes of the investigation require the survival of the animal for periods of time too long for the practicable continuance of the anesthesia. Nothing in this bill is more curious or more characteristic of the ignorance of its framers in scientific and medical matters than the little list of cases in which it is permitted to dispense with an anesthetic or to allow the animal to recover from the influence of the anesthetic before killing it. To the three exceptions which permit the survival of the animal, enumerated in previous bills, the present bill has added "tests of foods" and "experiments relating to the communicability of disease." The expression, "tests of drugs, medicines or foods," is certainly a very peculiar and, at least to members of the regular profession, unfamiliar designation of investigations in pharmacology and nutrition. It is hard to see why "tests" of other therapeutic procedures than those of drugs, medicines and foods should be excluded from this list, but I suppose that we ought to be grateful for this new concession that animals need not be anesthetized or immediately killed while feeding them during these "tests of foods."

It is difficult to see what of importance is added to this meager list by the insertion, in the new bill, of "experiments relating to the communicability of disease." A communicable disease is of course a contagious disease, and there do not occur to me any important experiments relating to its communicability which do not come under the already permitted class of "inoculation experiments." But if experiments permitting the survival of the animal may be made with reference to the "communicability of disease" why in the name of common sense may they not be made with reference to the study of the causation, the diagnosis, the prognosis, the pathology of disease?

It will be noticed that this singular little group of experiments which constitute the only ones in which the animal is permitted to survive the influence of the anesthetic are all experiments supposed to be of immediate practical utility, although they represent only a very small fraction of such experiments, most of which have just as much claim to be included as those which actually appear in the list. I have already indicated the fundamental error of conception, nowhere, in this remarkable bill, more strikingly manifested than here, which attributes supreme importance to experiments conducted with a view to their immediate, practical application to the treatment of disease.

With the five exceptions—*inoculation experiments, test of drugs or medicines, tests of foods, tests of surgical procedure, experiments relating to the communicability of disease—all physiologic and pathologic experiments in which the ends of the experiment can be attained only by observation of the animal for days or weeks are prohibited by this bill.* Such important experiments as those which have shed light on the processes of digestion by gastric, biliary, pancreatic or intestinal fistula, on the functions and sounds of the heart by the experimental production of valvular lesions, on the functions of the brain and spinal cord, of the kidneys, of the thyroid gland, of the liver and, indeed, of most of the organs of the body by observations extending over some length of time after an experiment, are all prohibited by the conditions of experimentation imposed by this bill. The list of prohibited experiments of this class is so long that I can not attempt to enumerate them. It has been asked whether the experiments on the brain and on the liver, cited by Dr. Keen as the basis for his successful operations, could not be performed under the provisions of this bill. They could not, for they required the survival of the animal after an operation inflicting serious injury, and they were not undertaken as tests of a surgical procedure or with reference to the communicability of disease, but for purely physiologic and pathologic purposes. Nor does this bill permit such experiments as those cited by Dr. Hare, which have led to the successful treatment of myxodema and forms of cretinism. If this bill included no more than the provision forbidding the performance of this class of experiments its enactment would inflict a blow, simply brutal, on biologic and medical science. It is conceivable that the framers of the bill did not know what they were doing when they inserted this prohibitive feature, but that surely does not put the matter in any better light.

It does not seem to me necessary, nor in the limited time is it practicable, to continue with an enumeration of all the useful classes of experiments prohibited by this bill. To some others I have called attention in Senate Document No. 104, 55th Congress, Second Session, but no one has ever attempted anything approaching a complete list of the prohibited experiments. I may here say that it is not clear to me what is meant by the assertion repeatedly made by advocates of the bill, that inoculation experiments are excluded from its operation. They are subject just as much as any other experiments to all its restrictions except that the animal need not be anesthetized during the operation or killed afterward. The magnitude of the concession that an animal—a mouse is the one oftenest used—need not be anesthetized for the prick of a needle or kept unconscious for days or weeks seems to have made an extraordinary impression on the supporters of this bill. Enough has been said to demonstrate that this bill explicitly prohibits many experiments of the highest scientific and practical value, including many which involve less suffering to the animal than some that are permitted. These unambiguous prohibitive features of the bill have been pointed out again and again in published documents but I have never seen any answer vouchsafed to these apparently weighty criticisms, nor do I expect to hear any to-day.

One of the speakers on the other side devoted a large part of his remarks to the subject of vivisection in public schools. The only reply which seems necessary is that the existing law permits only "properly conducted scientific experiments or investigations, which experiments shall be performed only under the authority of the faculty of some regularly incorporated medical college, university or scientific society," and that the Superintendent of Public Schools, on April 24, 1896, wrote, "Vivisection has never been practiced in the schools of the District of Columbia, so far as I have been able to ascertain after the most diligent inquiry. No legislation is necessary on this subject, because the authorities of the schools are radically opposed to vivisection except by experts for scientific purposes, and will do everything in their power, without legislation, to prevent its occurrence in the public schools."

One of the most irrational features of the previous bills has apparently been eliminated from the new or substitute bill printed on March 9, 1900, through the substitution of the words "warm-blooded" for "vertebrate," but there seems to have been some carelessness in carrying out this correction. In Sections 7 and 8 the license under the act is spoken of as one "for the performance of experiments on living animals," and I have already mentioned that Section 3 requires that "every place for the performance of experiments upon living animals" shall be approved and registered. There is also apparently some uncertainty on this point in Section 5. It is charitable to suppose that these slips and uncertainties are not intentional, but if due care had been exercised they would not have appeared.

In looking over the British law on this subject I was impressed by the following provision which would seem to afford experimenters considerable protection against persecution: "A prosecution under this Act against a licensed person shall not be instituted except with the assent in writing of the Secretary of State" (the authority administering this law). I am not a lawyer and can not say whether the omission of a similar safeguard from the present bill is based on legal grounds, but if not, then I do not care to comment on the motives of those who copied so much of the British law and left out this valuable protection to physiologists against unjust and malicious prosecutions.

Although I have not by any means exhausted the objections to this legislation, and have left untouched a number of just criticisms on it, already presented in various public documents, I see no necessity of occupying more time in a discussion of other objectionable provisions, after the hopelessly defective character of the bill has once been made sufficiently clear. I trust that it has been demonstrated to the satisfaction of the members of this Committee that no further legislation on this subject is necessary; that this law, in attempting to restrain abuses, of whose existence there is no evidence, would do far more harm than by any possibility good, by seriously hampering the work of scientific investigators; that many of the leading provisions of the bill are monstrously wrong in principle and would be most detrimental in practice to the interests of medicine and biologic science; that the proposed law is capable of being administered so as to prevent all animal experimentation, and does in fact explicitly prohibit a large number of important and useful experiments.

Before closing I should like to advert to two points which

measures adopted, and from what I know of America and Americans I am confident that no such laws are needed with you. Indeed, my objections to the act as a politician are quite as strong as my objections as a physiologist; the act is stamped with that mark of bad statesmanship, *maldestiniosidad*.

The act took birth in England: 1, from the energy of *doctrinaires* of the upper middle class—the upper ten thousand had nothing to do with it—who had time and funds for public agitation, while men of science and doctors had something else to do and hated agitation; 2, because certain leaders in science and medicine, fearing the strength of the *doctrinaires*, advised a compromise—the compromise has proved to be one-sided. "The report of the commission went beyond the evidence and the bill went beyond the report;" further, some most objectionable features were added to the bill as it was being passed through Parliament at the end of a session. If the act had been limited simply to demanding that no one should perform experiments who had not received a general license to do so, comparatively little harm had been done; it is the special certificates for particular kinds of experiments which give really all the trouble.

But if the time were to come over again I would fight tooth and nail against any act at all, on the ground that all such legislative restrictions are unnecessary, that instances of cruelty, that is, of heedless causing of pain on the part of physiologists, are, to say the least, rare, and that public opinion aided by the ordinary law is quite sufficient to cope with such cases; (if, of course, assume that vivisection is absolutely necessary for the progress of physiology). And much as I hate public agitation, I should throw myself with all the energy I possess into agitating against such measures, sacrificing my little portion of present ease and comfort for the sake of science to come. My advice to you is, accept no compromise whatever, refuse to admit for a moment the need of such a law, and fight against it everywhere, in the newspapers and on the platform, and, if the situation demands it, even imitate your opponents and refuse a political vote to a candidate who will not pledge himself to vote against it. I do not think I can say anything stronger than this last. To repeal a law is a very different thing from opposing the making of one. I scarcely think that I shall live to see the repeal of our act, but if the chance of success ever offers itself I trust I should be ready to carry out for ourselves the advice which I am now giving you.

Yours very truly, M. FOSTER.

Such are the opinions based on actual experience, of the foremost representatives of English surgery, medicine, therapeutics, and physiology, on the effects of the only antivivisection law in operation in any country, a law, moreover, bad enough but still far less repressive than that embodied in this bill. Can you wonder that biologists and physicians throughout this country are so earnest and active in their efforts to prevent the enactment of this bill? The opportunity which the introduction of this bill into Congress has afforded for an expression of the real sentiments of scientific and medical men has served to show the falsity of the assertion current in antivivisectionist writings that there is any material division of opinion in the medical profession concerning the utility of vivisection and the dangers to science inherent in this kind of legislation. I am aware that lists of doctors are reported in antivivisectionist publications purporting to show that many physicians are opposed to vivisection or approve special restrictive legislation. These lists, so far as published with any fulness, contain many names which will not bear scrutiny as to their professional standing. In the most frequently cited of these lists, that collected by the American Humane Society in 1894-95, I do not see how any right thinking person could have approved the statement headed "Vivisection without Restrictions," which is as follows:

Vivisection, or experimentation upon living creatures, must be looked at simply as a method of studying the phenomena of Life. With it morality has nothing to do. It should be subject neither to criticism, supervision, nor restrictions of any kind. It may be used to any extent desired by any experimenter (no matter what degree of extreme or prolonged pain it may involve) for demonstrating the principles of the statements contained in their text-books, as an aid to memory; for confirmation of theories; for original research; or for any conceivable purpose of investigation into vital phenomena. We consider that sentiment has no place in the physiologist's laboratory; that animals have there no "rights" which Man is called upon to notice or respect.

The comparatively small number of names signed, I must believe without due consideration, to this sorry, yet infamous, stuff is adduced by antivivisectionists as representing the proper ratio of physicians opposed to such legislative restrictions as we are considering, while the large number of those who refused to sign it is cited in support of this restrictive legislation. Could anything be more unfair?

I know no one, certainly no scientific man, who believes in

vivisection unrestricted by morality, uninfluenced by judicious criticism and public opinion, without competent supervision, without regard for a serious purpose in making the experiment, without due care in the avoidance of unnecessary suffering, and without subjection to the statute law relating in general to the prevention of cruelty to animals. These are the restrictions which should and do control the practice of animal experimentation. No further legislation is needed to secure them, and no special legislation regulative of this practice has ever been suggested, which would not seriously interfere with useful and proper experimentation and, therefore, prove detrimental to the interests of medical science and art.

Surprise has been expressed that scientific men and the great body of the medical profession in all parts of this country should concern themselves so actively with contemplated legislation which in its immediate effects relates to a very limited area and affects directly the work of probably not more than a dozen men, if indeed of that number. Our solicitude to prevent the passage of this act is not greater than that of antivivisectionists throughout the country to secure it. Our opponents have hitherto signally failed in their repeated efforts to obtain the enactment of similar laws in the various states. They now seek Congressional sanction in the hope that it will promote their "Cause" throughout the country. We know, and scientific and medical men alone can fully know, the dangers to science and humanity which lurk in what may seem to some of you this unimportant bit of legislation. The medical and biologic sciences have advanced in these later years with strides unapproached and in directions undreamed of but a quarter of a century ago. New vistas of knowledge and power have been disclosed, the full fruits of which will be gathered by coming generations. The main cause of this unparalleled progress in physiology, pathology, medicine and surgery has been the fruitful application of the experimental method of research, just the same method which has been the great lever of all scientific advance in modern times. Strange as it may seem at the turning-point of the century, we are here, not as we should be, to ask you to foster and encourage scientific progress, but to beg you simply not to put legislative checks in its way. Our own contributions to this progress may now be small, but America is destined to take a place in this forward movement commensurate with her size and importance. We to-day should be recreant to a great trust, did we not do all in our power to protect our successors from the imposition of these trammels on freedom of research. Our appeal to you is not only in the name of science, but in the truest and widest sense in the name of humanity.

SPECIAL ARTICLE.

RELATIONS OF PHARMACY TO THE MEDICAL PROFESSION.*

V.

As indicated in our fourth article (THE JOURNAL, page 1178) the pharmaceutical preparations of secret composition protected by trade-marked and fancy names are not entitled to medical patronage. There remain now for consideration as allied preparations several other classes, including: 6. Proprietary Pharmaceuticals—preparations under trade-mark or copyrighted names of which the general constituents are known, the purported formulas being represented by enumeration of ingredients more or less intelligibly, without information as to how a similar preparation could be produced.

FORMULA PREPARATIONS.

Preparations of this class, from the fact that the formulas are either printed on the labels or appear in the advertisements, are regarded as unobjectionable by many medical men, while they are condemned by pharmacists, as being impracticable and sometimes as being outright fictions. These positions are, on the part of both physician and pharmacist, often wrong, being based on incomplete information on the pharmaceutical chemistry involved in the preparations of many of them. The formulas have purposely been designed to mislead, or the satisfactory preparation is dependent on a

* The fifth of a series of articles to appear weekly in THE JOURNAL, designed to correct the abuses from advertising and patronizing pharmaceutical specialties.

certain often complicated reaction. A few examples of each kind will illustrate:

A certain make of "tri-iodides" is said to contain "in each table-spoonful as iodids, the alkaloids of 30 grains each of semen colchicum, phytolacca decandra, solanum dulcamara, with 10 grains sodium salicylate." Now, the alkaloid of colchicum is exceedingly rare, those of phytolacca and solanum have yet to be produced on a commercial scale, and it is a well-established fact that the iodids are the most insoluble compounds of the alkaloids—in fact the assay of many alkaloidal drugs is effected by precipitating the alkaloids as iodids. The preparation could not be made from the alkaloids but, by using the fluid extracts of the respective drugs, adding an iodid, probably potassium iodid, the compounds, if formed at all, will be in minute quantities and will be kept in solution by the large amount of liquid and especially the alcohol, since the iodids, as well as the bromids, of the alkaloids, are soluble in liquids of certain alcoholic strength. The formula for this preparation becomes, therefore, exceedingly simple, but on its face it looks very scientific. It is intended to captivate the physician and to mystify the pharmacist.

Of a simpler order is "tongaline," containing tonga, cimicifuga racemosa, pilocarpus, colchicin and sodium salicylate. These are mixtures of fluid extracts of drugs known to contain active principles, but in order to create and maintain a monopoly in their sale, the formulas pretend that they are made from the alkaloids.

FORMULAS WITH "KINK PROCESSES."

A number of formulas are based on a somewhat different plan in that there is a "knack" in the preparation, as illustrated in one of the earliest and best known—the "hypnotic par excellence"—"bromidia." This is said to contain "15 grains each of chloral hydrate and potassium bromide and ½ grain each extract of hyoscyamus and genuine imported extract of cannabis indica in each fluidram." Cannabis indica extract is a complex resinous substance, as insoluble in water as is varnish, and its solution suggested the use of alcohol, and consequently aromatic elixir was employed as the vehicle or solvent, by pharmacists who were asked to compound the mixture by physicians, attracted by the formula, but who preferred to have it compounded by the pharmacist. On standing a short time the liquid separates in two layers, and the superior oily one can but momentarily be mixed with the heavier liquid of much larger volume. The extemporaneous compounding was therefore very unsatisfactory and the originators of the compound have had a monopoly of it for twenty years. It has become exceedingly popular and is extensively used by the laity, especially by dipsomanics.

A PHARMACEUTICAL PROBLEM.

The explanation is very simple. Chloral, in the presence of alcohol, is decomposed by alkalis into alcoholate of chloral, an oily liquid, insoluble in water and specifically lighter than water which, in the presence of syrup—from the elixir—rises to the top of the liquid. Its solvent power is almost as great as is that of chloroform, and it therefore extracts the alkaloidal principles of the hyoscyamus and cannabis, and all the medicinal agents except the potassium bromid will therefore be found in the immiscible top-layer of the liquid. With a large volume of the mixture, say 500 c.c., the amount of alkaloids may be so great as to cause fatal results from an ordinary dose, if the mixture be not thoroughly shaken before taken. Bromid of potassium is always slightly alkaline, it being necessary on the part of the manufacturer in order to insure stability and to produce an alkaline salt, to crystallize it from an alkaline solution. This alkalinity in the presence of alcohol breaks up the chloral hydrate. It has been found that by using water alone as the solvent a perfectly stable solution is obtained, and this is the secret of the "famous" hypnotic. While water has no effect on cannabis extract, the solution of chloral hydrate and potassium bromid in water has solvent properties nearly as great as chloroform, and this solution will therefore extract and hold in solution all the active principles of the cannabis extract, leaving only some inert resin. The following is the formula:

LIQUOR CHORALIS ET POTASSII BROMIDI COMPOSITUS.

R. Chloralis hydratis	
Potassii bromidi, āā.....	5
Ext. cannabis indicæ	1
Ext. hyoscyami, āā.....	
Aque, q. s. ad.....	25

Dissolve the chloral and potassium bromid in 15 c.c. of hot water and add the solution in small quantities to the extracts, previously triturated with a little powdered pumice stone, contained in a mortar; let stand until cold, filter through cotton, adding water if necessary, with a little caramel, and if sweetness be desired, add a very little saccharin.

This is practically the strength of chloral and potassium bromid, which the preparation, as shown by analysis, contains.

A CHEMICAL PROBLEM.

As illustrative of the rôle chemical reactions play, the prescriptions of Dr. Barclay, "arsenauro" and "mercauro," are unique. These appear to be especially commended from the fact "that they are to be prescribed only on prescriptions," etc., and that the formulas are apparently bona-fide—and so they are. Arsenauero is said to "contain in each 10 minims, 1/32 gr. each of arsenic and gold bromids," and "to be a potent reconstructive." Many failures attended the earlier attempts to make a permanent solution, until some medical man and pharmacist in Pittsburg discovered the secret, viz., that the arsenous acid, as ordinarily employed, must be converted into arsenic acid before a stable compound with gold tribromid can be made. The formulas changed hands several times until they reached an adept in exploiting and had quite a run. The National Formulary gives the following, which differs only in containing 1/16 gr. tribromid of arsenic, instead of 1/32 gr.

LIQUOR AURI ET ARSENIUM BROMIDI.

R. Acidi arseniosi.....	2/5
Auri tribromidi.....	3/25
Aque bromi et aque destil, q. s. ad.....	1000

The arsenous acid is added to 135 c.c. of bromin water, contained in a flask, and heated until free bromin has disappeared; then add bromin water until the solution does not become colorless after some time. Heat the solution in a capsule until excess of bromin has been expelled, dilute with water to 900 c.c., dissolve in this the gold tribromid and then add water to make 1000 c.c.

It will be observed that in the first instances here mentioned, there is no originality or skill required in the process, as they are mixtures such as any competent pharmacist should be able to prepare. The "formulas" have directly or indirectly originated with some prescriber and have been appropriated for the purpose of exploitation, monopoly being secured through the use of trade-mark names.

PROTECTION TO INVENTORS.

The two last-mentioned preparations are in an entirely different category. In one, superior pharmaceutical knowledge and skill are required to form a uniform and stable solution of the cannabis extract and chloral and potassium bromid. The successful production was certainly as great an invention as was that of the traditional lever stoveld-lifter and a thousand and one little ideas which have made fortunes for their inventors. It was a pharmaceutical invention, and as such should have been entitled to limited protection through patent on the process. This would have prevented secrecy, protected the original inventor, and made the entire product public property through expiration of the patent. The same may be said of the arsenical preparation. That the arsenous acid must be converted into arsenic acid, as far as applied to this preparation, was, it is believed, an invention, showing originality and chemical skill. If the process had been patented the inventors would have had some protection, the patent would have been valuable and a princely royalty could have been secured for them as compensation. Instead they sold (?) their invention for a "mess of pottage."

The position on this class of medicines should therefore be the same as on the first-named. Their claims for medical patronage based on invention must be proved by patent on

the process. All parties concerned will then be protected, and medical and pharmaceutical literature will be preserved.

A committee of control, as already proposed, would be of great service in protecting inventors and determining the status of these medicinal articles.

The next class to be considered will be Pharmaceutical Specialties.

Therapeutics.

The Treatment of Seasickness.

At a recent meeting of the Northumberland and Durham Medical Society, McDougall (*British Medical Journal*, March 24, 1900, p. 707) described the results he had obtained in the treatment of seasickness by the hypodermic injection of atropin and strychnin. He had employed these remedies in 47 cases, with complete success in forty and with partial success in the remainder. The doses used have been from 1/60 to 1/30 grain of strychnin sulphate and 1/150 gr. of atropin sulphate dissolved in from 10 to 15 minims of peppermint-water. When necessary the dose was repeated in a few hours or on the next day. The injection should be given at the onset of nausea or discomfort, or as a prophylaxis in susceptible persons. The symptoms of seasickness being those of circulatory depression and cerebral anemia, this stimulating treatment is preferable to the use of sedative drugs, as it places the patient in the best position to avail himself of the natural prophylactics—food and exercise.

Dysentery.

Dr. J. O. Samtchouk, a Russian military physician, treats dysentery in the following way: As the first dose, 3iv to v of sodium sulphate are given; about two hours later, 3ii of sodium bicarbonate; two hours later, gr. iv of ergotin. This amount of ergotin is repeated once or twice a day, according to the amount of blood found in the stools. The following is also given:

- R. Bismuthi subnit. gr. iv
- Acidi tannici. gr. ivss
- Quinina sulph. gr. ii

M. ft. One powder. Give three or four such powders a day. After each stool, in old cases, tannin douches are used in addition, 3i to 4 or 5 glasses of warm water. As food, is given a decoction of barley, to which are added butter, eggs and bread. Tea is given for drink. Recovery is said to result in two or three days in recent cases. —*Merck's Archives.*

Treatment of Ozena.

Bonnier recommends the following course of treatment to be carried out by the patient: Twice a day he is to take a nasal douche of boiled water plus a tablespoonful of salt to the liter, using for this purpose a Weber siphon, elevated about two feet above his head. During the douche he should breathe through his mouth, avoid swallowing, and keep the soft palate raised by pronouncing the vowel a. After the douche the patient is to introduce the following ointment into his nasal fossæ, using for each side a bit the size of a bean, while holding his head backward:

- R. Menthol gr. iv
- Acidi borici 3ss
- Vaselinæ alb. 3i
- Olei geran. rosat. gtt. xx

M. ft. Unguentum. Sig. For external use. —*Medical News.*

Formalin-Alcohol in Night-Sweats of Tuberculosis.

At a recent meeting of the Berlin Medical Society, Hirschfeld (*Berliner Klin. Woch.*, 1900, No. 15, p. 326) reported the results of local application of a mixture of equal parts of formalin and absolute alcohol by means of a soft brush or a cotton swab in the suppression of the sweating in cases of tuberculosis. Under no circumstances should all of the clothing of the patient be removed, as the vapor set free from the warm skin would gain access and cause annoyance to the eyes and respiratory organs.

The patient should wear at least a shirt, which can be thrown over his head. In practice the chest and the abdomen are covered with rubber cloth, fastened about the neck, and drawn over these parts and kept in place for an hour after the application is made. This mode of treatment was pursued in 100 cases of pulmonary tuberculosis without unpleasant results in any. In only four of the cases was the desired effect not attained. In some instances a single application sufficed for weeks. In others it had to be repeated. The skin appeared to bear the medicine well. The chest and the abdomen, anteriorly and posteriorly, were painted at one sitting, and the legs, if involved, on the following day. When the head was the seat of trouble, cotton squeezed out of the solution was rubbed on it. The application should not be made to wounds or abrasions of the skin, such as may be induced by a mustard plaster or iodine, and also not to the nipples, the umbilicus, the genitalia and the anus. Slight burning follows the application, but this soon disappears. In persons with a delicate skin the concentration of the application should be lessened. The patient should not be permitted to use the solution himself.

For Intestinal Dyspepsia with Flatulence.

- R. Pepsini puræ
 - Pancreatini, ʒā. gr. xxx
 - Pulv. carbo. liqui
 - Bismuthi subgallatis, ʒā. gr. lx
 - M. Ft. powders xii. Sig. One before each meal.
- Wells: Medical Record.*

Palatable Trional Mixture.

One of the objections to trional is its difficulty of solution and also its unpleasantness of administration when given in the usual method. The following will be found an excellent method of making a palatable mixture.

- R. Trional ʒii
- Ol. amygdal. dulc. ʒi
- Gum acac. ʒiv
- Syrup toltan. ʒi
- Aque aurant. concent. ʒiv
- Aque pur. q. s. ad. ʒiv
- M. Ft. Emulsion.

Given in this way the hypnotic effect is as pronounced, and far more readily obtained than in the present method of administering the drug. —*M. A. H. Thelberg, New York City.*

Tubercular Syphilides.

Dr. A. H. Ohmann-Dumesnil (*St. Louis Med. and Surg. Jour.*) suggests the following local applications for tubercular syphilides:

- R. Acidi salicylici gr. xx
- Ichthyolis ʒiv
- Ung. aque rosæ ʒi
- M. Sig. Apply thoroughly twice a day.

If there be objections to using an ointment, the following, which is but a type of preparations to use, will be found very efficient. It is dry, water-proof, and not easily removed by friction:

- R. Acidi salicylici gr. xx
- Cocaini hydrochloratis gr. ʒi
- Traumaticini or collod. fix. ʒi
- M. Sig. Paint on affected parts twice a day.

After the disappearance of the skin symptoms a bland ointment should be applied at night. An excellent one is the following.

- R. Hydrarg. chloridi mitis ʒss
- Ung. aque rosæ ʒii
- M. Sig. Apply thoroughly at night.

Treatment of Alcoholism.

Morton (*Brooklyn Med. Jour.*, May 26) does not restrict himself to any special drug in the treatment of alcoholic cases, but individualizes his treatment. In some cases he stops the use of alcoholics on the first day and in others continues it for three or four days after admission, though not longer as a rule. He believes in stopping the use of the intoxicant as rapidly as possible, not so soon as to shock the person or start up a delirium. The drugs he prefers are strychnin in small doses to strengthen the heart, a laxative to relieve arterial

congestion, and a sedative like bromid of soda. For old drinkers he gives liquid diet every two hours, occasional baths and rest in bed. He uses chlorid of gold in fractional doses, and hypodermics of strychnia and atropia, with good results, also extract of ipecac in small doses in a glass of whisky three times a day until the patient is thoroughly nauseated. He thinks the saving of life in critical cases is due to the use of heart tonics and nourishing diet given frequently. He does not employ chloral, hyoscyamin or hydrobromate of hyoscin.

Treatment of Influenza.

Johnson (*Med. Review*, May 12) finds that quinin is one of the best preventives of influenza, and irrigation of the mouth and nasal cavities is also of value. Fumigation of the apartments of the influenza patient should be done even before the convalescence. To prevent relapse, the patient should not be allowed to get out of bed within twenty-four hours after complete subsidence of the fever, and in some cases even this is not sufficient. In checking la grippe at the onset diaphoresis is of value and if we can also produce a sialorrhœa it will have a good effect. These combined results may be obtained with pilocarpin. Phenacetin and Dover's powder may be used for their analgesic and diaphoretic effects, and, if pilocarpin is contraindicated, quinin and Dover's powders, hot lemonade and a hot foot-bath may be used. For elimination and cleaning of the alimentary canal, calomel in divided doses is to be recommended. For the pains, headache and neuralgia, he has found the use of salipyrin and phenacetin of value. Quinin and salicylates hold first place as specifics for this disease. For the special symptom of nasal catarrh he offers the following prescription:

R. Mentholisgr. i
Magnesiæ carbonatis levis.....gr. v
Cocainæ muriatisgr. v
Sacchari lactis3iss
M. Sig. As snuff.

As a substitute for the above, finely powdered white sugar and camphor may be used as a snuff. Syringing the nasal cavities with Dobell's solution is good practice. A teasing cough is often relieved by occasionally spraying with

R. Cocainægr. v
Antipyrinʒii
Aque gaultheriæ3ii

The cocain may be omitted. Strychnia is useful in the depression of and after la grippe. He has found asafetida, combined with tonics, of value.

Pruritus Ani.

Adler's treatment for pruritus ani (*Philadelphia Medical Journal*, May 12) consists largely in paying attention to the removal of the factors complicating pruritus, if such exist, and then giving local treatment for itching. It is important to see that there is a daily evacuation of the bowels, and if necessary, medicine should be used for this purpose. In all cases there is more or less pruritus of the hemorrhoidal veins, and he is in the habit of seeing the patient daily for a time and using an injection into the cavity of 1 to 2½ drams of the following prescription:

R. Fluid ext. hamamelidis.....ʒi
Fluid ext. ergotæ
Fluid ext. hydrastis
Comp. tinct. benzoini, aa.....3ii
Olei olivæ or lini, carbonized (5 per cent.)..ʒi
M. Sig. Shake well before using.

The patient is advised prior to using this injection to remain quiet and resist the sensation of immediate evacuation. On the first visit, if the skin has a very hard and dry surface, he paints around the anus for several inches with a strong (saturated) solution of silver nitrate. If the skin is broken, a little 2 per cent. solution of cocain is used to prevent eruption from this application. The application of silver may have to be repeated two or three times, not oftener, however, than every third day. As soon as the silver is dried he smears over the anus and the cutaneous surface of the parts for a distance of about 2 inches, the official citrine ointment in full strength and repeats on subsequent visits. Over this he uses a wad of absorbent cotton, kept in place with a T-bandage, which is to

be worn all day and over night. If the itching should annoy during the night the patient is advised to use hot water as hot as can be borne, but under no consideration to rub the parts. After using the water he is directed to use a solution of black wash or, what is better in some cases, calomel ointment applied locally. Prior to coming to the office for the next treatment he may wash the parts with castile soap, though this is not essential as a routine practice. No rubbing is to be permitted. For the first two or three weeks the patient is seen daily, then every second day for a like period or longer time; after that once or twice a week will suffice until the disease is conquered. The treatment should be continued for about six months. A definite promise of cure should not be given, and he warns the patient that the itching may return any time, but that it must not be considered a bad sign. Sometimes during the use of nitrate of mercury ointment the parts become sore, presumably from scratching during sleep. Under these circumstances the ointment may be discontinued for a few days and calomel ointment substituted. He has never seen any bad effects from mercury. With a large number of cases thus treated he has not had a single failure.

Medicolegal.

Five Dollars Not Enough for Scalp Wound.—The General Term of the City Court of New York holds, in the case of Levison vs. Bernheimer and others, that an allowance by a jury of five dollars is insufficient to compensate a person for a lacerated scalp wound that a physician washed with bichlorides and bandaged up, where same was found to have been caused by the negligence of the defendants.

Destruction of House Over Sick Person.—The owner of a house who knows that a member of the tenant's family whose term as lessee has expired is sick and unable to leave her bed without danger, the appellate division, second department, of the Supreme Court of New York holds, in Prieser vs. Wielandt, is liable for all the natural and necessary consequences which he might or should have reasonably anticipated from proceeding to demolish the house over such sick person, although no actual blow is struck the latter in the course of the destruction of the building.

Can Recover Compensation Without Certificate.—The Court of Civil Appeals of Texas reaffirms, in the case of Carleton vs. Sloan, that a regular practicing physician, holding a diploma from an accredited medical college chartered by the legislature of the state in which it is situated, who has had such diploma duly filed and recorded in the county of his residence, where he has practiced his profession, can recover for professional services rendered by him, notwithstanding he may have never obtained from a medical board appointed by a district judge of Texas a certificate to practice medicine.

Entitled to Reward for Finding Dead Body.—The Supreme Court of Nebraska holds that the mere fact of being one of a party discovering a dead body for which a reward has been offered is not of itself sufficient to entitle one to share in the reward. It must further appear that the efforts put forth were in conjunction with the party who succeeded in the search, and with whom there was co-operation for that purpose; that such persons were acting in concert, and by their joint efforts the desired end was accomplished. Therefore, the court holds, in Elkhorn Valley Lodge vs. Hudson, where many persons are engaged in the search for a dead body, for the recovery of which a reward is offered, and one acting on his own account, independent of the others, and for the purpose of securing the reward, succeeds in finding the missing body, he will be entitled to the whole of such reward.

Non-Expert Can Not Say About Legal Capacity.—The Supreme Court of Rhode Island says that the uniform practice in that court has been to permit non-expert witnesses to testify to facts which they have observed bearing on the

mental condition of a testator, and then to give their opinions as to his mental condition, derived from those facts. But it holds, in *Hopkins vs. Wheeler*, clearly inadmissible the question whether a certain person was in a condition to make a will, asked of a witness who was not an expert on the subject of mental capacity. It condemns the question because it calls for the opinion of the witness as to the degree of mental capacity required by law for the making of a will.

Valid Contract with Employee.—The Supreme Court of Georgia holds, in *Petty vs. Brunswick & Western Railway Company*, that a contract between an employee and his master, or another acting in the latter's interest, such as a relief and hospital association, by the terms of which contract the employee, when physically injured, whether as a result of his own negligence or not, or when sick, is to receive pecuniary or other valuable benefits, and which stipulates that his voluntary acceptance of any such benefits in case of injury is to operate as a release of the master from all liability on account thereof, is not contrary to public policy. The court considers that such a contract secures to the employee substantial benefits, and that the master has contributed to the fund for the payment thereof constitutes a valuable consideration, as to the employee; and this, it maintains, is true though the employee himself made a small monthly contribution to that fund. So it holds that a contract of this kind is not wanting in mutuality. Furthermore, one who deals with an association as a legal entity capable of transacting business, and in consequence receives from it money or other thing of value, the court holds, is debarred from denying the legality of its existence or its right to contract. This settled, the court then more particularly holds that the acceptance by an injured employee of any benefit under a contract of the kind first-above described is an election on his part to look exclusively to that source for compensation on account of the injury, and amounts to a complete satisfaction of his claim for damages against his master therefrom arising.

Liability for Injury by Private Ambulance.—In *Green vs. Eden* the Appellate Court of Indiana has affirmed a judgment for damages for the injury of a pedestrian by an ambulance. Among other things, the court holds that it can not assume, from an averment that the defendants were operating a "hospital ambulance," that the ambulance was a public vehicle, and being operated for the public good. Nor does it consider that it was necessary to aver that they derived benefit from the operation of the ambulance. But one of their defenses was that they had entered into a contract with the city whereby they bound themselves to keep a hospital ambulance for the use of the city, and to furnish therefor a horse and driver, the ambulance to be under the control of the dispensary surgeon, and all calls coming through the city dispensary must be promptly answered, and that when the injury complained of was inflicted the ambulance was, in accordance with that contract, under the exclusive control and direction of the surgeon in the employ of the city, then and there in charge of the ambulance. Nevertheless, the court not only pronounces inapplicable that line of cases holding that a municipal corporation can not be held liable for damages resulting from the negligent act of a driver of a city ambulance while driving through its streets, but it holds that the defendants could not escape from the results of their alleged negligent acts by saying that when the injury in question occurred the ambulance was under the management, control, and direction of the dispensary surgeon, an employee of the city. The city, through its servant or employee, the surgeon, it holds, could not authorize the defendants, through their servant, the driver of the ambulance, to be guilty of actionable negligence, or recklessness, or carelessness in driving the ambulance through the streets of the city at a high and dangerous rate of speed. Again the defendants argued that the plaintiff had failed to make a case, because it was established that when he was injured the ambulance was conveying an injured person to the hospital, and was being driven at a high rate of speed, at the direction of the surgeon, and that there was necessity for so doing to save life. However, to sustain such a proposition by a judicial decision

would, the court thinks, establish a dangerous precedent. It may be, and doubtless is, it maintains, as necessary and important to protect the life and limb of the innocent pedestrian upon the street, whether child or adult, whether infirm or in the full vigor of years and health, as it is of the person who is being conveyed in an ambulance. And to establish any other rule, it declares, would be to wholly disregard the rights and life of the pedestrian under such circumstances, which it is not willing to do.

Construction of Contract for Cure.—In *Wellman vs. Jones*, the Supreme Court of Alabama had before it an action on a contract which provided that, if Jones, the plaintiff in the court below, would place his brother in a certain named institute, to be treated as a patient addicted to the excessive use of morphin and chloral, and would pay in cash the sum of one hundred dollars to the proper officer of the institute, the party signing this contract would return, on demand, to the said Jones, the said sum of one hundred dollars, provided his brother was not fully and permanently cured by the treatment of said institution of the use and habit of morphin and chloral. This contract, in terms, the supreme court, first of all, declares, was plainly an original undertaking between the said Jones and the defendant, and consequently not open to the defense of the statute of frauds relating to "promises to answer for the debt, default, or miscarriage of another." As shown by the evidence, the brother in question was addicted to the habitual and excessive use of morphin and chloral, and it was of this excessive use and habit, by the terms of the contract, he was to be cured. He entered the institute, and received treatment for that purpose, and, after receiving treatment, he left said institute, claiming that a cure had been effected, but within a short while thereafter returned to his former habit and excessive use of these drugs. This leads the supreme court to say that it thinks the fair and reasonable interpretation to be given to the words "fully and permanently cured," as employed in the written contract sued on, when construed in the light of the attendant conditions and circumstances, was that the patient should be restored to the normal condition of body and mind, with the same will power to resist the desire to indulge in the use of morphin and chloral that he possessed and enjoyed before the habit was acquired. It would be an unreasonable construction of the contract, it maintains, to say that it was the intention of the parties that the patient should be put in that condition that he could never again take the drug—a contract impossible of performance—if by the cure the patient was restored to the normal condition of body and mind and will power possessed before the habit was acquired. But if, as a matter of fact, a cure had not been effected in accordance with the conditions of the contract, the court holds that the plaintiff would not be deprived of his right of action growing out of the failure to cure, although, at the time his brother left the institute, its managing officer, as well as the plaintiff and his brother, were under the mistaken belief that the latter had been cured. Moreover, the court holds that it was no defense to an action on this contract that neither the institute nor its managing officer had a certificate or license from the medical board of examiners to practice medicine or sell drugs, the contract by the defendant being to pay back to the plaintiff the amount paid by him to a proper officer of the institute, in the event a cure of his brother was not effected under the treatment to be given by the institute. There was nothing in this contract, the court says, violative of any provision of the statute against the practice of medicine without a certificate from the board of examiners. Again, so far as the institute itself, a domestic corporation, was concerned, the court says that it is impossible to conceive of a corporation engaging in the practice of medicine, or of conforming to the requirements necessary to obtain a certificate from the board of medical examiners. These provisions of the law can not be applied to a body corporate, and were never so intended. They can only be made to apply to persons or individuals capable of complying with the requirements necessary to obtain the certificate.

Societies.

COMING MEETINGS.

AMERICAN MEDICAL ASSOCIATION, Atlantic City, N. J., June 5-8.

Association of Military Surgeons of the United States, New York City, May 31 to June 2.

American Laryngological, Rhinological and Otological Society, Philadelphia, May 31, June 1 and 2.

New Hampshire Medical Society, Concord, May 31 and June 1.

International Association of Railway Surgeons, Detroit, Mich., May 30 to June 1.

Baltimore & Ohio Association of Railway Surgeons, Atlantic City, N. J., June 1-2.

Conf. of State and Prov. Bds. of Health of N. A., Atlantic City, N. J., June 1-2.

American Academy of Medicine, Atlantic City, N. J., June 4.

American Medical Publishers' Association, Atlantic City, N. J., June 4.

American Medical Editors' Association, Atlantic City, N. J., June 4.

Association of American Medical Colleges, Atlantic City, N. J., June 4.

Medical Society of New Jersey, Atlantic City, N. J., June 4. New Mexico Medical Society, Santa Fe, June 5.

American Association of Acting Assistant-Surgeons, U. S. Army, Atlantic City, N. J., June 6.

Rhode Island Medical Society, Providence, June 7.

Medical Association of Delaware, Rehoboth, June 12.

Massachusetts Medical Society, Boston, June 12-13.

Oregon State Medical Society, Portland, June 26-27.

Colorado State Medical Society, Denver, June 13.

Maine Medical Association, Portland, June 13-15.

South Dakota State Medical Society, Aberdeen, June 14.

Indian Territory Medical Association, Wagoner, June 19-20.

Wisconsin State Medical Society, Milwaukee, June 20.

Third District Branch of the New York State Medical Association, Binghamton, N. Y., June 21.

Second District Branch of the New York State Medical Association, Schenectady, N. Y., June 28.

Oregon State Medical Society.—At the annual meeting of this Society, to be held in Portland, Ore., June 26 and 27, Dr. A. M. Phelps, of New York City, will give two addresses, and operate on cases to illustrate his remarks.

Texas State Medical Association.—B. E. Hadra, of Waco, was elected president of the Texas State Medical Association, at its recent meeting. Galveston was chosen as the meeting-place for the next session, to be held in April, 1901.

Thirteenth International Medical Congress.—During the week of this Congress, to be held in Paris, August 2-9, free admission to the Paris Exposition will be granted to members of the Congress. To secure this, members will receive a special card by applying to the office of the Congress, 21 rue de l'École-de-Médecine.

Brazos Valley Medical Association.—At the recent meeting of this Association, in Caldwell, Texas, the officers elected for the coming year were: president, L. P. Oliver, Caldwell; first vice-president, M. L. Langford, Baileyville; second vice-president, E. S. Ferguson, Camron; secretary, W. B. Briggs, Easterly; treasurer, J. W. Hudson, Milano.

American Proctologic Society.—The following officers were elected by the American Proctologic Society, at Washington, D. C., May 5: president, Jas. P. Tuttle, New York City; vice-president, Thos. Chas. Martin, Cleveland, Ohio; secretary, Wm. M. Beach, Pittsburg, Pa.; executive council, S. T. Earle, Jr., of Baltimore, Md.; A. B. Cooke, of Nashville, Tenn.; J. R. Pennington, of Chicago.

International Congress of the Medical Press.—The sessions will be held in the United States Press Pavilion, Paris Exposition, July 26 to 29. The American delegates are as follows: From the Association of American Medical Editors—Drs. J. M. Mathews and Horace Grant, Louisville, Ky.;

George F. Butler, Alma, Mich.; George H. Simmons, Chicago; C. F. Taylor and H. A. Hare, Philadelphia; Dillon Brown and Daniel Lewis, New York City; Thos. H. Hawkins, Denver, Colo.; Henry W. Coe, Portland, Ore. Those from the American Medical Publishers' Association are: Dr. J. C. Culbertson, Cincinnati, Ohio; J. MacDonald, New York City; Drs. Ferdinand King, New York City; Charles Wood Fassett, St. Joseph, Mo.; Landon B. Edwards, Richmond, Va. Those from the Medical Press Club of the Mississippi Valley are: Drs. I. N. Love, St. Louis, Mo.; Frank P. Norbury, Jacksonville, Ill.; Alexander J. Stone, St. Paul, Minn.; John Puntun, Kansas City, Mo.; Hanan W. Loebe, C. G. Chaddeok, and O. F. Ball, St. Louis. Interesting papers on timely topics will be presented by delegates from the various countries. A symposium on "The American Idea of an International Press Congress" will be read by Dr. Charles Wood Fassett, of the *Medical Herald*, St. Joseph, Mo. Dr. I. N. Love, editor of the *Medical Mirror*, St. Louis, Mo., will present a thesis on "The Relationship of a Medical Editor to the Publisher."

Toronto Tuberculosis Association.—This Association held its inaugural meeting recently. Dr. E. J. Barrick, Toronto, was elected its first president. The objects of the Association were outlined by Dr. Barrick, in his presidential address. An active campaign will be at once pushed toward securing a large membership, first 1000 and then gradually extending until there is something like 5000 members. The city council will be appealed to for the purpose of submitting a bill to the rate-payers at the next municipal elections authorizing the city to expend \$50,000 in the erection of a sanitarium. In addition to this an appeal is to be made to philanthropically disposed persons for contributions, donations and bequests. Then a campaign of education will be enthusiastically prosecuted along the line of showing the people that it will be better to expend money in this direction than for the orphans of the victims of the disease. It is presumed that there are 8000 consumptives in Ontario; and the only sanitarium accommodation provided for these unfortunates is the fifty beds at the Gravenhurst institution. The problem which this Association will try to solve is the bringing of sanitarium treatment within the reach of the other 7950 afflicted ones. It was largely through the efforts of this Association that the Ontario government granted legislation toward helping municipalities in the erection and maintenance of these institutions.

Confederation of Examining Boards.—The National Confederation of State Medical Examining and Licensing Boards, will hold its tenth annual meeting, at the Hotel Traymore, Atlantic City, N. J., Monday, June 4, the morning session at 9:30, the afternoon at 2:30 o'clock. The program includes the following: Address of Welcome, by Hon. F. P. Stoy, Mayor of Atlantic City; Address of Welcome on Behalf of the Medical Profession of Atlantic City, by W. Blair Stewart; Address of Welcome on Behalf of the State Board of Medical Examiners, of New Jersey, by William Perry Watson, Newark; Response, by Vice-President N. R. Coleman; Annual Address by the President—"The Work Accomplished under the Kentucky Law"; "Associate Medical Examining Boards," by Charles A. Groves, East Orange, N. J.; "A Brief Review of the Medical Curriculum of the United States with Special Reference to its Defects and Indicated Modifications, as Demonstrated by the State Medical Examinations of Pennsylvania," by Henry Beates, Jr., Philadelphia; "The New Medical Law of Ohio," by Hon. Maro J. Love, Bloomingville; "The Co-operation of the Medical Profession of the United States with the National Confederation of State Medical Examining and Licensing Boards in Establishing Interstate Reciprocity for the License to Practice Medicine," by Emil Amberg, Detroit, Mich.; Discussion: "What Steps Shall be Taken to Establish a Uniform Standard of Preliminary Requirements in Accordance with the Recommendations Contained in the Report of the Committee on Minimum Standards, Adopted June 5, 1899?" The following members will lead—N. R. Coleman, Columbus, Ohio; William Warren Potter, Buffalo, N. Y.; Augustus Korndorfer, Philadelphia, Pa.; Joseph M. Mathews, Louisville, Ky.

Illinois State Medical Society.

Fiftieth Annual Meeting, Springfield, May 15-17, 1900.

MEDICINE OR SURGERY: ARE THEY SEPARATE? IF NOT, WHICH IS THE SCIENCE, WHICH THE SPECIALTY?

DR. A. C. CORR, East St. Louis, delivered the address of the section on practice of medicine, using this subject. He said that medicine and surgery are inseparable in practice, except in the extremes; that medicine is a science and embraces all that comes under the head of the practice of medicine; that the tendency to be enticed by the glamor of surgery for its mere physical appearances is strong; but physicians forget that tissues have properties that may by a classified derangement constitute a disease and that these properties may be modified by medicines so as to correct the aberration and cure the disease. If surgery arrogates much, medicine must become in a restricted sense a specialty. The well-informed general practitioner is the only one who can comprehend the whole situation, is the safest one to trust, and the best exponent of the science and practice of medicine. None are competent to practice a specialty until they have studied and practiced general medicine for at least ten years.

DR. M. S. MARCY, Peoria, said that not every physician is a surgeon by any means and that the attempts of various physicians to become one have been detrimental to the population. This is especially true since appendicitis has become such a fashionable disease and there is a furor for operating. Owing to this, many lives have been sacrificed by inexperienced practitioners trying to operate on cases of appendicitis.

DR. H. B. BROWN, Decatur, said that the specialist should first be a general practitioner, and as such must necessarily have some knowledge of surgery, although his manual dexterity may not be as fully developed.

DR. R. H. HENRY, Peotone, said that the country doctor must learn to amputate a limb, to ligate an artery, and to perform laparotomy, etc., consequently he is a surgeon in the strict sense of the word, and that every practitioner must qualify himself the best he can to do surgical work.

DR. O. B. WILL, Peoria, said that some practitioners make good diagnosticians, some good therapeutists and others expert operators; and that what is expected of every man is that he will have sense to know, and the honesty to express himself when he does not know.

DR. J. N. NELMS, Taylorville, said that in order to be successful the surgeon must necessarily be a skilled mechanic, and that this requirement should be exacted of him before he graduates. If he has not the aptitude of a surgeon, he should be the first to know it, and people soon learn whether a man is skilful or not in any department of medicine.

DR. A. C. CORR, in closing, said that the essential feature of his paper was to elicit the opinions of members in regard to stopping, or at least restricting, what he designated as premature specialism.

CHRONIC GASTRITIS.

DR. JAMES BRAYSHAW, Berlin, contributed a paper on this subject, and entered a protest against the use of the tube recommended by Hemmeter; for, although it is quite soft, it is provided with a sharp, chisel-like edge around the lower opening, for the purpose of loosening pieces of carcinomatous tissue, and such an instrument is dangerous in the hands of the average practitioner. Fermentation and dilatation, one or both, are usually present in chronic gastritis, but chronic gastritis is not always an accompaniment of the former conditions. In the treatment he recommended lavage, as it not only cleanses the stomach, but stimulates the muscularis. Another method of treatment is the use of abdominal massage; this may be carried out more or less perfectly with the hands, if one is a skilled masseur, or by rolling a metal ball over the abdomen. A method he has not seen recommended, but which has given excellent results in his hands as an adjuvant, is the interrupted and alternating galvanic current passed directly through the walls of the stomach.

OUR MILK-SUPPLY; SOME OBSERVATIONS AT HOME AND ABROAD.

DR. S. E. MUNSON, Springfield, in discussing this subject, considered the milk from the time of its delivery to the conditions influencing its protection. He said that it is absolutely

essential to start with a healthy animal in order to have Nature's milk laboratory give us a supply of pure, wholesome milk. Such laws as we have already regulating disease in cattle should be rigidly enforced, and additional ones enacted. "Only the State can guard against the dirty milk, corrupted or polluted water-supply, impure ice, etc., and nothing but medical supervision will accomplish these objects, and there are no agents so effective as physicians to spread through all classes of the community the educational sense of sanitary decency."

DR. CHARLES B. REED, Chicago, mentioned the work of a legislative committee appointed to investigate the feeding of distillers' slops and brewery grain to cattle. It was found that cattle so fed were markedly tubercular to a greater degree than those that had been fed on so-called pasture food. It was likewise found that where the milk of these cattle was fed to infants and young children, there was a larger portion of infantile alimentary diseases.

DR. FRANK P. NORBURY, Jacksonville, spoke of the satisfactory results obtained in investigating the condition of cattle from the tuberculin test, and pointed out the great necessity and importance of conducting these tests and examinations more extensively, and having them involve all herds from which the public secures its milk-supply.

DR. W. H. KIRBY, Chestnut, said that the value of the tuberculin test had been conclusively demonstrated, and that all physicians should give it their support.

DR. E. H. OCHSNER, Chicago, said that if physicians, through their influence, would make a demand for Pasteurized or pure milk from tested herds, dairymen would supply it.

DR. KATHERINE MILLER, Lincoln, pointed out the necessity of having the milk-cans thoroughly clean, as the source of contamination in many instances can be traced to them.

DR. A. C. CORR, East St. Louis, said it is inconvenient and expensive for men who own small farms and have small herds of cattle to carry out some of the plans and tests mentioned.

NEPHRITIS.

DR. J. W. KELLY, Springfield, read a paper on this subject. He emphasized its prevalence, alluded to the reasons for this, and cited illustrations. He dwelt on the importance of an accurate and early diagnosis, and closed by reporting three instructive cases.

IS PNEUMONIA CONTAGIOUS?

DR. J. T. McANALY, Carbondale, considered this question, and the following conclusions and inferences were drawn: 1. Pneumonia is an acute specific and mildly contagious disease produced by the micrococcus lanceolatus, involving the vesicular structure of the lungs in an exudate of greater or less extent, and is attended by the severe and often dangerous constitutional symptoms due to the toxins produced by the infecting micro-organism. 2. Isolation should always be recommended, and no two patients should occupy the same room at the same time. The aged and children, owing to the great mortality among them and to the enfeebled powers of resistance of the former, should be excluded from the sick-room. 3. The room should be large, and should be kept well ventilated, as pure air is very essential for a pneumonia patient. The danger of vitiated air should be constantly borne in mind, for it is a point to be doubly guarded because of its harmful effects on the patient, and of its dangers to the attendants. 4. The prompt and thorough disposal of all pneumonic sputa is important, for while it may be harmless to-day, it may be dangerous to-morrow. Prophylaxis is clearly one of the most important points to be considered. Since the true nature of pneumonia has been demonstrated by the bacteriologist, we may the more readily appreciate its dangers and guard against the septic possibilities resulting from pneumococic invasions. 5. The rapid increase in our knowledge of bacteriology and the introduction of specific remedies afford ground for the hope that soon we may discover a treatment for this disease as certain and effective as that of antitoxin for diphtheria, or quinin for malaria.

THE EVILS RESULTING FROM NAMING DISEASES FOR INDIVIDUALS.

DR. N. S. DAVIS, Sr., Chicago, read a paper on this subject, bringing out the following points: 1. It is very inconvenient.

2. It is meaningless, i. e., it conveys no information concerning the causes of location, nature or results of the disease.

3. It is unscientific. Disease is necessarily a deviation from the healthy condition of function or structure of some part of the whole of the living body; consequently its name should be suggestive of the nature, and, when possible, also of the chief seat of the disease.

DR. HAROLD N. MOYER, Chicago, said that society owes thanks for this calling of attention to the vicious nomenclature of medicine, and that the time is almost ripe when organized medicine should take some action to abolish the method of naming diseases for individuals.

DR. JOHN H. HOLLISTER, Chicago, emphasized the necessity of creating an urgent demand by the medical profession for greater simplicity of terms, so that they shall be self-explanatory. He expressed the hope that the profession would soon reach the termination of the creation of new names for drugs.

DR. A. C. CORR said that physicians should keep in mind the physiologic action of drugs, in order to counteract the pathologic changes that take place and he able to meet the indications that are required in the treatment of the diseases which are recognized.

DR. T. J. PITNER, Jacksonville, called attention to the fact that in the specific diseases, where we have a distinct bacillus which is recognized as characteristic of and causing the disease, it does not act alone, but is modified by other germs and other pathologic processes which must be considered. Examples were cited.

DIAGNOSIS OF TUMORS OF SPINAL CORD AND ITS MEMBRANES.

DR. FRANK P. NORRURY, Jacksonville, considered this subject and said that disturbed functions of the cord vary in intensity and kind, involving either it or its membranes, or both. But as symptoms of organic disease, and especially tumors affecting the cord or its membranes, are similar, it is necessary to study symptoms in common. Practical diagnosis recognizes the local sequence of symptoms and does not accept as disease, what, in many instances, are purely symptoms. When possible, differential diagnosis considers the pathogenesis of tumors. Defective function is seemingly not commensurate with existing lesions, and in some cases the reverse is true. Symptoms should be systematically considered, and the plan of Eskridge is a good one, viz.: irritation of the nerve-roots; meningeal symptoms; cord symptoms.

Irritation of the nerve-roots begins by changes in sensibility—pain, neuralgia in character; and neuralgia is apt to be the diagnosis. Sensory symptoms, usually unilateral at the beginning, become more pronounced as the neoplasm develops. Segmental diagnosis is of assistance here, as soon as local symptoms appear. Motor symptoms usually give the clue as to localization; numbness, hyperesthesia, and later anesthesia follow along the distribution of the nerves involved; and contracture, spasm and exaggerated reflexes of the extremities are noted.

In regard to meningeal symptoms there are no pronounced differentiating symptoms, except Kernig's sign and muscular rigidity, when the upper cervical region is involved.

The cord symptoms are those of gradual compression of the cord, viz., motor and sensory paralysis, spastic symptoms, vasomotor, trophic and reflex changes, and differential diagnosis as to intradural, intramedullary location requires careful investigation.

The vasomotor and trophic symptoms are sweating, unilateral and profuse; occasional deep capillary flushings, herpetic skin eruptions; bed-sores, and change in the skin and nails.

As to differential diagnosis, caries is to be noted, the great point being the history or presence of tuberculous infection elsewhere. This is suspected in young persons, and especially when there is a clinical history suspicious of tuberculosis. The pain, tenderness, deformity, muscular rigidity, are also points in differentiations. Carcinoma is also to be considered—the history of removal of malignant growth. A case was mentioned with constant bilateral sciatica present; and lumbar carcinoma found after death; also some deformity, etc. Cervico-occipital neuralgia, myelitis, syringomyelia, spinal syphilitic tumor are also to be considered in differentiation.

The observations and conclusions were derived from the study of three cases: One of tuberculous tumor, intramedullary, cervical region; one of sarcomatous, dorsal region, extradural; one of carcinoma, extradural, lumbar region. Post-mortem findings confirmed the diagnosis in two cases.

DR. HUGH T. PATRICK, Chicago, said that the differential diagnosis of spinal cord tumor due to syphilis, as the gumma, had been omitted. He had seen several cases of spinal cord syphilis in Chicago.

DR. ARCHIBALD CHURCH, Chicago, said that he had seen four cases of tumor of the spinal cord, and that the most distinctive symptoms in all had been those of sensation. He regards it as exceedingly difficult to diagnose tumor of the spinal cord, and considers this largely tentative, unless confirmed either by surgical intervention or post-mortem examination. He related a case that had been operated on by Dr. Fenger, where the tumor seriously invaded the cord and produced a destructive myelitis.

DR. FRANK P. NORRURY, in closing, said the three cases reported by him had come under his observation during the last twelve years; and tumor of the spinal cord is a comparatively rare affection, there being only some 220 cases found in medical literature.

CALIFORNIA AS A HEALTH RESORT.

DR. J. H. HOLLISTER, Chicago, in a paper on this subject, considered: persons to be benefited; the locations suited to their various needs; and the proper care of such individuals. No climate in and of itself is curative, but the power for recovery must be inherent with the patient, as the environments at best are only helpful. With certain recuperative powers in the individual, the conditions which may best promote recovery are: a dry soil, with freedom from soil exhalations; a mild atmosphere, pure in quality and nearly uniform in temperature; exposure, with personal comfort, to continuous days of sunshine; wisely directed daily physical exercise; the residence isolated from crowded apartments, with good ventilation, proper drainage, and plenty of sunlight exposure; a liberal bill of fare, well selected and properly cooked; pleasant social relations and diverting pastimes. These are the ideal factors which promise most of helpfulness, so that in no single locality can one expect to unite them all, but such ideal conditions may be more nearly approximated in California than in any location with which we are familiar.

EVERY-DAY HEADACHES.

DR. HUGH T. PATRICK, Chicago, read a paper on this subject. He said that every-day headaches are those of eye-strain, migraine, neurasthenia, infection and intoxication—fever, constipation, indigestion, alcohol, etc. Those from migraine and neurasthenia are incomparably the most frequent, but the headache of the latter is not really a head pain, but nearly always a cephalic distress. The peculiarities, causes, and treatment were considered and several illustrative cases cited. Migraine, if not the most frequent headache, is the most often misunderstood, and its prevalence, nature, cause, peculiarities and variations were discussed; the diagnosis and treatment given, also illustrative cases narrated.

DO WE HAVE SMALLPOX?

DR. H. C. MITCHELL, Carbondale, discussed this question, now that we have an epidemic of smallpox, so mild in character that its fatality is almost *nil*; when such a state of affairs exists, we can rest assured that the diagnosis of smallpox will be questioned by the average physician and laity. The doubt manifested as to the diagnosis of the present epidemic is not because the symptoms are not identical with those of former epidemics, but because of its mildness and low fatality. The mildness of the disease can not be due to its having originated in a tropical country, because it has been clearly shown that in Cuba, where it is supposed to have started, the death-rate was relatively large. It can not be due to climatic conditions in our own country, because the disease prevails in the same mild type both North and South. He believes that this explanation may be offered: The disease is produced by several germs which differ as to the character of their virulence; for example, the pus-producing ones—streptococci and staphylococci. Or that it might be explained

on the hypothesis that smallpox, like measles, diphtheria, scarlet fever and similar diseases, often appears in mild form. This may not be a satisfactory explanation, because in these diseases, when they appear in their mildest forms, there will occasionally be some malignant cases and deaths, while in this instance we have a more fatal disease than any of the others mentioned that has been running for three years with practically no death-rate.

TREATMENT OF THE OPIUM HABIT BY THE BROMID METHOD.

DR. ARCHIBALD CHURCH, Chicago, read a paper on this subject, and said that in the *British Medical Journal*, July 10, 1897, Dr. N. Macleod, of Shanghai, reported seven cases which he had treated by what he called the "bromid sleep." Briefly, the purpose of this treatment is to stupefy the patient utterly for a number of days, during which time the opium is rapidly withdrawn, with also recovery from the physical disturbance secondary to its withdrawal. Macleod states that early in 1897 a neurasthenic woman, addicted to the use of morphin for nine years, by accident, had administered to her 2½ oz. of sodium bromid in something over two days. A profound sleep was induced, lasting several days, and when its effect wore off the craving for morphin had ceased and with it the various disturbances which had led to its use. A few months afterward a pilot, who was addicted to morphin and alcohol, agreed to try the effect of the treatment; no suffering was experienced during the withdrawal of the morphin, craving for which, as well as for alcoholics, disappeared on recovery from the bromid sleep.

He also gave the histories of two other cases treated by the Macleod method: in the first, the result was excellent; the second, which might have been a successful result, so far as the bromid treatment was concerned, terminated fatally, perhaps by the bromid aggravating a nephritis. The method of administration, which has been gradually developed as the result of the experience of Macleod and his own observations, was formulated thus: The drug should be given only in the daytime; 120 grains of sodium bromid in a half tumbler of water, every two hours, until an ounce is given in the same way, and this may be sufficient, or it may be necessary to continue the doses in the same way on the third day. Macleod says a safe rule is to cease the administration of the bromid after twenty-four hours, when drowsiness is so profound that the patient can not be aroused, or when aroused is incoherent. If the sleep continues or becomes deeper, no more bromid will be needed. It is to be remembered that the bromid acts in a cumulative manner. After the second or third day, when the bromid is withdrawn, the drowsiness, in some cases actually coma, tends distinctly to deepen for forty-eight hours, so that the fully-developed sleep presents a rather alarming condition to any one not familiar with it. For two or three days there is difficulty in feeding the patient, and swallowing is sometimes impossible, so that rectal alimentation is required. During this treatment, there is apparently a tendency to aspiration pneumonia, so that feeding by the mouth becomes doubly dangerous. Any septic condition in the pharynx or in the antra communicating with the mouth should contraindicate the treatment. The poisonous effect of the bromid apparently falls on the respiratory and cardiac centers, so that a weak heart or impaired pulmonary conditions would furnish reasons against the method. From the case of nephritis, that he had reported as terminating fatally, it is strongly suggested that bromid of sodium in large quantities acts harmfully upon the kidneys, if they are diseased, and therefore any degree of nephritis should be a contraindication to this line of treatment. Three deaths being occurring in twelve cases, although in each instance attributable only remotely to the bromids, and occurring where it had been used in extraordinary doses—doses that can no longer be advised—show that the plan of treatment is very far from being simple and without danger. However, as compared with the difficulties of the ordinary methods that are pursued in correcting the addiction to morphin, it seems to be of very definite value in well-selected cases; and can then be used without hesitation, under appropriate safeguards.

(To be continued.)

Association of American Physicians.

Twenty-sixth Annual Meeting, Washington, D. C., May 1-3, 1900.

President, Dr. E. G. Janeway.

ACID INTOXICATION.

DR. C. A. HERTER, New York City, in a paper on "Experimental and Clinical Study of Acid Intoxication," referred especially to the presence of oxalic acid and oxalates in the urine, and said that animals kept on a mixed diet have 67 mg. of oxalates in twenty-four hours' urine, while those on a diet of milk are free from oxalates; and that dogs fed on a sugar diet in the course of a few weeks are taken with intermittent diarrhea and gastric disturbances, with oxalates in their urine, and that all this goes to show that the oxalates are formed within the body. He concludes that this is done in the stomach and that it is probably due to an organized ferment.

DIABETES.

DR. J. B. HERRICK, Chicago, presented a paper on this subject and spoke of the low specific gravity of the urine in some cases, it being influenced by the large amounts of fluids taken. He has had cases with specific gravity as low as 1004, and has found albumin and casts not uncommon in diabetic urine, the latter being unusually abundant preceding coma.

URIC ACID AND EPILEPTIC ATTACKS.

DRS. JAMES J. PUTNAM and F. PFAFF, Boston, presented a paper entitled "Communication on the Relation of Uric Acid Secretion to Epileptic Attacks," and said that there is no difference in the amount of uric acid secreted during or between the prooxysms.

CASE OF ACUTE ASCENDING PARALYSIS, SHOWING HEMATURIA AND PYRINURIA.

DR. CHAS. G. STOCKTON, Buffalo, N. Y., read a paper on this subject, in which he reviewed the history of a case of this quite fully. He said that the claret-colored urine was not due to any of the indican bodies, for they were absent, but that there was a relationship of the pigment to the inflamed condition of the spinal cord.

INFREQUENCY OF TRANSMISSIBLE DISEASES IN CHILDHOOD.

DR. A. C. ABBOTT, Philadelphia, presented a paper on the "Relative Infrequency of Acute Transmissible Diseases During the First Year of Childhood: with a Discussion of the Probable Reason for the Same." By means of a number of statistical charts, he was able to show that acute infections, especially of measles and scarlatina, are relatively rare in children under one year of age, and very rare in those less than six months old. He thinks that this immunity is due to the mother's milk.

RECURRENT VOMITING IN CHILDREN.

DR. J. P. C. GRIFFITH, Philadelphia, in a paper on this subject reviewed the histories of four cases, and said that recurrent vomiting, often called cycle vomiting, is too little discussed. Of the cases under consideration, the third and fourth were fatal; the first, mild, and the second, very severe, but recovery took place. The symptoms were as follows: vomiting almost incessant, with obstinate constipation, not relieved when the bowels were opened; exhaustion marked, but no abdominal pain; they appeared to be at the point of death, but quickly recovered.

DR. CHAS. G. STOCKTON said that the character of the vomit had not been given and that in his cases it was pure gastric juice.

DR. JOHNSON, Washington, D. C., had a case in which the vomit was like coffee grounds.

PULMONARY TUBERCULOSIS.

DR. E. L. TRUDEAU, Saranac Lake, N. Y., presented a paper entitled "Sanitarium Treatment of Pulmonary Tuberculosis and Its Results," in which he spoke of the advantages of the sanitarium treatment over the old routines, and mentioned as especially necessary: good climate, well-regulated open-air life, proper food and care in regard to daily habits. He said that the incipient stage of pulmonary tuberculosis is not generally recognized; and that the X-ray, together with the tuberculin test, are valuable in aiding to make a diagnosis.

DR. NORMAN BRIDOE, Los Angeles, said that three-quarters of his cases were managed best by treatment outside of the sanitarium.

DR. FRANCIS KINNICUT, New York City, reported a case of phlegmonous gastritis and exhibited some specimens.

ORGANISM AND LESIONS OF ACTINOMYCOSIS.

DR. J. H. WRIGHT, Boston, considered this subject, and said that this disease goes frequently unrecognized, and it is much more common than one would suppose. He considers it a subacute or chronic process, and spoke of the difficulty in making cultures of these organisms; he showed a number of specimens by lantern slides and said that it was not necessary to stain a fresh specimen of one of the rays in order to make a diagnosis.

SPOROTHRUX.

DR. L. HEKTOEN, Chicago, read a paper entitled "A New Pathogenic Fungus" (Sporothrix), which was first described by Schenck, and gave the history of a patient who was inoculated with this new organism by a punctured wound of the fingers, due to an iron nail, and said that several different cultures produced the same organism.

PERNICIOUS ANEMIA.

DR. RICHARD C. CABOT, Boston, presented a clinical study of 110 cases; and in speaking of its etiology said that the disease is more common in males, that late middle life is predisposed to it, and that the menopause bears no relationship to the disease. The symptoms are relatively constant in all of his cases, viz., hemorrhage of the nose and mucous membranes, muscular weakness, shortness of breath, gastrointestinal irritation, which is paroxysmal, some slight fever, about 99 F., frequent myelitis together with the blood changes. He thinks that treatment is hopeless, that the average duration of the disease is from two to three years.

BLOOD FINDINGS IN PERNICIOUS ANEMIA.

DR. FRANK BILLINGS, Chicago, read a paper entitled "Report of Cases of Pernicious Anemia with Special Reference to the Blood Findings." He showed some very interesting charts that illustrated the rise and fall of the polychromatophiles and the nucleated red corpuscles, together with the color-index, and brought out their relationship to the periods of improvement and decline. He spoke also of the increased number of eosinophiles accompanying apparent improvement.

NOTES ON CASES OF PERNICIOUS ANEMIA.

DR. F. P. HENRY, Philadelphia, reported five cases, three of which had autopsies; some had paralysis of the extensor muscles of the extremities, though this is rather uncommon. His theory is that in this the blood of man reverts to that of the cold-blooded animals.

DR. H. A. HARE, Philadelphia, said that he thinks a great many changes in the form of the blood-corpuscles takes place in health, and suggested work in this line, because we know more about the pathology of blood than about its normal changes.

DR. WM. H. THOMSON, New York City, spoke of Hunter's theory of pernicious anemia, which makes it due to suppuration at the roots of the teeth.

DR. W. H. THAYER, Baltimore, Md., said that he thinks that a diagnosis could not be made by the blood count alone.

DR. DACOSTA said that the length of remissions is often as long as eight and ten months.

STRONGYLUS INTESTINALIS.

DR. W. S. THAYER, Baltimore, Md., gave a report of "Two Cases of Diarrhea Associated with the Presence of Strongylus Intestinalis in the Stools," and said that the character of the diarrhea was interesting inasmuch as it was never painful, and appeared to be the first described in the United States.

FILARIA.

DR. W. T. COUNCILMAN, Boston, read the report of a case of filaria and showed specimens of the adult parasite. The patient, who was a native of Barbados, had several live adult filaria in his left testicle and also in the blood.

THE ELIMINATION OF DELETERIOUS SUBSTANCES FROM ANTI-TOXIC SERA.

DR. W. H. PARK, New York City, read a paper on this subject, in which he said that antitoxins are of the nature of globulins, because they give the same clinical reactions, and when there is an increase in the number of toxins in the blood there is also in the globulins. He spoke of the deleterious effects

that the sera of certain animals have on the individual and suggested that only those animals he used which by experiment have been found not injurious.

VARIETIES OF DIPHTHERIA BACILLUS.

DRS. F. F. WESTBROOK, WILSON and McDANIEL, Minneapolis, Minn., presented a paper on this subject. Dr. Westbrook illustrated with several water-colored charts, and divided the diphtheria bacilli into three groups, viz., granular forms, barred forms and solid color forms, and said that some of them are able to change their shape through morphological development.

ADDISON'S DISEASE.

DR. W. W. JOHNSTON, Washington, D. C., presented a case of Addison's disease that has been under treatment with suprarenal extract. The patient has shown a marked improvement by an increase in weight, though this is due as much to rest as to the treatment.

VENOUS THROMBOSIS AS A COMPLICATION OF CARDIAC DISEASE.

DR. WM. H. WELCH, Baltimore, Md., considered this subject and reported four cases. Cultures taken from the thrombus after death were infected, while cultures from other parts of the body were not. He reviewed the literature of twenty-three cases.

CIRRHOSIS OF LIVER.

DR. SIMON FLEXNER, Philadelphia, presented a paper entitled "The Nature of the New Tissue in Cirrhosis of the Liver and Its Distribution." He said that the pathology is not well understood, but that the introduction of special stains has made the study of elastic tissue possible; and that in studying the distribution of the elastic tissue, staining has been combined with a process of digestion and in this way he has been able to separate some of the different kinds of connective tissue.

MULTILOCULAR CYSTOMA OF PANCREAS.

DR. R. H. FITZ, Boston reported a case in which the cysts were successfully removed by operation, and the patient recovered.

DEGENERATED ECHINOCOCCUS CYSTS OF PLEURA.

DR. CHAS. CARY, Buffalo, N. Y., presented a paper on this subject and told of a patient who had never been out of the United States.

MINOR FORMS OF CARDIAC DILATATION.

DR. BEVERLY ROBINSON, New York City, discussed this subject and spoke of three types in which the disease is found, viz., the young anemic girl, the fat woman, and the nervous woman about the age of 40.

GRAVES' DISEASE WITHOUT EXOPHTHALMIC GOITER.

DR. WM. H. THOMSON, New York City, read a paper on this subject and said that it is a distinct disease, not an undeveloped exophthalmic goiter; that tachycardia is the first symptom to appear and the last to disappear; and that there were often sensory and motor disturbances. He spoke also of the gastric disturbances and said that he believed the disease to be of a gastrointestinal origin.

PERICHONDRITIS OF LARYNX.

DR. M. H. FUSSELL, Philadelphia, discussed this subject and exhibited a patient and a specimen. He said that only 7 per cent. of cases of typhoid fever are thus affected.

APPENDICITIS AND TYPHOID FEVER.

DR. H. A. HARE, Philadelphia, read a paper entitled "The Attitude of the Physician and Surgeon to Appendicular Symptoms. Complicating Typhoid Fever," and cited cases that he has had simulating appendicitis, which after twenty-four hours became typical typhoid fever.

Southern Medical Association.—This Association met in Sparta, Ill., May 11 and 12. The following officers were elected for the ensuing year: president, F. T. Grinstead, Cairo; first vice-president, H. L. Gault, Sparta; second vice-president, A. A. Dean, Campbell Hill; secretary, A. B. Ormsby, Murphyboro; assistant secretary, Emmett Bottom, Murphyboro; treasurer, A. Tilford, Menard.

American Gynecological Society.

Twenty-fifth Annual Meeting, Washington, D. C., May 1-3, 1900.

President Dr. George J. Englemann, of Boston, in the chair.

OPERATION FOR PRIMARY VAGINAL CARCINOMA.

DR. WILLIAM R. PRYOR, New York City, read a paper on "Operation for Primary Vaginal Carcinoma, Applicable also to Cancer of the Rectum in Women," in which he mentioned the fact that cancer of the vagina is very rare, involving usually its posterior wall, and extending underneath the rectum, then to the vaginal structures and to the uterus. He described the operation as performed by him in two cases, where he removed all the organs in which recurrence was apt to take place, and worked from above downward. The steps being: 1. The general preparation of the patient. 2. The incision from the umbilicus to the pubes. 3. The ligation of the vessels and ligaments. 4. Dissection of the bladder from the cervix and entrance to the vagina anteriorly. 5. Removal of the vagina and the entire rectum. 6. Ligation of the obturator artery to prevent anastomotic circulation being formed.

The technique of the operation was illustrated by drawings.

DR. PAUL F. MUNDÉ considers it fortunate that these cases are rare; he has never seen but two, and says that he has curetted and cauterized, but does not think that radical work repays for the slight benefit received.

DR. R. S. SUTTON, Pittsburg, Pa., had seen but one case in thirty-four years, and does not favor radical operations. He thinks that the pathology of cancer should engage our attention instead of a new method for its removal.

DR. E. VAN DE WARKER thinks that nothing has been gained by operations for cancer.

DR. E. E. MONTGOMERY, Philadelphia, believes that the great frequency of recurrence of malignant disease, where it involves the vagina, and extends into the parametrial tissue and the broad ligament, makes questionable the operative treatment. He has seen patients in whom he felt that an operative procedure would result favorably, but in whom there was an early return of the disease, while in other cases of extensive destruction of the cervix, the patients lived several years without recurrence.

FECAL FISTULA.

DR. I. S. STONE, Washington, D. C., read a paper on this subject. He regards fecal fistulae one of the most distressing and annoying of post-operative sequela, and thinks that possibly the larger number of them follow in the wake of appendiceal abscess, and that there can be no routine treatment. Mention was made of certain methods that he believes are followed by the best results, for instance in cases in which the cecum and ascending colon are greatly thickened and firmly bound by adhesions, a section of the ilium may be taken as near the caput coli as convenient and transplanted, or an end-to-side anastomosis may be made to the transverse colon. He gave his successful experience in two cases of recto-abdominal fecal fistulae of long standing. In all of these that are persistent any foreign body must be removed, and all attempts at skin closure, by cauterization or by curettement are generally successful; and in all cases where a fistula connects with the superficial coil of intestine, the method of Greig Smith may be tried before resorting to radical operation. Recto-abdominal fistulae should, if possible, be converted into recto-vaginal fistulae, and closure of the tract secured before temporary fistulae are allowed to close.

DR. A. F. CURRIER, New York City, has seen but one case of fistulae of the small intestine and this was finally cured by section of the small bowel. He believes that in these cases, including the small intestine, it is not wise to wait, and in those situated low down, he does not advocate hasty operative procedures, having seen a number of cases where by waiting, Nature instituted a cure.

DR. C. P. NOBLE, Philadelphia, has seen a number of fecal fistulae, all but four of which closed spontaneously, three remained obstinately open, and one recovered after operation.

DR. A. P. DUDLEY, New York City, said that in operating for cancer and in breaking up the adhesions, he has broken the small intestine in two and put in a Murphy button, that was afterward recovered, having worked down to the rectum, and out through the fistula behind the uterus. Although he had expected the woman to die, the fistula healed and she recovered.

DR. P. F. MUNDÉ referred to three cases of fistulae resulting from the intestinal opening of the intestines in order to relieve an obstruction to the bowels that was tending to general peritonitis following some abdominal operation. He agreed with Dr. Currier that in fistula in the small intestine it is well to wait, but in the same condition in the large bowel, the abdomen should be opened.

DR. M. D. MANN believes that we are almost always obliged to open the abdomen in fistula of the small intestine, and that further treatment will depend on the opening; if it is close to the mesentery it will be dangerous to sew it, and if large it should not be sewed for fear of stricture.

DR. I. S. STONE, in closing, said that the Society seems agreed as to the danger of opening the abdomen in these conditions, and that it should be done only after every special method has been employed.

DR. W. L. BURRAGE, Boston, reported 137 operations which were performed on diseased uterine appendages, with the object of preserving one ovary, or portion or portions of one or both ovaries with their tubes, or as much of the tubes as was reasonably normal in appearance. He gave the results in 85 of these, the table being divided into the more severe and the less severe. By comparison it was found that in the majority of the former gonorrhoea and syphilis were more prevalent, that the symptoms had resulted more frequently from difficult labors, or abortions, and that the tubes were closed; whereas they were open in all but one of the less severe. Pregnancy followed operation in four of the more severe, and in 11 of the less severe. Anatomical cure was reported in 33 out of 57 cases, and symptomatic cure in 60 out of 85. In women of both classes, who have borne children, subsequent pregnancy may be expected in 35 per cent., whereas in previously sterile women, it may be looked for in only 5 per cent.

DR. A. P. DUDLEY said that in a case of double pyosalpinx he had taken the tube off and left the ovary hanging, then brought the uterus up and split the fundus in two; and he was absolutely sure that the ovary had grafted, and that the patient is now menstruating every twenty-eight days. He had had five cases in all, in which, not being able to save any of the tubes, he had planted the ovary, and in all he was sure it had grafted, as every portion of the discharging stricture had been analyzed.

DR. H. N. VINEBERG, New York City, said that the class of cases in his hands, which had given the poorest results had been those in which the lesions had not been very severe.

DR. M. D. MANN, Buffalo, N. Y., mentioned a case in which one tube and ovary were entirely removed, and the others were in bad condition. The tube was opened, and after breaking up the adhesions, left, together with the ovary. Four children have since been born, three girls and one boy. This is interesting in the matter of sex in regard to one ovary.

DR. J. RIDDLE GOFFE said that he was approaching his one hundredth case of conservative work on appendages, which had been very largely through the vaginal, rather than the abdominal, incision.

DR. W. L. BURRAGE, in closing the discussion, said that he has operated twice in cases where there was no symptomatic and anatomical cure, and that there were several other cases, where operation was needed but the patients would not submit and he had used the cautery. He has had in his experience pronounced neurasthenia in patients past the age of 33 years, and in those cases either complete removal or no operation is indicated, as they do not do well after resections.

INTERNAL SECRETION OF OVARY.

DR. A. W. JOHNSTONE, Cincinnati, Ohio, in a paper on this subject, said that retained secretions are the cause of nearly all conditions. For if it is a lack of an internal secretion that

causes the nervous menstruation disturbances of the menopause, why is it that delayed menstruation in a child-bearing woman will produce identically the same symptoms as those of the menopause? This is apparent to all in our every-day work, and has occurred so often that he believes that if a woman's menstruation is delayed for any reason except pregnancy, she is apt to have symptoms closely approximating those of the change of life. This leads him to believe that the internal secretion of the ovary is a myth.

THE TECHNIQUE, INDICATIONS AND ULTIMATE RESULTS OF SUTURING THE ROUND LIGAMENTS TO THE VAGINAL WALL FOR RETROVERSIONS AND FLEXIONS OF THE UTERUS.

DR. HIRAM N. VINEBERG, New York City, described in detail the technique because he felt that the method was not correctly understood. The patient is prepared as she would be for a vaginal hysterectomy, and when the uterus is unusually large and heavy, or the utero-rectal ligaments are put on high tension by anteverting the uterus, it is wise to employ a single uterine fixation suture in addition to the round ligament sutures. To avoid the possibility of dystocia in the event of pregnancy this should not be placed too high up on the uterine wall. Any operation on the cervix that may be called for is now done, and the posterior vaginal wall or perineum subjected to any plastic operation that may be deemed necessary. The patient is kept in bed for twelve days, when the round ligament sutures may be removed and also the uterine sutures, if they are present.

In 64 per cent. some surgical work on the adnexa was found necessary. In 53 consecutive cases the results show no mortality; in 48 cases convalescence was uneventful, and in only 1 was there absolute failure, the uterus being found in retroversion six weeks after the operation.

DR. A. F. CURRIE said that fixation can be done through the abdomen, and his plan is to limit the operation to those cases in which a later one is necessary.

DR. R. S. SUTTON hopes that soon the abdomen will not be opened as often as it is now, and that pelvic diseases may be attacked almost exclusively by the vaginal route.

DR. J. W. BOVÉ considers that the Alexander operation possesses an advantage over the shortening, inasmuch as it does not require the opening of the peritoneal cavity.

DR. J. RIDDLE GOFFE expressed the belief that we will not have to wait long until all pelvic work will be done through the vagina. He believes that laparotomy is not justifiable until it is found impossible to relieve the patient by a vaginal incision. In only one case within the last few years has he been compelled to resort to laparotomy to complete the work.

DR. HIRAM N. VINEBERG thought that the cases may require to be selected for the vaginal route, and that some are best approached from the abdomen.

PREGNANCY IN LABOR.

DR. J. CLARENCE WEBSTER, Chicago, offered for inspection some casts illustrating the anatomy of pregnancy in labor, also models used in gynecologic teaching. Many clinical observations made by him in regard to the topography of pregnancy had been reproduced in frozen sections.

DR. BUCKMASTER spoke of a method of reproducing the process of an operation by paraffin.

ANASTOMOSIS OF URETERS WITH INTESTINES.

DR. REUBEN PETERSON, Chicago, considered this subject and gave a historical and experimental research. He presented first an exhaustive review of the literature, then a description of his experiments, from which, together with the work of others, general conclusions were drawn. The most striking fact is the exceptionally high mortality attending the operations; out of 60 dogs operated on by the various experimenters, where one ureter was implanted in the intestine, there was a mortality of 61 per cent.; out of 65 dogs undergoing bilateral ureteral anastomosis, there was a mortality of 87 per cent. The majority of the deaths resulted from peritonitis. The method which calls for the least amount of suturing of the ureter itself is found to give the best results. He gave a short abstract of the 28 uretero-intestinal anastomoses in man, showing that the primary mortality of 32 per cent. is high.

EVOLUTION OF TECHNIQUE IN TREATMENT OF FIBROID UTERINE TUMORS.

DR. H. A. KELLY, Baltimore, Md., in this paper referred to his method of controlling the uterine vessels, which he considers a remarkable advance on any that has preceded. He briefly detailed his method of dealing with very difficult cases, such as large adhering tumors, and gave the following ways of dealing with them: by median sagittal incision of the uterus with the tumor; by a corona bisection of the uterus with its cervical portion; by a bisection of the tumor alone. The principle of the operation is the same in all cases. The best method of enucleation is to seek at first to isolate and ligate the ovarian vessels of one side and to expose the uterine vessels, then cut across the cervix, clamp the opposite uterine artery and the round ligament, and lastly, the ovarian vessels.

GYNECOLOGY IN THE LAST QUARTER OF A CENTURY.

DR. GEORGE J. ENGLEMANN, Boston, in his presidential address, gave a historical review of the various periods in gynecology in the last quarter of a century. The trend of modern medicine is toward research for cause and prevention, and the main cause of suffering is found on the great waves of a woman's life—puberty, menstruation, labor, and the menopause.

INTRA-ABDOMINAL AMPUTATION OF THE UTERUS; A MODIFICATION OF HYSTERECTOMY.

DR. F. H. DAVENPORT, Boston, in a paper on this subject, stated that the indications for hysterectomy are quite well established, and that interest is now centered on the technique. In a young married woman, whenever possible, he prefers to leave the cervix, and for suitable cases, chooses the abdominal route; he operates by the vagina for cancer, either of the cervix or body. The essential feature in which his method differs from that usually employed is that the uterine arteries are not ligated.

KELLY'S METHOD OF REMOVING THE FIBROID UTERUS VIA ABDOMEN.

DR. A. LAPHORN SMITH, in speaking on this subject, said that the advantage of Kelly's method lies in the fact that the operation is commenced on the easy side, and after securely tying the ovarian, round ligament and uterine arteries, and separating the bladder, we cut across the cervix and roll the tumor out, thus obtaining plenty of room to tie the arteries from below upward. Another great advantage is that there is much less danger of injuring the ureters. He lays even greater stress than does Kelly on the importance of feeling for each individual artery, and tying it before cutting it, and then putting on a second ligature. He strongly advises the use of chromicized catgut, and just as firmly opposes leaving the ovaries and tubes and myomectomy, and he holds the opinion that all fibroid uteri should be removed as soon as discovered, because a woman with a fibroid is liable not only to hemorrhage, but to reflex disturbances of digestion and circulation. He objects to a preliminary curetting, because it is unnecessary, and when done is seldom effectual, and also to vaginal morcellation which is not to be compared with Kelly's method.

He strongly advises the closure of the abdomen with through-and-through silk-worm gut sutures, left in for three or four weeks, for then, if not tied too tightly, and redressed with boric acid in abundance, the one dressing, or at most two, will suffice.

BRONCHIAL DISEASE AND ETHER ANESTHESIA IN ABDOMINAL SURGERY.

DR. THADDEUS A. REAMY does not think that bronchial disease is invariably a contraindication for anesthesia in abdominal surgery. He said that his personal experience with surgical anesthesia covered 8000 cases; his obstetrical work, 3000 deliveries; and that 2000 of these were under chloroform anesthesia. Although he much prefers ether, he has never lost a patient under either ether or chloroform. He mentioned as the proper conditions in the administration of both, the preparation of the patient; the temperature of 98 to 100 F. in the operating room, where the anesthetic should be administered; the placing of the chest and trunk of patient lower

than the pelvis; and of the pure quality of the ether, and the inhaler that must permit of the re-inhalation of the vapor, no more to be used unless the operation lasts more than forty minutes. He has witnessed but one case in which pneumonia was probably induced by ether inhalations, but has seen bronchitis, both acute and chronic at once cured as a result. He would not employ ether in the presence of emphysema.

DR. MALCOLM MCLEAN emphasized the importance of the high temperature of the room and spoke against any confusion that would make it necessary for more ether than would otherwise be required.

DR. T. A. REAMY regards conversation in the room of great disadvantage. His rule is to allow no one to speak until the patient is unconscious. He emphasizes the fact that the room must be hot and the ether given in the operating room.

RELATIONSHIP BETWEEN DYSMENORRHEA AND APPENDICITIS.

DR. ARCHIBALD McLAREN, of St. Paul, Minn., considered the influence of pelvic and inflammatory conditions on menstruation. In 200 laparotomies, he had 158 cases where inflammatory appendages had to be removed and in 40 per cent. the appendix showed evidence for removal, but does not advocate doing so always. The technique of his earlier operations was given; in later years he has adopted the method of Kelly.

DR. A. J. C. SKENE said that the relation of appendicitis to dysmenorrhea was a new idea to him, and explained certain observations for which he had previously been unable to account.

DR. A. LAPHORN SMITH'S experience coincides with that of Dr. McLaren. He had often been called in consultation with two doctors, one being of the opinion that the condition was salpingitis, and the other appendicitis; and since he has had more experience he agrees with both.

PELVIC ASYMMETRY.

DR. PHILANDER A. HARRIS, Paterson, N. J., demonstrated the utility of a certain chart for the determination of pelvic asymmetry by a very simple method of external pelvimetry. He exhibited the instrument and urged a more frequent use of the pelvimeter, and also showed photographs illustrating the advantages of employing a certain background in the photography of pathologic specimens.

The officers for 1900 are: president, E. Van de Warker; vice-presidents, Charles Jewett and R. B. Maury; secretary, J. Riddle Goffe; treasurer, J. Montgomery Baldy. Chicago was selected as the next place of meeting.

German Congress of Internal Medicine.

Wiesbaden, April 21, 1900.

ENDOCARDITIS.

The two principal subjects discussed: "Treatment of Pneumonia" and "Endocarditis," were ably handled by Koranyi, Pel and Litten, but nothing new was presented except Litten's classification of endocarditis. He rejected the anatomic divisions: verrucose, ulcerative, etc., as endocarditis may occur and kill before vegetations or ulcerations have appeared, and they are not characteristic of any clinical manifestation. He proposes a classification based on the clinical evolution and the degree of virulence of the micro-organisms, distinguishing three varieties: the benign, the malignant nonpurulent, and the malignant septicopyemic. Benign endocarditis occurs in the course of an infectious disease: rheumatism, chorea, gonorrhoea, purpura, typhoid or the eruptive fevers, diphtheria, pneumonia or tuberculosis, or it may be of ex-influenza or traumatic. It is not a morbid entity but merely a localization of the infective process. The anatomic manifestations may be verrucose or ulcerative, and there are usually metastases, which may be simple bland infarcts, or suppurative emboli in consequence of the participation of pyogenic micro-organisms. If the agents of the infection are unusually virulent they may induce the second variety, malignant nonpurulent endocarditis, which is generally fatal, while the benign terminates in recovery. The third variety, malignant septicopyemic endocarditis, is merely one manifestation of the general invasion of the organism. Traumatic endocarditis may

develop sooner or later after a trauma, even without external manifestations of injury to the thorax, and may remain benign and heal, or may lead to chronic valvular defect. It is also liable to become complicated with secondary pyogenic infection and assume the malignant septicopyemic form. Wassermann believes that any kind of bacterium settling on the endocardium may induce endocarditis, and that the benign or malignant character is not due to the virulence of the germ, but rather to finer biologic processes such as Ehrlich has demonstrated in his research on the hemolysins. His, of Leipsic, reported observations in which acute gonorrhoea had an aggravating effect on pre-existing valvular affections. Jurgensen asserted that the share of the myocardium in the cardiac complications of infectious diseases has been underestimated, and remarked that the character of acute articular rheumatism has altered in his experience of late years. There is less fever and swelling of the joints, and the pains extend through the diaphyses. The course is more insidious; the functional disturbances of the heart occur earlier and more frequently; respiration is accelerated and he has observed nervous phenomena, choreic, cataleptic or reflex.

EXPECTORANTS.

In discussing expectorants, Naunyn recommended potassium iodid in pneumonia and rebellious bronchitis with certain limitations, and Senator reported extremely favorable results from the use of hot water, which he administers in bronchitis and rebellious catarrh in the form of hot alkaline mineral waters.

CARCINOMA OF ALIMENTARY CANAL.

Boas reported that he had become convinced from his study of two hundred cases of this affection that the influence of heredity is much overrated. On the other hand, his belief in the noncontagious character of carcinoma has been rudely shaken by twenty-two observations on its occurrence in persons living together. He proclaimed the necessity of prophylactic measures, especially in regard to the dejecta of carcinomatous subjects, and articles they have used, dishes, toilet articles, etc. Meat-eaters predominate in his experience, but vegetarians are quite frequently affected. Alcoholic antecedents were noted in 40 per cent. of his observations. Traumatism, he adds, may unmistakably favor or arouse carcinoma of the alimentary canal, and likewise phthisis, diabetes, and syphilis.

New York County Medical Association.

CONTINUATION OF DISCUSSION ON DR. HOWARD KELLY'S PAPER ON "THE PRESENT STATUS OF OPERATIONS FOR CANCEROUS UTERI."

(Concluded from p. 1220.)

DR. H. J. BOLDT, New York City.—When your president requested me four months ago to take part in the discussion of Dr. Kelly's paper, I accepted with pleasure, not because I thought that I would be able to add to the value of the discourse, so far as treatment was concerned, because I knew that what the gentleman would speak about would be thoroughly weighed and studied, to enable him to contribute something of real value to the profession, but as I desired to add my opinion, based on the observation of a considerable number of cases. Fortunately the time given me has been sufficient to enable me to make an inquiry from all accessible surviving patients who have been under my care with cancer of the uterus.

The question as to what are the ultimate results in treating cancer of the uterus can only be answered intelligently, if the extent of the invasion of the cancerous neoplasm be defined in the individual case; the operator should differentiate these cases with regard to the prognosis, guiding himself by the ascertainable local extension. We must look on cancer of the uterus as a local disease in the initial stages; therefore, we are in a position to say that if the malignant neoplasm is diagnosed during such early stage, before it has gone beyond the uterus, the ultimate result as to final cure is good in the hands of an operator who is a master in the technique of performing hysterectomy. Unfortunately, however, it is but seldom that

patients are seen in the beginning stages; they do, however, increase in the practice of those who, on the slightest suspicious symptom, make a careful examination of such patient, and who, in all submitted to an abrasion of the uterine mucosa, have the scrapings carefully examined by a competent pathologist. The scrappings, in giving a prognosis, must also be considered as an important factor; the older the patient, the better is the prognosis, always with the proviso that the case is one very favorable for a radical operation. Women under 30 years, unless the neoplasm is in its incipient stage, give an unfavorable prognosis as to ultimate freedom from the disease. Its seat has also a bearing on the prognosis. The most favorable cases are, so far as my own experience goes, malignant disease of the uterine body; next favorable, cancer of the vaginal portion; then cancer of the cervical mucous membrane. The most unfavorable variety is the cervical cancerous nodule.

The method usually adopted in citing the value of treatment for cancer of the uterus loses greatly by neglect of consideration of the points noted. It is obvious that it is an injustice toward any given therapy to quote, for instance, that of 100 cases of cancer of the cervix operated on by vaginal hysterectomy, 50 patients are alive after one year; 30 after 2; 10 after 3; 8 after 4; 1 after 5 years. For the purpose of arriving at an accurate prognosis, as to the ultimate results, we should know what the form or variety of cancer was; which part of the cervix was the seat of the neoplasm; how much progress the disease had made at the time of operation; the age of the patient operated on, and then the description of the operative technique adopted in the respective instance. As an illustration permit me to cite an instance: A nullipara, 26 years old, presented herself with an epithelioma of the portio vaginalis, twenty-seven months ago. The vagina was appreciably infiltrated about one-fourth of an inch from its junction with the cervix. The parametria were free on the right side; on the left there was a slight thickening of the base of the broad ligament, which did not impress me as malignant, on account of the lack of a board-like, unyielding hardness. After rapid removal of the readily breaking down neoplasm, with a sharp curette, and subsequent cauterization, the upper half of the vagina was detached and closed over the portio by a continuous suture; the bladder, with the ureteral terminations, was well pushed out of the field of operation by a large gauze strip; the parametria were ligated as far from the cervix as possible and the uterus removed *in situ*, with the adnexa. The patient is still free from any evidence of recurrence.

Suppose the technique would have been such as we frequently see employed even at this day; curetting of the disintegrated neoplasm followed by extirpation of the uterus, the operator keeping close to the cervix, for fear of injuring the ureters; I doubt whether the result obtained could have been achieved. Suppose even moderate malignant infiltration of the parametria had been present, then I do not believe that there would still be freedom from the evidence of a recurrence. The cauterization after curetting, with subsequent resection of the vagina and covering the malignant surface with the loosened portion, prevents the chances of an implantation or vaccination infection, to which George Winter has called attention. Again, the probability of a good ultimate result would be still better, if the patient's age, at the time of operation, had been double.

Let us view cancer of the supravaginal portion of the cervix for a moment. Experience has taught us that the peculiarity of cancer of the uterus is that, in its early stages, it will not encroach by dissemination to other anatomic segments or parts of the uterus from where it had its primary origin. A patient with beginning carcinoma of the cervical endometrium consults her family physician on account of leucorrhœa and the discharge may occasionally be slightly intermixed with blood; the examination reveals an intact os externum of the portio, while about the vaginal portion nothing abnormal seems to present itself to the examining finger; she is dismissed with a prescription for some remedy like ergot or hydrastis canadensis and ordered to take douches. About three months later she is examined again. By that time a crater may have formed in the cervical cavity, the supravaginal portion be invaded in its

entirety and the parametria affected; the probability is that it is too late at such a stage to do a radical operation with the prospect of a good ultimate result. Not infrequently such cases are sent to the specialist as beginning cases of cancer, whereas the beginning was four to five months previously, and that was the proper time for operation.

The patients who have a hard carcinomatous nodule in the supravaginal portion of the cervix do not present any symptom until the neoplasm begins to break down, and it is then always too late to do radical work, because the parametria are generally extensively involved; it is by mere accident that such patients are seen early enough to do a hysterectomy, which will promise a good ultimate prognosis. I can not emphasize it too strongly, that we should invariably think of malignant disease, and use every method known in arriving at a diagnosis, to make sure that cancer is *not* present before dealing lightly with the respective patient. The same precaution holds good for disease of the corporeal endometrium, causing slight atypical bleeding or prolonged menstruation. We should never be satisfied with doing a curetting if there is the *slightest* suspicion, unless the microscopic examination of the scrapings shows an absolutely negative result. In making such curetting, it should also be remembered that a dull instrument is inadequate and that the mucosa must be removed from *all* portions of the interior, including the uterine cornua. I have never seen a case in which, if the microscopic examination showed cancer in one part of the scrapings, no matter how small, the examination of the extirpated organ did not verify the diagnosis. True, sometimes opinions may differ, but this is not the fault of the microscope but rather of the examiner; it is also true that a patient may have cancer and nothing has been seen in the scrapings to show it; this again is not the fault of the examiner, but it is due to the operator, hence the precaution noted, to remove from *every* part of the lining membrane.

Let us now turn to the results obtained by the speaker from radical operations for cancer of the uterus. The operation has been performed 131 times, 5 by the abdominal route and 126 by the vaginal. From the latter method 8 deaths ensued, as the direct result of the operation, making nearly 6.35 per cent. direct mortality. These are to be divided into: 3 from shock—1 of the latter had an extensive cardiac lesion, as determined a few hours after death, this taking place about three hours subsequent to operation; the lesion consisted of myocarditis and calcareous degeneration of the aorta, which was diagnosed before operation; 1 foreign body pneumonia, also determined, or rather, verified by autopsy; in 1 patient the ureters were probably tied—unfortunately an autopsy could not be obtained to verify or dislodge the suspicion; 3 died of septic peritonitis.

If we analyze the cases operated on for cancer of the uterus by vaginal hysterectomy, more than two years ago, we find the following result: total number of patients, 111; direct mortality, 5.4 per cent.; mortality from recurrent cancer, 34.2 per cent.; living with recurrence, 2.7 per cent.; deaths from other causes than cancer, 2.7 per cent.; no report obtainable, 30.6 per cent.; living and free from any evidence of recurrence, 24.3 per cent.

Year.	No. of cases.	Direct mortality.	Deaths known from recurrence of cause.	Deaths from other causes after recovery from operation and discharge of patient.	Living with recurrence.	No report obtainable.	Living and free from evidence of recurrence.
1887	5	1	3			1	1
1888	4	1	4				
1889	4		3				
1890	10	1	3				
1891	9	1	3	One from pneumonia.	4	1	2
1892	12	1	3	One myocarditis.	4	4	4
1893	18	1	1		3	3	
1894	17	1	7	One nephritis.	4	5	4
1895	19	1	5		4	5	5
1896	4	1	1		1	1	1
1897	9		3		1	1	1
1898	3		1		1	1	1
1899	7	1	1		1	1	3
1900	5	1					
Until April 1.	126	8	40	3	6	35	31

So far as the radical operation by the abdominal route is concerned, I have not yet arrived at a positive opinion. Of the 5 patients operated on, 3 died as a result, although one of these was early in my career, when the Freund operation was first made known and the technique then employed could not be called radical, as now understood, if the method is employed at this day. Yet it must be conceded that abdominal hysterectomy as advocated by Riess, Clark, and Kelly, in this country, with extirpation of the retroperitoneal glands and lymphatics, is more grave and must necessarily give a larger percentage of direct mortality, and it is still a question with me whether the ultimate results from the operation will justify the procedure. When, in 100 cases operated on by radical measures, more than two years shall have elapsed from the time of operation, the statistics of that series will undoubtedly throw the balance in favor of one or the other method.

In instances of *beginning* cancer, in fact so long as the parametria are not involved, vaginal hysterectomy, properly performed, gives a fair percentage of ultimate recoveries.

It is my opinion that with the use of the hot iron, galvano-cautery or paquefin cautery, the ultimate results will still be bettered. That this seems correct is illustrated by the published results of Byrne and Mackenrodt. With the limited personal experience which I have had with the method, I feel justified in agreeing with those authors.

In doing a vaginal hysterectomy, one must consider that it is for malignant disease, and must operate as far away from the uterus as can be done with comparative safety; the disintegrated structures should be rapidly removed with a sharp curette or spoon, and be thoroughly cauterized, charred, with a hot iron, before beginning the removal of the organ. The uterus should be removed *in situ*, unless a part of the vagina is resected and covered over the cervix. Subsequent to the operation, the administration of some form of arsenic is beneficial. The patients, during the first year after operation should be examined not less than once a month; during the second year, once in two months. Should there be the slightest infiltration of a suspicious character, then we should thoroughly cauterize with an actual cautery. One patient with cancer of the portio with a recurrence in the scar has been treated in this manner three times since her primary operation in 1896, with satisfactory result.

The question whether ligatures or clamps should be used in performing vaginal hysterectomy should not be dealt with in an offhand way; each has a place, especially so in hysterectomies for cancer; each has its advantages and disadvantages. The practical advantages which I have found with the exclusive use of the ligature method are: the patients suffer much less pain after operation, in fact it principally amounts only to the effects caused by the anesthetic; the convalescence is hastened materially—there is less liability to produce cystitis from catheterization. Theoretically it is a more surgical operation. For practical results, however, I have not found it superior to the clamp method, that is so far as the direct mortality and the remote results are concerned. What, on the other hand, are the advantages of clamps? The time consumed is greatly diminished—this is of very great importance with patients who are not robust; it is much easier to perform; one can generally work farther from the uterus. Theoretically, there is less danger of secondary infection—this, however, has not been borne out in practice in my hands.

I use ligatures exclusively, when the uterus is freely movable and if the vagina is sufficiently large, so that they need not be applied closely to the cervix, with the proviso that the patient's general condition is such that the greater amount of time consumed is of no consequence. When these requisites are not present, I deem the use of clamps safer, both for direct and remote results. The greatest danger of any vaginal method, when operating for cancer, is the injury of the uterus. This complication is more surely avoided by the abdominal method.

Dr. E. E. TULL said that since 1890 he had operated on 20 cases of carcinoma uteri, in all of which the diagnosis had been confirmed by microscopic examination. Four of the patients are now living and 2 of them were operated on ten years ago.

Dr. HIRAM N. VINEBERG said that out of about 12,000 cases

of diseases of women seen by him in dispensary practice there has only been about 12 of cancer of the uterus. The majority of these women had borne many children and had suffered extensive lacerations; hence cervical laceration can not be considered an important factor in the production of cancer. He suggested modifying Dr. Kelly's method by making a longitudinal incision in the anterior wall of the vagina, through which the uterus can be delivered without any necessity for entering the peritoneal cavity posteriorly.

Dr. GEORGE TUCKER HARRISON expressed the opinion that a patient should not be considered cured until five years have elapsed without recurrence. On this basis, 15 or 20 per cent. have been cured. The reason 80 per cent. or more were not cured was that the diagnosis had not been made early enough.

Dr. JOSEPH E. JANVRIN said that four years ago he had reported 16 cases of cancer of the uterus that had originated in the cervix in which, by the despised and old operation of skinning out the uterus, he succeeded in saving 12 patients—at least at that time this number had been well for three years or more. Two of these are well and living at the present time; one is well after twelve years. In every instance the disease of the cervix was well marked, yet he secured 37.5 per cent. of cures. Of 4 in whom the disease had extended down on the vaginal mucous membrane, 3 were cured. Vaginal hysterectomy should be restricted in those in which the disease is only in the cervix or in the adjacent mucous membrane, and to adenoma and carcinoma uteri in their early stages. For all other cases he would advise abdominal or abdomino-vaginal hysterectomy.

Dr. J. RIDDLE GOFFE said that he considers the vaginal operation the only justifiable one in cancer of the uterus, because of the liability to inoculate the freshly exposed tissues by other methods. His first objection to Dr. Kelly's technique is the turning of a carcinomatous cervix up into the peritoneal cavity, for this is simply inviting a dissemination of the disease in the peritoneum. He also objects to the method of quadrisection of the uterus, on the same ground. He would not hesitate to take out the whole vagina if this seems necessary in order to cut wide of the disease.

Dr. RALPH WALDO believes that where the disease has lasted more than six months it is probable that recurrence can not be avoided. He prefers the vaginal operation, using ligatures.

Dr. JOHN BYRNE, New York City—I deem it a privilege, no less than a pleasure, to have been afforded an opportunity of listening to this welcome and masterly résumé of personal experience by one whose opinions on any subject connected with surgical gynecology are worthy of every confidence and the fullest consideration. The difficulties oftentimes encountered in arriving at a correct diagnosis in the incipient or early stages of uterine cancer, and more especially where the disease has its origin in the fundus, are matters familiar to all, and the author's emphatic words touching the necessity for microscopic investigation in all doubtful cases are of the utmost importance, because while they sound the alarm, they preach the gospel of true conservatism.

Than cancer, in the broadest sense of the term, there is, perhaps, no other disease in the whole range of human afflictions more justly dreaded, nor is there another for the relief of which more so-called cures, from condurango to hysterectomy, have been lauded and resorted to, and from the days of Hippocrates to the present time. If the unhappy victim of this malady be a woman, and her sexual organs the seat of the disease, it is, indeed, hard to imagine a fate more pitiable, or an ebbing life so fraught with intolerable distress and utter hopelessness.

We are here to-night solely in the interest of these unfortunate victims of torture and despair, to consider, and, if possible, to decide, as to the best ways and means, through which we may contribute toward their relief and the prolongation of their lives. Such being our object then, it is to be hoped that the consideration of this important subject will not, as too often happens, be conducted in a slipshod or mere perfunctory manner, and that clinical facts, and not visionary theories, however plausible, shall constitute the basis and grounds of this discussion.

At this juncture in our friendly interchange of views, and as

time is precious, I fear the author of this valuable paper, as well as those who may have been impressed by the brilliant and attractive glitter of the work of one who concededly occupies a high place in the ranks of pelvic and abdominal surgery, and your humble servant, will have to shake hands, and for the time being, metaphorically speaking, part company.

With regard to the operative treatment of cancer of the cervix uteri, and to which limited sphere only my remarks apply, I have practically nothing to add to what I have stated over and over again, but more particularly in my critical analysis of the statistics of hysterectomy eight years ago, contrasting the results of this operation with those obtained by me through the agency of the electric cautery. I believed then, and I am now more than ever satisfied that if the time should ever come when the advocates of total hysterectomy, as the remedy *par excellence* for cancer of the cervix, can be coaxed, cajolled, or in any other manner persuaded to follow my method of operating, and then, and in this way only, become qualified to endorse or condemn, this vital question may reach a settlement. Judging from the past, however, we have too often been made to suffer from a surfeit of mono-ideal and sometimes monotonous intellectual pabulum, varied only by occasional changes of place and utensils, from vagina to abdomen and back again, and dished up, I had almost said slaughtered, by the irrepressible advocates of pelvic evisceration. In fact, any unsophisticated outsider might reasonably suppose that the entire body of gynecologists had settled down to the conviction that for cancer of the cervix, be it much or pathologically infinitesimal, nothing short of total ablation of the offending but doomed organ is to be considered.

Indeed, so universal of late years has this short-cut to the solution of difficult and complex problems become that gentlemen of more conservative, sometimes called obsolete, views, have been made to feel that they had no standing in court, and deeming silent discretion the better part of outspoken disapproval, have usually, and perhaps wisely, kept quiet.

In this way those of up-to-date ways and methods, occasionally having novelty, if nothing more, to commend them, in attending society meetings, if the subject for discussion happened to be cancer of the uterus, and being well primed and equipped for a one-sided contest, could always air their opinions and display their uterine trophies unchallenged and unhampered, as in the good old days of wholesale oophorectomy. So, my friends, in spite of the courteous invitation extended to me to attend this meeting and to participate in the discussion of one of the most important, yet open, questions in the whole range of gynecology, I confess I do so with no little diffidence and reserve if not a feeling akin to obtuseness on my part.

Regarding the relative merits of hysterectomy, vaginal or abdominal, and removal of the diseased part by the cautery knife, not loop nor galvanic snare, which I have many years ago discarded as less efficient, and very thorough dry roasting of the remaining cavity, four years ago I made what I fondly hoped at the time might prove to be the final effort to induce members of the American Gynecological Society to give this method of treating operable cases of cancer of the cervix uteri a fair and practical test. On that occasion, however, the remarkably strict application of a rule governing time compelled me to desist at an important point in my remarks. In consequence of this, or perhaps from a lack of interest in the subject, the discussion was less full than I had reason to expect. A committee of three was named, however, to investigate the subject, and to send cases, or invite me to operate, but up to the present time *three patients only* have been referred to me, all in too advanced a stage to warrant even a satisfactory hysterectomy. I offer this statement in order to suggest what I have often been inclined to fear, the probable futility of every effort toward popularizing the galvanocautery.

With regard to the technique of vaginal or abdominal hysterectomy, as so lucidly described by Dr. Kelly, I have nothing to say, nor indeed does it properly belong to the subject of our inquiry to-night, except in so far as certain steps in such operations may influence primary mortality. By far the most vital and far-reaching question, and in fact the only one expressed or implied by the title of the paper, is what is the best treat-

ment for uterine cancer, or, in other words, which of the two methods of operating now under consideration insures to the patient the longest period of exemption from a recurrence of the disease? As to primary danger from hysterectomy, there need be no contention on this point. In the hands of an expert operator, the extirpation of a cancerous uterus, as I have before said, need not be and has not been followed by a ratio of primary disasters sufficient to for a moment cause doubt as to the admission of such a procedure *per se* to the domain of legitimate surgery. On the contrary, the very large proportion of recoveries should be looked on as one of the many brilliant examples of modern surgery, and of which any reasonable operator ought to feel proud. Were it not, therefore, for the groundless assumption of those who have been persistently trying to minimize the difficulties, as well as the dangers of these operations, by quoting the phenomenal success of a few favored ones only, the question of primary mortality need hardly be considered. So when in 1892 I undertook the analysis of published statistics up to that date, my main object was, if possible, to disentangle and sift from the chaotic mass some grains of truth regarding the period of exemption from recurrence of the disease obtainable through hysterectomy.

Therefore, whether the death-rate due to this operation be 5 or 15 per cent., or, as in cases treated through the agency of the electric cautery, less than 1 per cent., need not trouble us at present, and does not seriously affect the more important questions regarding the degree to which life may be prolonged by either method, and the period of exemption from recurrence, assured or obtainable.

To any one who may undertake to glean facts and truth from the ingeniously and marvellously constructed statistical reports on the results of hysterectomy for uterine cancer, the task will be found to be one of extreme difficulty, and in some instances almost impossible. In some, I regret to say, will be found a strained, yet unsuccessful, effort to divert attention from leading and vital issues to a tabulated but unwarranted summary, while in others the perversion of figures is so manifestly, and it would seem purposely, resorted to to obliterate the tracks of disaster, that it will often be found hard to pursue this line of investigation with any degree of patience. As neither the occasion nor time will permit me to go into details, for which I would refer to Volume xviii of the "Transactions of the American Gynecological Society," I will merely state as a sample of what may be learned by any one who will take the trouble to interpret reports on recurrences after hysterectomy for cancer up to 1892, and subsequent experience will in no material point justify any modification, the following: In summing up all the facts obtainable regarding the results obtained in 235 cases treated by a number of leading operators in Germany, France and elsewhere, we found but 63, or 27 per cent. of the whole, in which relapses were noted, while nothing whatever is said of the fate of 172, or 73 per cent. of the whole number operated on and tabulated as follows: One had no recurrence for 8 years, 1 none for 7, 1 none for 6, 7 none for 5, 17 none for 4, 15 none for 3, 19 none for 2, 2 none for 1 year. An average exemption from recurrence or death for 63 patients out of 235 was three years and nearly four months.

From reports like this, and it is a fair specimen of what is available, no possible trustworthy data can be gleaned, because if, for example, to each of the 172 patients, or those of whose fate we are told nothing, we allow even one year of life, which would be far in excess of what all records warrant, we have in the aggregate 381 years of exemption for 235 patients, or one year, seven months and thirteen days only for each.

Again, at the International Congress in Berlin, in 1890, Olshausen reported 163 cases of hysterectomy for cancer at the University Womans Klinik, 42 only of whom were living at the end of two years, and of the entire number who escaped death from the operation, namely 155, 19 only were free from recurrence.

Facts like these, and the records of every country with them, may be modified to an inconsiderable extent by the rare and more happy experiences of able and exceptionally fortunate surgeons like the indefatigable author of the paper under consid-

eration, but I contend that they should be well pondered over and not dismissed, as they have been heretofore, with the vain hope that by improved technique and greater familiarity with these operations better results may yet be reached. It should also be remembered that, although a more or less perfect technique must and has lessened primary mortality, it can not likely influence, and has not materially, the great liability to recurrence, due mainly to traumatic infection, against which we can devise no reliable safeguard. To this latter defect and the unavoidable mauling of outlying tissues, often in an early but unrecognizable stage of cell proliferation, and thus more responsive to traumatic irritation, are we to attribute the great and well-known liability to recurrence after hysterectomy. Truly, the most noteworthy fact in the history of this operation is that a very large majority of women suffering from uterine cancer may submit to it yet live for a time at least.

Regarding my own experience in the treatment of cancer of the cervix by the electrocautery, covering a period of thirty years, I have but little to add to what is already of record. During the last ten years, what the advocates of hysterectomy would consider operative cases, i. e., those in which the disease is found to be limited to the cervix proper, the vaginal surroundings intact, and the whole organ fairly movable, have been comparatively few and rare. Consequently, of late years, most of my work in this line has consisted of a free use of the curette, trimming the ragged edges by cautery knife and thoroughly roasting the cavity. In this class of cases, when it is found that the disease has extended beyond the os internum, the sharp or the serrated curette is also freely used, but in exceptional cases only is actual cauterization carried to the fundus proper.

Several patients, at least five, of this advanced and otherwise hopeless case, operated on in this manner from ten to fifteen years ago, are now known and reported by reliable physicians to be perfectly well. Similar results in so-called inoperable cases are by no means rare in my experience, as my hospital colleagues well know. As for cancer of the cervix proper and uncomplicated, my reports and predictions of 1872, 1875, 1889, 1892 and 1894 have been fully confirmed and substantiated. In other words, in cancer of the cervix at an early stage or of circumscribed degree, excision by the cautery knife and deep and thorough dry roasting of the cavity by the dome-shaped electrode, while absolutely free from danger, insures a longer, if not a permanent, respite from recurrence than any other known means. Again, in more advanced cases, deemed at all operable by the most reckless advocates of hysterectomy only, the free use of the curette followed by electrocauterization as I have so often described, advised and resorted to will always be found to be a safe and palliative measure, and will often insure a nonrecurrence of several years.

Without going into details, and as the clinical grounds and basis of these statements, and the results of long and careful observation, I can simply say that in 100 cases of strictly cervical cancer, permitting of supravaginal excision by the cautery knife, and further dry-roasting of the cavity, the great majority will be followed by a permanent cure, while, in less favorable ones, an average longevity and freedom from relapses of from seven to eight years may reasonably be expected. In the more advanced class, always premising that the corpus be not involved, the results, as stated, are strictly in accordance with my experience.

The seemingly paradoxical assertion that the extirpation of the diseased part of a carcinomatous uterus by electrocautery, besides being absolutely free from danger, should also give better results than extirpation of the entire organ has usually been met with the simple *non credo* of those who fail to reflect on the peculiar effects and properties of the agent employed. My explanation of this apparent enigma, supplementary as it is to clinical facts, may be found in the volume of "Transactions of the American Gynecological Society" for 1892, and is as follows:

I am of the opinion that in the parametric tissue of many cancerous uteri, and much beyond what might seem to be the limit of disease, there exist some morbid cell changes due to faulty nutrition, or cancer germs, but, in so undeveloped a state

as to be inappreciable even by the aid of the most powerful microscope. Under such circumstances there is surely nothing unreasonable in surmising that cell proliferation, hitherto slow, or almost dormant, would be hastened, and that formative processes, so responsive to any kind of irritation, would be roused into active life through the traumatic stimulus of an operation, and the exposure of more or less raw surfaces. On the other hand, in the progress of an amputation by cautery, and where the heated knife is so long and repeatedly applied—for such operations must be slow—the effects of the heat on outlying structures may be imagined by the shriveled and comparatively small size of what had been, before operation, a voluminous cervix. In no other manner do I think it possible to explain certain phenomena following these operations by galvanocautery, e. g.: 1, absence of fever and almost all pain, pelvic or peritoneal; 2, the almost universal immunity of the scar tissue after cauterization from secondary attack in the event of recurrence of the disease, and 3, in the case of relapse, the long respite obtained from reappearance of the disease in remote parts, even in the more unpromising cases of undoubted circum-uterine infiltration.

Why, it may be asked, have phenomenally successful results obtained through the agency of the electrocautery failed thus far to convince theoretic skeptics wedded to the glamor of more sanguinary methods? Why will gentlemen still declare there is but one remedy for cancer of the cervix uteri? Why will they persistently declare that there is positively no place for any treatment other than hysterectomy? And why will editors of journals published in the interest of gynecologic progress, in reviewing the treatment of uterine cancer, and supposed to be *au fait* in leading questions touching the subject, continue to insult our intelligence by stating in an *ex cathedra* fashion, that though the treatment of uterine cancer by hysterectomy "is eminently unsatisfactory," yet that "it is the best procedure now at our disposal?" Why will gentlemen still persist in palming off the base coin of obsolete methods as mine, and talk of removing a cervix by the galvanic snare, an instrument which I have not employed ten times in twenty years? Finally, where, I would ask, can we find, throughout the pages of gynecologic literature, a shadow of warrant for the dictum that hysterectomy, with its ghastly and life-curtailing record, is the only surgical procedure admissible in cancer of the uterus? These and many similar questions I shall not waste your time in discussing, but merely submit them for your own consideration and possible solution.

In the light of startling facts like those I have barely touched on, is it not marvelous to think that at this late day so few, if indeed any, of our numerous and otherwise progressive gynecologists should have accorded to the electrocautery a reasonably fair and practical trial? Those who have reluctantly admitted its claims to serious consideration have, for the most part, done so through the representations of others rather than from an adequate practical knowledge of its worth or possibilities. Hence it is not surprising that in nearly all past discussions on the treatment of uterine cancer by the galvanocautery, the most outspoken doubters and the most zealous advocates of any or every other method of operating have usually been those least qualified to judge. Whether the essential attribute of an umpire, i. e., the power or skill to compare or contrast, is wanting, opinions regarding the relative merits of any two or more methods of operating for uterine cancer, for example, as between the galvanocautery and hysterectomy, must necessarily be worthless, and should have no legitimate claim to consideration.

Within the last few years, however, owing to the substitution of the dynamic for the chemical current, the less frequent use of the troublesome and fitful battery, and the comparative facility with which the most delicate, as well as the most extensive, operations may now be conducted, by hospital surgeons especially, there is no longer any valid excuse for culpable apathy or indifference.

There is every reason to hope, therefore, that intelligent, unbiased and honest investigation, so long desired, may yet unfold the whole truth, and thus remove every doubt as to the rare exceptional and special efficacy of the electrocautery and the gradual abandonment of hysterectomy in the treatment of cancer of the cervix uteri.

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ETIOLOGY, PATHOLOGY AND SURGICAL TREATMENT
OF TUBERCULOSIS OF THE KIDNEY.

In the absence of a specific remedy for the treatment of tuberculosis, the clinician must avail himself of all those measures that have proved in any way helpful. While it is universally admitted that the tubercle bacillus is the exciting cause of the disease, it is recognized that the conditions, as yet undefinable, that render possible the manifestation of its activity, are scarcely less important. The mere presence of the bacillus does not constitute tuberculosis, but this consists rather in the reaction that takes place between the invading micro-organism and the attacked tissues. The disease is to be averted by preventing dissemination of tubercle bacilli, and by rendering the tissues resistant to their invasion; and the indications for treatment are the extrusion, destruction, encapsulation of the bacteria, or otherwise rendering them innocuous, the neutralization of their effects, and the repair of lesions. The tubercle is a local formation, and its removal would constitute the most certain means of cure. Unfortunately, however, the lesion is not single, nor always circumscribed, while often it is situated in an inaccessible organ, or is otherwise not susceptible of excision. Of the several situations in which such intervention is feasible and sometimes promising, the kidney is one; and the results thus far attained in this connection are most encouraging. An important requisite for successful treatment is, here as elsewhere, early diagnosis.

A most interesting discussion of the subject of tuberculosis of the kidneys, with especial reference to etiology, pathology and surgical treatment, has been entered into by Newman¹. It is pointed out that renal tuberculosis may occur as acute miliary, as localized, or as chronic tuberculosis or caseous nephritis. Healthy kidney-tissue is thought, by reason of its abundant blood-supply, although it is more vulnerable than other portions of the urinary tract, to possess a remarkable power of destroying organisms introduced into its substance or of eliminating them from the system. Tubercle bacilli may, thus, be found in the urine of persons suffering from tuberculous disease of bone, the lungs, or other organs, in the absence of morbid structural change in the kidneys.

The natural power of the kidneys to destroy or eliminate micro-organisms may be impaired as a result of local disease or hemorrhage or traumatism. The kidneys may become invaded by tubercle bacilli through

the blood-stream, the tuberculous particles being so small as to be stopped only in the ultimate capillaries, where they give rise to numerous miliary deposits; or through infective emboli entering a branch of the renal artery, and the tuberculous virus becoming disseminated throughout the area of its distribution. Invasion may take place also along the lymphatics of the kidney from foci in the lower urinary tract; by contagion along the lumina of the excretory ducts: by contiguity from adjacent diseases.

Infection by way of the blood-stream may result in obstruction of the capillaries or in tuberculous emboli of the arteries. In cases of acute miliary tuberculosis of the kidney, the bacilli are conveyed by the blood-vessels and are widely distributed. The disease is always associated with tuberculosis of other parts, and attacks children more commonly than adults. The condition usually escapes recognition during life, as it does not give rise to distinctive symptoms. A tuberculous embolus in the kidney may undergo caseation or become encysted. The disease is generally unilateral, and involves only a portion of the kidney-substance, although there may be more than a single focus. At first, the lesion is limited to the substance of the kidney, but in the further progress of the case, the tuberculous process is carried forward through other channels, unless a conservative inflammatory action closes the lymphatics and prevents extension. If the caseous material breaks down, rapid destruction of the organ may result.

Tuberculous pyonephritis may arise in several ways. Thus, the primary focus may be in the kidney-substance itself. If the ureter becomes blocked by tuberculous thickening of its walls, by impaction of masses of debris, by cicatricial stenosis, or by twisting, pyonephrosis will be likely to result. Primary tuberculosis of the pelvis of the kidney is less common than secondary infection. With tuberculosis of the kidneys there are usually associated inflammatory changes in the mucous membrane of the pelvis, the ureter and the bladder.

Tuberculous infection of the kidneys by way of the lymphatics, from foci in the lower urinary tract, is not uncommon. Such ascending renal tuberculosis is characterized by early obstruction to the escape of urine from the pelvis, with symptoms and signs indicative of hydronephrosis or pyonephrosis. Extension by contagion along the lumina of the ducts occurs in cases with ascending tuberculous lesions. Infection by extension of disease from adjacent organs is uncommon.

Statistics show that tuberculosis, both primary and secondary, occurs in the kidneys in about 5.6 per cent. of all cases of tuberculosis. The renal localization seems to be more common in children, in the proportion of nearly three to one. The presence of pyuria, together with renal symptoms in men, should always suggest examination of the genital organs and the prostate for tuberculosis, and association with rapid emaciation, anemia, elevation of evening temperature, and rapidly

¹ The Lancet, February 24, March 3 and 10.

progressive marasmus should arouse suspicion of tuberculosis. The presence of pain depends on whether the pelvis and the ureters are involved or not. Vesical irritability, as manifested by incessant and painful micturition, is a frequent, and almost characteristic, symptom. Strangury also is often present. A swelling may be appreciable in the loin if the kidney is enlarged. Careful analysis and microscopic examination of the urine are necessary for early diagnosis. Polyuria is often one of the first indications of a tuberculous lesion in the kidney. Hematuria may occur long before, as well as after, the development of a gross renal lesion. It is rarely profuse. The urine contains albumin, but no tube-casts. The detection of the tubercle bacillus is extremely important. Ureteral catheterization may be necessary to determine whether the disease is situated on one or both sides.

Tuberculosis of the kidney must be differentiated especially from renal tumors, septic pyelitis and pyonephrosis, and renal calculi. The prognosis is most unfavorable, the more so if the disease is not limited to one kidney, but extends to the ureter, the bladder or the other kidney. When the disease is localized in one kidney, or in only a part of the kidney, the tuberculous material may be discharged or may dry up into a firm caseous mass, while the other kidney undergoes compensatory hypertrophy.

It must be admitted that spontaneous recovery may take place, or the progress of the disease may be checked. Some time elapses between the onset of primary tuberculosis of one kidney and the invasion of other parts, and it is in this interval that the surgeon can intervene with advantage. A number of cases are on record in which life has been prolonged for a considerable time by surgical treatment, or good health has been conferred for a number of years. Nephrotomy may be practiced if the disease is limited to a small area, or has formed a single cavity that can be drained. Should recovery not ensue, we can then resort to nephrectomy. This should be undertaken as a primary operation when the disease is extensive and little can be hoped for from incision and drainage. When operative intervention is deemed advisable, symptomatic treatment should be employed. The internal administration of boric acid, salol, ammonium benzoate, and also of antipyrin and extract of hyoscyamus, frequently affords relief from vesical irritability. Strangury may be alleviated by the employment of preparations of opium by the rectum, or of warm sitz-baths; and when the urine has become alkaline, calomel given by the mouth exerts a beneficial effect.

THE DEVELOPMENTAL CYCLES OF THE ORGANISM OF MALARIA.

In order to understand the peculiar and complicated developmental cycles of the malarial parasites, it is necessary to consider the organisms most closely related to them, namely the coccidia, because the details concern-

ing these are much better known. As there is no change of host in the case of the coccidia, the process is not so complicated as in the malarial parasites. Shorn of a wealth of detail, the developmental cycle of the coccidia runs somewhat as follows, according to the recent review, by Lühe,¹ of the investigations of sporozoa, with especial reference to the malaria parasites and related organisms. As is well known, coccidia are found rather frequently in the intestinal tract and the liver of vertebrate and other animals. Examining the feces of an infected rabbit, for instance, there are found encysted parasites of varying size, which Schaudinn and other prominent investigators in this line call "oocysts;" they have a double contoured membrane and a unicellular content, called "sporont." The further changes are readily followed in the moist chamber. The unicellular contents divide into a certain number, commonly four, or "sporoblasts," which in turn become "sporocysts" by the appearance of a protected membrane around each spore. Each sporocyst forms two nucleated sickle-shaped bodies, the so-called "sporozoites." And now the sporocyst may remain latent for several months without losing the power to develop further, hence it has also been called lasting spore. Further development takes place only when it is taken into the digestive tract of a suitable animal; then the membrane is dissolved and the sporozoites penetrate into epithelial cells. The form of multiplication just described is termed "sporogony."

In the host, however, multiplication does not take place according to this type. After much controversy the zoologists practically agree that in the host multiplication takes place by fission. The sporozoites may develop and subdivide into numerous sickle-shaped organisms, called "merozoites." As the mother organism of the sporocyst is called "sporont" so the mother organism of the merozoites is called "schizont." This mode of reproduction is termed "schizogony," and it alone can explain the massive infections sometimes observed in animals and which consequently are the result of a sort of auto-infection. Schaudinn has shown that the schizonts rapidly form merozoites, and that multiplication in this manner at first goes on at a great rate. Later, when the host has become weakened and the conditions of the nourishment of the numerous parasites unfavorable, then another mode of reproduction is resorted to, and the sexual coccidia appear. Some of the merozoites grow to form larger, female cells, the macrogametes, and others form the so-called microgametocytes, the nucleus of which rapidly subdivides into a number of nuclei that become surrounded with a small amount of protoplasm and leave the mother cell as spermatozoa—microgametes. The copulation between the macrogamete and microgamete occurs according to the same principles as in the impregnation of the eggs of metazoa. The result of the copulation is the oocyst, the starting-point of sporogony.

Sporogony secures the preservation of the species and

¹ Cbl. f. Bakt., Abth. i, 1900, xxvii, 367.

the spread of the infection, while schizogony increases the infection of the host. Coccidia consequently present alternating, sexual and non-sexual generations.

Lühe then recounts step by step the development of our present knowledge of the mode of infection of human malaria and the rôle played by certain mosquitoes, especially *Anopheles claviger*, as one of the hosts necessary for the development of the malarial organism. These things have been described from time to time in these columns. The reproductive method first understood of the malarial organisms corresponds to the schizogony of the coccidia. The sexual processes that lead to multiplication by sporogony were first recognized by McCallum, who demonstrated the copulation of the male and female elements. Reproduction by schizogony takes place in the blood of the warm-blooded host—man. Sporozoites pass into the red corpuscles, develop into schizonts, which divide into merozoites. The merozoites may and ordinarily do repeat this process. After a time, however, they form sexual individuals and in pernicious human malaria these assume the crescent and oval forms characteristic of this affection.

The maturation of the sexual forms ordinarily takes place in the stomach of the blood-sucking mosquitoes. Here copulation takes place, and the resulting body—called "ookinete"—passes into the intestinal wall of the mosquito, where it forms innumerable sporozoites which ultimately collect in the salivary glands of the insect where inoculation of the warm-blooded host results during the act of stinging. And now multiplication by schizogony again begins. It will be seen that, stated in this simple manner, the developmental cycles of the malarial organisms correspond accurately to those of coccidia, the essential difference being that in the case of the malarial organism the sexual cycle is connected with the change of host and runs its course in the mosquito.

The intracorporeal parasite seen in the blood of quartan malaria, for instance, is a sporozoite; as it grows it becomes a schizont—sporulating body—and the "spores" formed as it breaks up are the merozoites of the zoologic nomenclature.

It would be of lasting service to all present and future students of malaria and malarial parasites if the writers on subjects connected with reproduction of the organisms would agree as far as possible to the use of the same nomenclature. In a matter as complicated as this with phases subject to different interpretations, entire unanimity in nomenclature is not to be expected, however. The mere mention of the group of malarial organisms suggests a large list of synonyms. Lühe points out that according to the law of priority, which is the only one applicable in cases of this sort, the correct name is *plasmodium malariae*. This name ought therefore to be used in the interests of uniformity and simplicity.

Druggists of Vienna have agreed to charge a special rate for putting up prescriptions marked *pro paupere*, by the physician.

ETIOLOGY OF ACUTE ARTICULAR RHEUMATISM.

In a recent review of the infectious diseases, Packard¹ considers the various theories in regard to the etiology of acute articular rheumatism. There is little or no foundation for the humoral and the nervous theories. The principal support of the humoral theory was the similarity between articular rheumatism and gout, the joints being affected in both. The lactic-acid theory grew out of this apparent relationship. But the fact that lactic acid may cause articular pain and swelling does not prove that it is the cause of acute rheumatism, because there is more to rheumatism than articular inflammation. How should the excessive production of lactic acid be explained? The nervous theory was the outgrowth of the similarity between the joint affections of acute rheumatism and of certain nervous diseases. There is no good reason to be advanced in favor of nervous joint centers. There is no real evidence of any relationship between rheumatoid arthritis and acute articular rheumatism, hence no support of the nervous theory is to be derived from comparing these two diseases with each other. Packard points out the confusion in nomenclature that has come from calling the secondary arthritis of such diseases as gonorrhœa, scarlet fever, and pyemia rheumatism; at the same time such names as gonorrhœal rheumatism, etc., give a suggestion as to the probable nature of acute articular rheumatism. There are a number of affections, such as lumbago, certain forms of wry-neck, etc., that are called "rheumatic" largely because they are painful, but there is not the slightest connection between acute articular rheumatism and these troubles. Either the term "rheumatism" should be restricted to these disorders, or else they should be designated by more appropriate terms.

Acute articular rheumatism is a distinct clinical entity. There is considerable resemblance between the general manifestations of acute articular rheumatism and pyemia, only that in pyemia there is no difficulty in studying the organism at work.

The efforts to discover the cause of acute articular rheumatism have thrown much light on arthritis of various kinds. It need not be stated that the infectious arthritis of pneumonia, of gonorrhœa, and of a number of well-recognized infections, is not acute articular rheumatism.

Packard then reviews the principal reports of bacteriologic work in acute articular rheumatism. Without going into details suffice it to say that the results reported by the various investigators are so contradictory that no definite conclusions can be drawn. The organisms that have most claim for consideration are the bacillus of Achalmé and the diplococcus of Triboulet. The diversity of the bacteriologic findings has led to the suggestion that acute rheumatism is not an etiologic entity, but that it may be produced by a number of different organisms. Packard finds the view advanced by Singer

¹ *Progressive Medicine*, March, 1900.

to be attractive, namely, that our disease is a modified pyemia, the difference between the two being one of degree rather than of kind. It has been pointed out that attenuated organisms have a certain affinity for joints. Packard also dwells on the relation of angina to rheumatism, the angina being regarded as an evidence of the entrance of the moribific agent into the body at the tonsils; further that the lymphadenoid tissue of the faucial mucous membrane may lessen the virulence of the organisms before they reach the internal organs. This theory is strengthened by Manfredi's experiments on the influence of lymphadenoid tissue on bacteria. Manfredi and his pupils² show that lymph glands may retain microbes for a long time, the virulence being more or less reduced. This theory is an interesting one, and it is strengthened in a measure by the fact that pyogenic cocci are reported present rather frequently, relatively speaking, in the joint and other lesions of rheumatism, but if the disease is a mild form of pyemia we would have a right to expect that pyogenic cocci would be found in the lesions far more constantly than has been the case up to this time.

There are many features of rheumatism that speak in favor of the phenomena being produced by a toxin or toxins: the frequent, in fact, common, absence of bacteria from the articular exudate, the evanescent character of the joint symptoms, the completeness of recovery of the affected articulations. Packard sums up the evidence somewhat as follows: Rheumatism is an exogenous disease; the part played by cold and wet in its production must be regarded as productive of a general lowering of vitality, permitting infection of some kind, whether specific or produced by various organisms can not now be settled. There is much to favor the view that pyogenic cocci of reduced virulence are frequently the cause of the disease. And it is also possible that bacterial toxins absorbed from some hidden bacterial focus produce the articular and some of the other phenomena of the disease.

On the whole it seems that this undesirable uncertainty and vagueness of our knowledge concerning the etiology of acute articular rheumatism may give way to clearer notions only through patient, thorough, clinical and bacteriologic study of larger series of cases. There is excellent room here for investigations of high practical and scientific value.

OPERATIVE RELIEF OF SUPPRESSION OF URINE OF LONG STANDING.

Interference with the discharge of urine may result from mechanical or functional causes. Obstruction of the urinary passages at any point—by a calculus, a stricture, a neoplasm, a twist or a kink, or by pressure from without—will have this effect; as may also disease of the kidneys, by preventing the secretion of urine. Suppression of urine at times results from reflex influences. Deficient elimination of urine, from whatever cause, will

be followed by the development of uremia, although the skin, the bowels and the lungs may for a time vicariously assume the functions of the kidneys. This period is usually not a long one, and generally rather short, but an interesting case in which it extended over sixty hours, and relief was afforded by operative intervention, is reported by Jaffrey.¹

The patient was a man, 53 years old, who had felt ill for several weeks and for a short time had complained of pain in the left loin and a dragging sensation in the region of the left kidney. Micturition was frequent and the urine had appeared normal. Anuria, however, set in, with acute tearing pain in the left groin and lumbar region, together with frequent vomiting. Applications of hot fomentations to the loin and the administration of diuretics internally failed to afford relief. On introduction of a catheter into the bladder after suppression had been present for two days, only a little blood-stained mucus was obtained. No definite tumor could be developed on palpation at first, owing partly to thickening of the abdominal walls and their rigidity, but on the third day, a well-defined tumor could be felt and was thought to be the distended kidney, probably hydro-nephrotic. The catheter again failing to afford relief, the kidney was exposed through an opening in the loin and found to contain not urine, but rather more than a pint of blood-clot and serum between the perinephric fat and the kidney itself. Blood was present also between the capsule of the kidney and the cortex. The kidney was larger than normal, much congested and when incised it bled freely. The pelvis of the kidney was filled with blood-clot. No calculus and no other possible cause of obstruction could be detected. Irrigation was practiced, a drainage-tube introduced and the wound sutured and dressed with cyanid gauze. Urine was discharged through the tube, which slipped out of place, and was not restored, and in thirty-six hours practically all of the urine was being passed by the natural channels. The patient was out of bed on the sixteenth day and left the hospital three weeks after entrance, quite well. The nature of the influences responsible for the suppression of urine in this case is not clear, although it is suggested that it may have been due to a small calculus or to kinking or to compression of the ureter by the blood surrounding the kidney or finally to congestion of the kidneys.

ATTEMPTED CONTROL OF SECTION ON MATERIA MEDICA.

The action taken by THE JOURNAL in regard to the proprietary and secret nostrums is having the effect of arousing to action those interested in these products. They are actively at work with the object of getting control of the Section on Materia Medica, Pharmacy and Therapeutics of the AMERICAN MEDICAL ASSOCIATION next month, and to accomplish this they are sending circular letters broadcast. Those addressed are editors of certain medical journals whose support comes

² Virchow's Arch., 1899, 155, 335; Zft. f. Hyg. u. Infektionskr., 1899, xxx, 64.

¹The Lancet, March 3, p. 612.

only from their advertising pages, drug journals, and physicians whose influence they are hoping to get. Well-known secret nostrum houses of St. Louis and New York are especially energetic, and spare neither postage stamps nor even telegraph tolls. Many of the letters have been forwarded to THE JOURNAL by those who received them, although it has not been favored with any sent direct by the gentlemen managing the enterprise. When THE JOURNAL took up the fight against secret nostrums, it expected opposition and is not surprised at the first skirmish of the battle. But we can assure the gentlemen that they need not be in the least afraid that the "German chemical houses" will get control of the Section, any more than will the secret-nostrum houses. It will be controlled in the future, as in the past, by physicians of standing in the profession.

DOES NOT TAKE A JOKE.

An English medical statistician, in reporting on the mortality of his district, for 1899, took the occasion to suggest that the predominance of male births was influenced by the patriotic enthusiasm aroused by the present war. This was apparently offered as a facetious comment and it was accepted as such by the council receiving the report. Our British contemporary¹ that gives us the item does not appear to take it kindly as such. It not only ironically congratulates the council on its sense of humor, but gravely proceeds to remark that the figures are too small to afford any sound conclusions, and that a still greater fallacy is involved since it is impossible to suppose that maternal patriotic zeal could have affected the sex of unborn children in the last two or three months of pregnancy. Hence it says: "absurdities of this kind will do nothing to advance the position of the medical officer of health as an instructor of the community." The humor of the suggestion appears to have been comparatively innocent; at the worst it is only a matter of taste, but the serious consideration it has received has a still funnier side.

EPILEPSY, RICKETS, AND THE LYMPHATIC CONSTITUTION.

The association of idiopathic epilepsy—*grand mal*—with the lymphatic constitution—persistence of thymus gland, hyperplasia of lymph nodes, and of spleen—has been emphasized of late by Ohlmacher. The association of lymphatism and of idiopathic *grand mal* has been so strikingly frequent in the autopsies in Ohlmacher's laboratory at Gallipolis, Ohio, that a thorough study of the literature bearing on persistent thymus and on the lymphatic state became necessary. The clinical condition of thymic asthma, or laryngismus stridulus, of infancy is connected on the one hand with the lymphatic constitution, of which enlarged thymus is often but a part, and on the other hand clinicians are wont to associate it with rickets. Tetany and infantile convulsions are also referred to "the rickety diathesis." With these considerations in view, and guided also by gross pathological evidences of rickets in some of the epileptics, Ohlmacher was led to think more and more of the relation of idiopathic *grand mal* and rickets; and, all things

considered, he became convinced that rickets plays an important rôle in the development of epilepsy.¹ Ohlmacher² refers, with a certain sense of satisfaction, to the fact that Gowers in 1885 had reached the same conclusions from purely clinical data obtained from a careful study of the infantile period of ninety-eight cases of epilepsy. Gowers was so strongly impressed with the apparent influence of rickets on the development of epilepsy that he was led to suggest that a considerable proportion of cases of epilepsy are really within the range of preventable diseases. There is reason, then, for continued effort toward clearing up the relationship of rickets, epilepsy, and the lymphatic constitution. We are as yet in the dark as regards the essential nature of rickets, and the lymphatic state. But at all events, infant hygiene and feeding should be brought up to the highest standard so as to do what can be done, in the light of our present knowledge, to prevent epilepsy and other neuroses that seem to have some connection with such diseases of infancy as rickets.

THE PLAGUE AND COMMERCIAL INTERESTS.

The San Francisco Board of Health started out right when the bubonic plague first developed in that city, and courageously did its duty in spite of bitter opposition. But in the more recent developments it has certainly laid itself open to censure. Two weeks ago³ we noticed the discovery of another case of the plague in San Francisco's Chinese quarter, the account being sent to us by telegraph by our regular correspondent. Shortly after his telegram was received, another came in which we were requested not to publish the matter, as the merchants' association there desired it kept out of the papers. Developments show that the merchants succeeded and that while they kept a knowledge of the conditions out of the general newspapers—a report of the case appearing exclusively in THE JOURNAL—the disease spread. Secrecy in this instance meant half measures in fighting the disease, whereas the most energetic steps, those which could only be carried out openly, were demanded. The penny-wise policy has proved to be a pound-foolish one for the business men of San Francisco. We have frequently asserted that there is no danger of the plague spreading in this country, even though it came to our shores, but if secret half-hearted measures are to be adopted in deference to commercial interests, then a different story may have to be told. The San Francisco Board of Health has been abused by the newspapers and will be in the future, probably, but none the less its duty is to protect the people against the spread of the disease, even if commerce should temporarily suffer by the publication of the actual conditions.

MEDICAL SOCIETIES.

A British contemporary,⁴ remarking on the fact that some 700 medical societies are entitled to representation at the AMERICAN MEDICAL ASSOCIATION, says that the United States must be the "happy hunting-ground" of medical organizations. It further states the fact that

¹ Bulletin of Ohio Hospital for Epileptics, Vol. 1, Nos. 2 and 3, 1898.

² Am. Jour. of Insanity, April, 1900.

³ THE JOURNAL, May 5, p. 1141.

⁴ Medical Press and Cir., May 2.

¹ Med. Press and Cir., May 2.

the figures given do not represent the total, and mildly deprecates the mighty burden of literature that must be thrown upon the profession if all the societies regularly publish proceedings. The local American medical society is an institution that is not fully understood by outsiders, but it is nevertheless a very important and valuable reality. Were its possibilities fully developed, and had every one of the thousands of counties an organization, the numbers would still more astound our contemporary. There would be, however, less danger of wasted or buried wisdom than it seems to think; such societies are or should be local stimulants of scientific medical work, but not necessarily publishing bodies. That society proceedings do sometimes bury valuable papers, so far as the general knowledge of their contents is concerned, may still be occasionally true, but it is certainly less so now than at any former time. The greater evil, if it is an evil, at the present is the over and over republication of the same articles. In any case the danger from multiplication of local centers of scientific medical progress and thought is not in this or any other respect as yet a serious one, although the same can not be said of the district, tristate and seminational bodies.

THE PLAGUE.

The newspaper reports of new cases of plague in San Francisco are not surprising; in fact they are no more than was anticipated. Any of our Pacific ports in direct communication with the Orient and with a specially segregated Mongolian quarter are liable to the same possibilities, and inland cities with similar elements in their population are also not free from danger. The influx of Japanese was never greater than at the present time, and it may be that in this is our greatest danger. Plague is now, however, a pandemic; it has reappeared in Egypt, it exists in South Africa, South America, Australia, China, Japan, Russia, and Persia as well as in India, where it has extended itself, being malignant in the eastern portion of that country, in Calcutta as well as in Bombay. It is therefore a universal danger and one that should receive the attention of sanitarians everywhere, as, with the greatly expanded modern methods of communication, no city with extensive commercial relations can be considered altogether safe. There is one cheerful side to the picture, however, and that is that modern methods of sanitation are a far better protection than those in vogue in the past and that thus far the plague has gained no lasting foothold in any European city. Better modern civilized habits of life have also apparently robbed the disease of many of its terrors, for our race at least. In Hongkong, where it was long epidemic and where the mortality was about the highest known, it was treated by the European community almost as a negligible quantity and its ravages were almost, if not quite, exclusively among the native population. We now know many things in regard to the disease that we did not know before, and while there is not the familiarity that breeds contempt, it may rationally relieve us of much of the senseless fear of this disease that has prevailed in the past. The possibilities of preventive inoculations are also to be con-

sidered when calculating the dangers, and we can safely say that if health authorities do their duty the recurrence of anything like the Middle Age epidemics is a very remote probability in any country inhabited by civilized whites. What the plague can do in a country like India at the present time is an object-lesson of the need of due precautions and healthy living on our part. It may be we will find it a necessity to do more than we have done in the past to prevent an undue influx of unassimilable Orientals, with their habits and diseases, over our boundaries.

ANTIVIVISECTIONISTS AND THE "BRITISH MEDICAL JOURNAL."

A peculiar libel suit against the *British Medical Journal* has just been decided in London, in favor of the defendant. One Adams, the editor of an antivivisection publication, discovered a "mare's nest" in a government report, and thought he could make a point against experimenters in that they had, as he supposed, obtained authorization for experiments on animals without anesthetics, but had employed them. He wrote to the Home Secretary in regard to the matter, and received a specific reply that he was mistaken as to facts. Not satisfied with this he sent an insulting circular letter to the gentlemen mentioned in the report, and a number of others, inferentially charging them with bad faith or incompetence in obtaining certificates authorizing experiments without anesthesia and afterward using it, and saying that he should accept their silence as assenting to the accuracy of his inferences. This communication, of which it was said by the trial judge in his summing up that "a more impertinent letter was never written by one man to another," was sent out to over seventy gentlemen, forty-one of whom had no connection whatever with the experiments referred to. A copy or copies of it naturally came to the hands of the editor of the *British Medical Journal* who, in what appears to us to be exceedingly temperate comments, mentioned the writer as an "irresponsible editor," which was the basis of the libel suit just concluded. The evidence showed that the reports and letters were easily understood by any one who wanted to understand them, and that there was no reason for the inferences drawn except the desire to find fault. There are several strange features in this case: one, that this editor who, as the evidence shows, was by no means careful as to imputations about others, should have felt himself libelled by the extremely temperate criticism of the *British Medical Journal*. As the judge remarked, the difficulty in dealing with the case was because the defendant was not the plaintiff, and the whole proceeding is perhaps an illustration of the general state of mind of these especially self-righteous zoophiles. Another feature illustrating this and their methods is the fact that, failing a charge of cruelty, he made one of bad faith, fraud, or ignorance because giving pain was avoided. This antivivisectionist was certainly hard to please. It is not always fair to judge a class by one of its representatives, but this is only an extreme case, if it is that, of the usual methods of the antivivisectionists. There is a general family likeness in them all; they are

all too ready to distort facts, and employ the *suggestio falsi* on the very slightest basis of inference. The petty malignancy shown in the course followed by the plaintiff in this suit is still another evidence of what numerous other facts have illustrated in the past, that excessive zoophily exists often in inverse ratio to philanthropy.

Medical News.

PROGRESS OF THE PLAGUE.—At a meeting of the San Francisco Board of Health and the attorneys of the Chinese Six Companies, May 22, a letter was drawn up for posting in Chinatown to the effect that the Board will not force the Chinese to submit to inoculation and that only those volunteering will receive the prophylactic injection. A house-to-house canvass of Chinatown will be made, to discover, if possible, any hidden cases of the disease, and to thoroughly cleanse the disease-breeding spots. As noted in our editorial columns this week, the Board has endeavored to keep the actual conditions from the public, but on the 21st it admitted, in a circular to the other state boards, that there had been nine deaths from bubonic plague, all Chinese found dead in Chinatown. No further cases are known, but every precaution to prevent the recurrence of the disease is being taken. Rio Janeiro, Brazil, is also a suspected plague center, several cases of the disease being officially reported, and eleven suspicious ones on the 22d. The plague has also appeared in a Persian village near Bagdad, and in Persian Kurdistan, where there have been 122 deaths. The sanitary council has met in extra session at Constantinople to consider these facts, and the Bassorah authorities have been ordered to draw a sanitary cordon around Suleimanic. Cases of plague have also been reported on vessels arriving at Barcelona from Manila, at Assyr, Rangoon and Matrah in Oman. The *St. Petersburg Med. Woch.* states that advices from Tokio, Japan, announce that Kitasato has discovered a second plague bacillus. The existence of a second casual agent explains the conflicting results with Yersin serum, and Kitasato hopes to be able to produce a new plague serum which will be effective in the cases in which the Yersin serum fails.

PENNSYLVANIA. Philadelphia.

AUTHORITIES OF ST. TIMOTHY'S HOSPITAL have appointed Drs. William C. Todd and James Libard visiting physicians.

HEIRS OF THE LATE PERCIVAL ROBERTS have donated \$50,000 for an addition to the St. Timothy's Hospital as a memorial to him.

THE ANNUAL COMMENCEMENT EXERCISES OF THE JEFFERSON MEDICAL COLLEGE were held May 15. Over 100 candidates received their diplomas. The degrees were conferred by Hon. William Potter, and the presidential address was made by Dr. James D. Moffat, president of Washington and Jefferson College.

THE PHILADELPHIA ALUMNI OF THE MEDICO-CHIRURGICAL COLLEGE held their annual exercises May 18, in the clinical amphitheater of the hospital. The principal address was delivered by Adj.-Gen. Thomas J. Stewart. A banquet followed, at which the principal speakers were: Thomas J. Stewart, Dr. Henry Fisher, and Dr. Frank Hachlin.

THE NUMBER OF DEATHS IN THIS CITY during the past week was 535, an increase of 41 over the previous week, and an increase of 152 over the corresponding period of last year. The principal causes of death were: apoplexy, 22; nephritis, 33; pneumonia, 75; measles, 22.

THE BOARD OF TRUSTEES OF THE PHILADELPHIA POLYCLINIC have

recently appointed Dr. James Thorington as professor of diseases of the eye. This is a new chair in that department.

DR. J. M. DA COSTA has been chosen orator for the annual commencement exercises at Yale Medical College. His subject will be "Questions of To-day in Medicine."

MR. W. B. SAUNDERS announces that he has associated with him in business Mr. F. S. Hopkins and Mr. F. F. Legner. The former has been manager, heretofore, of the subscription, and the latter of the publication, department. The firm will be known as W. B. Saunders & Co.

ON THE AFTERNOON OF MAY 14, a fire broke out in a building adjoining the Germantown Hospital and for a time threatened that institution. The loss was about \$1000.

COLLEGE SUED BY STUDENT.

A student in one of the medical colleges recently entered suit against that institution for \$2500 damages for refusal of the defendant to allow the plaintiff to take the final examinations. The student claimed that he entered this college in 1896, but was subsequently compelled to finish his course at another institution. The college maintained that he was in arrears for his tuition and had failed in certain requisite studies. The jury, after being out all night, failed to agree and was discharged.

NEW YORK.

New York City.

AT THE NEW YORK POLYCLINIC, Drs. Francis J. Quinlan and R. C. Myles have been elected professors of laryngology and rhinology.

MILK BOOTHS.

The board of estimate and apportionment has appropriated \$4000 for the construction of two ornamental booths, one for Central and the other for Tompkins Park. They are to be used for dispensing the sterilized milk and infant food supplied by Nathan Straus, and are to cost \$1400 each. By the end of this month Mr. Straus proposes to have fifteen milk booths in operation in this city. These are to be provided with proper facilities for cooling and preserving the milk.

CLOSING OF TRINITY HOSPITAL.

For the first time in the twenty-seven years of its existence, Trinity Hospital has been closed, and it will not reopen until October 15, as it is necessary to make extensive alterations in the building. The fact that in the fall it is to be placed in charge of trained nurses has probably given rise to the rumor that this step was taken as a convenient way of retiring the Angelican Sisters of St. Mary, who have been in charge all these years.

THE BICYCLE AND CONSUMPTION.

The long-distance cycle riding of William R. Brown is of a different kind from that to which the public has been treated in the past, for a decidedly novel feature has been introduced—a long-distance bicycle ride with the object of demonstrating its value as a consumption cure. This man has pluckily pedaled away in the face of all sorts of difficulties and discouragements, and in a ride of nearly 148 hours has covered 1400 miles through mud and rain. He was off his wheel only thirty-seven hours altogether, and his total sleep amounted to 1½ hours. On the completion of his fourteenth century, several physicians examined him. They not only found him to be in fit form to continue his ride, but he had only lost 3½ pounds from the commencement of the ride. The respirations were 22, the pulse 60, firm and regular, and the temperature normal. He seemed no more exhausted than most persons at the completion of a single century. The remarkable thing about his weight was its increase, he having gained 3½ pounds in the last two days.

BURNED WITH CAUSTIC POTASH.

A dastardly assault was recently made on the wife of Dr. John J. Cronin. As she opened the door of their residence, in answer to a ring, a slender woman, dressed in black, and closely veiled, asked in a lisping voice if Dr. Cronin was in. On being told that he was not, she hesitated a moment, and then pulling out a small bottle from the folds of her dress, said, "I called to give him this," and pulled out the stopper and dashed the contents, a solution of caustic potash, in Mrs.

Cronin's face. The police were at once notified, and detectives put on the case. They found that less than an hour before the assault the woman in black had called on Mrs. Cronin's mother and had asked where the Doctor lived. From what the mysterious woman said it was evident she was well acquainted with the family. Mrs. Cronin was removed the next day to the Manhattan Eye and Ear Hospital but it is thought probable that she will lose the sight of one eye.

DAMAGES AWARDED A PATIENT.

A case of much medicolegal interest, and one that has been in the courts for five years, has just been decided. It is the suit of Miss Helen D. Ward, to recover \$30,000 damages from St. Vincent's Hospital for injuries resulting from the carelessness of a nurse in burning Miss Ward while the latter was still under the influence of ether after an operation. She entered the hospital in February, 1894, and paid \$25 a week for board and \$3 a day for the services of a special nurse. The operation was performed by her own physician and was entirely successful, but the burn on her leg, it was alleged, eventually compelled Miss Ward to undergo an operation to save her leg from amputation. The suit was first brought in March, 1895, and came to trial three years later. The judge directed a verdict for the defendant, on the ground that the hospital was a charitable institution and, therefore, not liable for the negligence of employees. The case was appealed, and in April, 1899, the judges of the appellate division unanimously ordered a new trial, holding that Miss Ward was a pay patient, and the action was not brought because of negligence, but for alleged breach of contract. At the second trial, last December, the jury disagreed. The third trial was last week, and as a result, the plaintiff was awarded \$10,000 by Judge Gildersleeve and a jury of the supreme court. The decision is totally at variance with all precedent, and is likely to open the way for numerous suits against hospitals for real or fancied grievances.

MARYLAND.

DR. T. ROSS PAYNE has been appointed health officer of Baltimore County, to succeed Dr. H. Burton Stevenson.

DR. H. O. WALTON has been appointed health officer and physician to the jail of Anne Arundel County.

DR. CHARLES F. DAVIDSON of Queenstown has been appointed health officer of Queen Anne County.

DR. C. L. CECIL, the local health officer of Charles County, has contracted smallpox.

DR. O. H. W. RAGAN, Hagerstown, has been appointed health officer of Washington County, vice Dr. J. McPherson Scott.

DR. CHARLES A. WELLS, Hyattsville, has brought suit against the Baltimore and Ohio Railroad for \$6000 for injuries received at a railway crossing.

DR. CHAS. L. MABBELDT has been appointed sanitary officer of Catonsville; and Dr. J. C. Schofield, of Highlandtown and Canton, both in the same county.

DR. H. BURTON STEVENSON, secretary of the Baltimore County Board of Health, reports the smallpox outbreak at Sparrow's Point, a suburb of Baltimore, as checked. There are still 9 cases at the quarantine hospital, and 16 in the detention hospital.

Baltimore.

DR. I. EDMONDSON ATKINSON has resigned the chair of therapeutics in the University of Maryland.

DR. JOHN A. SCHULTE has been appointed vaccin physician and health warder, vice Dr. J. J. Valentine.

DR. G. W. TRUITT, a member of the late legislature, has been appointed chief clerk by the new state insurance commissioner. The salary is \$2000.

THE REGISTER of the Johns Hopkins University, recently issued, shows that there were 231 students enrolled in the medical school, of whom 20 were in special courses.

THE SPRING state medical examination of applicants to practice medicine commenced May 16, and continued four days. Eighty-three persons were examined.

AT THE Hebrew Hospital, Dr. A. L. Rettaliata has been re-elected resident physician in charge. Drs. Jos. Blum and Sidney Cone have been added to the visiting staff, and Dr. Jos. Seligman has been put in charge of the dispensary.

MR. HENRY WATERS presented to the city the keys and deed to the public bath-house at 131 and 133 South High street, May 17. Mr. Eugene Levering, president of the Public Bath Commission, made an address showing the necessity of public baths in crowded neighborhoods.

FIRST KOREAN DOCTOR.

THE feature of the commencement exercises of the Women's Medical College, May 14, was the graduation of Dr. Esther Pak Kim, of Seoul, Korea. She is the first medical graduate in America from her native country, and the occasion was regarded as of sufficient importance to be observed officially by the representatives of Korea in Washington, two of whom were present. She will become a missionary in her native land.

ILLINOIS.

Chicago.

THE CAPITAL stock of the College of Physicians and Surgeons has been increased from \$100,000 to \$217,000.

DR. CLARENCE L. WHEATON, owing to illness in his family, is going to Colorado to engage in the practice of medicine.

THE REGULAR quarterly examination of the Illinois State Board of Health will be held at the Great Northern Hotel, July 11-13.

DR. G. FRANK LYDSTON has been appointed professor of genito-urinary surgery in the Chicago Clinical School vice Dr. F. Kriessl.

DR. R. R. CAMPBELL has returned from the Pacific Coast, where he has been for the past five months on account of his wife's health.

THE NEW FRANCIS Willard National Temperance Hospital, at 167 South Sangamon Street, was opened May 17. The hospital will accommodate thirty patients, and has twelve nurses in attendance.

DR. JACOB FRANK sailed for Europe May 19, via the Hamburg-American liner *Graf Waldersee*. He goes as a delegate from the AMERICAN MEDICAL ASSOCIATION to the International Medical Congress that meets in Paris in August, where he will also read a paper.

A DIET kitchen for infants and children will soon be opened at Thirty-second and Wallace streets, in the building of the Rouse Mission of the Trinity Episcopal Church. Its object will be the provision of pure modified milk, modified foods, fruit juices and meat extracts for poor children. It will be under the medical direction of Dr. Geo. T. Palmer, and Dr. Marcus P. Hatfield will be the consulting pediatrician, while the detail work of the kitchen will be in the hands of the trained nurses of St. Barnabas Guild.

OHIO

DR. C. A. PROBST, Columbus, secretary of the State Board of Health, sails for Europe, June 5.

THE MEDICAL staff of the Cincinnati Hospital, represented by Drs. Eichberg, Packer and Holt, together with the board of trustees, have just selected the site on Price Hill for the hospital for consumptive and other contagious diseases. The legislature has granted \$25,000 for the purpose, and a two-story brick, fifty feet in length and thirty in width will be erected.

VIRGINIA.

THE EXECUTIVE committee of the State Central Hospital, near Petersburg, has accepted the plans for the new addition to the main building, which will accommodate 160 patients and cost about \$18,000.

Richmond.

SEVENTY-FIVE received the degree of M.D. at the commencement exercises of the University College of Medicine, recently.

AT THE commencement exercises of the Medical College of Virginia, May 10, forty received the degree of doctor of medicine. Dr. Chas. A. L. Reed, Cincinnati, made the address.

KANSAS.

TEN YEARS' PRACTICE QUALIFIES PHYSICIAN.

THE supreme court has decided that under the provisions of chapter 68, laws of 1870, enacted "to protect the people from empiricism and to elevate the medical profession," a physician

who had practiced medicine for ten years prior to the taking effect of the act is qualified, but ten years of practice after the passage of the act confers no right on the practitioner. In this decision the supreme court reverses Judge Monroe, of Hays City, who held, in the case of the State vs. Wilson, that Dr. H. L. Wilson had complied with the law by practicing for ten years after its enactment.

Topeka.

AT THE last meeting of the city council the salary of the city physician was reduced from \$200 to \$50, the regular monthly salary. This is on account of the abatement of the smallpox epidemic, as there are now only fifteen cases in the city.

HOSPITAL DONATION.

Rev. Chas. Sheldon has offered to give the city \$1000 on condition that the council appropriate a like sum for the purpose of erecting a detention hospital to be operated in connection with the city jail. The city has accepted his offer, and work on the hospital will be commenced at once. Dr. Sheldon's donation is from his share of the profits resulting from the Sheldon edition of the *Capital*.

DELAWARE.

THE TRUSTEES of the state hospital at Farmhurst have re-elected Dr. John J. Black, New Castle, president; Dr. Paris Carlisle, Frederica, secretary.

THE MEDICAL Examining Board has elected Dr. Irving Valandigham, Middletown, president, and Dr. J. H. Wilson, Dover, secretary.

TENNESSEE.

A CLASS of sixty was graduated from the Chattanooga Medical College, at the recent commencement.

A CONSOLIDATION of the *Memphis Lancet* with the *Memphis Medical Monthly* is announced, and in deference to the seniority of the latter journal the name of the new publication will be the *Memphis Medical Monthly*.

IOWA.

DR. J. C. SHRAEDER, Iowa City, has been elected president of the State Board of Health.

NINETY-TWO applicants have passed the medical examination and been granted certificates to practice medicine in the state.

NEBRASKA.

FIFTEEN STUDENTS were granted diplomas from the Omaha Medical College, at the commencement exercises held early in the month. David R. Kerr, chancellor of the University of Omaha, conferred the degrees, and Prof. Henry Ward, of the University of Nebraska, addressed the class on "The Physician as a Scientist."

CALIFORNIA.

DR. J. F. KITCHINGS, Oakland, has been re-elected president of the State Board of Health.

DR. DRIESBACH SMITH has resigned as assistant in the Napa State Hospital, and will be connected with the Asylum for the Insane, at Livermore.

Los Angeles.

THE TOTAL number of deaths in Los Angeles for April was 142, or an annual rate per 100 of 16.54 per cent. Twenty-six were from pulmonary consumption, 2 of the persons being natives of the Pacific Coast. There were 281 cases of contagious diseases, as follows: diphtheria, 19; scarlet fever, 14; typhoid fever, 20; measles, 228.

DR. STANLEY P. BLACK, professor of histology, bacteriology and clinical microscopy, medical department of the University of Southern California, is suffering from a serious attack of blood poisoning, there being special involvement of the glands under the pectoralis major and along the clavicle. Infection occurred through a slight wound in the finger while handling pathologic specimens.

CANADA.

DR. D. A. SHIRRES, Montreal, has returned from Baltimore, Md., where he has been carrying on research work in neurology.

LAST WEEK the death-rate in Montreal was more than usually heavy, 151 being registered. Of these, five were from typhoid fever.

THERE IS an epidemic of diphtheria in the barracks of the Northwest Mounted Police stationed at Regina. The disease was brought in by recruits. The hospital is full.

LIEUT.-COL. GEORGE STIRLING RYEBSON, Canadian Red Cross Commissioner in South Africa, has been appointed British Red Cross Commissioner with Lord Roberts' headquarters.

DR. COLIN A. CAMPBELL, of the house staff of the Toronto General Hospital, has been appointed surgeon to the S. S. *Tartar* of the Canadian Pacific's line from Vancouver to Yokohama.

DR. ALFRED A. LOEB, who was graduated from McGill last spring, and who has since occupied the position of house physician of the Philadelphia Maternity Hospital, has been re-elected.

FIFTY HOUSES in Montreal are placarded with scarlet fever notices. The civic hospital still continues full of these patients. So far the health officer is at a loss to account for the prevalence of the disease.

THE FOLLOWING practitioners are at the head of the movement in Montreal to establish a free consumption sanitarium for the city: Drs. LeCavallier, Mignault, Adams, Campbell, Johnston, Hervieux, Marsolais, Lesage and Dube.

THE TORONTO osteopath was up for trial last week and got off "scot free." The daily papers are reaping the benefit of it by the appearance of his card in their columns. Apparently we have not heard the last of osteopathy in Ontario.

THE "CANCER DOCTOR" and his practitioner friend of this city, who, it will be remembered, were to be tried at the May assizes, for manslaughter, are now breathing easier, the grand jury having found "no bill."

THE DOMINION government is shortly to appoint a quarantine officer at Windsor. The necessity for this is shown by there having been 2700 cases of smallpox in Illinois, whence there is much travel into Ontario.

PASSENGERS on the R. M. S., *Empress of India*, which is held in quarantine off Williams Head, near Victoria, B.C., are not permitted to leave the boat, pending instructions from Ottawa, there being a rumor that either plague or smallpox had appeared among the 100 steerage passengers.

TWO PHYSICIANS of Montreal are being sued for \$1099 damages, by a laborer who received a railway injury to one foot. His claim is that his foot was amputated while under the influence of an anesthetic, although promise was given that the operation would not be performed.

DR. MCCARREY, milk inspector of Montreal, has reported that the milk-supply is much purer than that of the spring of 1899. A year ago twenty-five dealers were summoned for supplying an inferior quality; so far this season only two have been similarly dealt with.

TORONTO UNIVERSITY is advertising for two professors for the medical department. On account of the death of Dr. J. Elliott Graham, the professorship of medicine and clinical medicine is vacant, and the professorship of pathology also by the resignation of Dr. John Caven.

THE SECRETARY of the Provincial Board of Health of the Province of Quebec has issued a statement of the smallpox situation in that province. Since the outbreak of the disease in the lower part of the province, in January, there have been 230 cases and only two deaths. At the present time there are thirty cases.

DR. PAUL A. GILLESPIE, a graduate of Toronto University, who was referred to in these columns some time ago as President Kruger's physician, having been commandeered at the outbreak of hostilities for service in the Boer hospital corps, has again become associated with the British service after the taking of Boshof by Lord Methuen's forces. Previous to the war he was a practitioner in Winburg, Orange Free State.

TRINITY MEDICAL COLLEGE.

So far as Trinity is concerned, the session is finally closed. On the 17th inst., between fifty and sixty were made recipients of diplomas making them Fellows of Trinity Medical College. At the commencement exercises, held that afternoon,

the Dean of the College, Dr. Geikie, presided, and as usual, gave some good, sound, practical advice to the graduating class. In the evening the members of the class held their class dinner. On the following day Trinity University conferred about seventy degrees in medicine; and the Trinity Medical Alumni Association held its eighth annual reunion. Dr. Allen Baines, Toronto, was elected president for the ensuing year.

MONTREAL GENERAL HOSPITAL.

Dr. F. G. Finley, the secretary, has presented his annual report, showing that the work of the past year was greater than at any other time, though the receipts have fallen away to some extent. The ordinary income amounted to \$76,421.72, and the expenditure to \$81,570.75. The income was \$1605.23 less than the previous year, while the expenditure was \$1082.50 more. The total number of in-door patients treated to a conclusion during the year was 2824, an increase of 94 over the preceding year. Of these, 189 remained over from the preceding year, and 2810 were admitted during the year; and 175 remained in the hospital at the end of the year. There were 2629 discharged, and 195 died in the hospital, making a total of 2824 treated during the year. The average number of patients in the wards during the year was 167; the average number of days in the hospital was 21.3; and the aggregate number of days in the hospital by all patients was 60,078, a decrease of 2966 over the previous year. Of the in-door patients treated to a conclusion, there were 1795 males, and 1029 females. The death-rate was 6.5 per cent., or, excluding 106 dying within three days after admission, 3 per cent. In the out-door department there were 37,373 consultations, an increase of 2295. The medical superintendent, Dr. Von Eberts, was appointed again to the position. In consequence of the resignation of the president, F. Wolferstan Thomas, Esq., Mr. James Cathern was elected president.

Correspondence.

Improvements in Medical Education.

CHICAGO, May 19, 1900.

To the Editor:—I have within the past few years been delivering special lectures at medical schools both in the East and in the West, and during that time I have made some observations concerning the state of medical education in this country, which, though not new to the readers of THE JOURNAL, may, nevertheless, be of interest to them. It need hardly be said that, wherever I went, I found such an *esprit de corps* among the members of the profession as, in spite of their many differences in theory and practice, constituted them a real brotherhood. There was also manifested in the schools an earnestness and candor which argues well for the future. The good work accomplished was so patent that I may be excused from dwelling upon it at any greater length. In pointing out some of the defects in the present system of medical education, I do not intend to assume the rôle of a carping critic. My sole object is to be of service to the cause of scientific medical practice.

In viewing the present system one does not have to seek long to find the root-cause of most of its defects. This lies to a large extent in the method of organization and conduct of the medical schools. The almost universal type of organization and conduct of the medical schools is that of a stock company. The school is owned and controlled by a few leading physicians who constitute themselves its professors. These stockholders, who usually have a large private practice, hire instructors in pathology, chemistry, etc., at salaries as low as possible. They elect as dean or secretary of the school a good business man who knows how to secure a large number of students and so can make the institution a paying investment—for the stockholders. In some cases, when this has been accomplished, the stock is then "watered" in order that it may be sold at a greater profit to new professors, and these in turn repeat what their predecessors have done. By a little play on words such a corporation might be styled "a traction company," organized for the purpose of *driving*

large dividends. Even without dividends the stockholder-professor regards it a paying investment.

From this brief description it is clearly seen that the money does not go to the hard-worked and poorly-paid laboratory man. The institution, on the contrary, is founded and run to further the selfish ends of the professor. Moreover, in such a school the leading professors, being general practitioners, consider themselves capable of teaching everything or anything, and hence such anomalies as the following are not uncommon: Dr. —, professor of physiology, hygiene and demonstrator of anatomy; Dr. —, professor of obstetrics and preventive medicine; Dr. —, professor of children's diseases and medical jurisprudence.

Then, too, the professor, being a busy practitioner, does not have time to prepare for his classes. On his way to college he "thinks up" what he will give the boys in his morning lecture. Or he studies a text-book and gives it to them just as he read it the night before. I have seen such a professor, after a busy day, bolstered up in bed "bucking up" for the next morning's recitations. I have also read stenographic notes on lectures, every point of which was presented in the same manner and in the same order as found in some well-known text-book on the subject. Knowing the text-book used, the entire course could have been arranged by an undergraduate.

Furthermore, I have heard lecturers spending much time in describing laboratory methods, who could scarcely tell a staphylococcus from the ameba coli. I found one who could not even focus the microscope. He was the "head" professor, and his income from practice was \$25,000 a year, gained largely through college association. (The bacteriologist and pathologist, devoting most of his time to the school, received \$600 a year.) In a recent report on the financial condition of a certain college, it was shown that its receipts were \$32,000. The expenses were \$6000, leaving a net profit of \$26,000.

It is clear that under such actual conditions as those outlined above, where the selfish financial principle is at the basis of the medical institution, the departments which require the largest expenditure of money for equipment will be the most hampered and crippled. This will be most keenly felt by the laboratory of the school, the place where all scientific work must begin. If the graduates of our institutions have not been deeply grounded in modern laboratory methods, how can we hope for real progress in the medical profession? It is also clearly seen that under such circumstances the real workers in the institution will be continually underpaid, and so there will be no stimulus toward proficiency. Only inferior talent will thus be attracted to such positions. Moreover, where the personal and selfish interest governs the faculty, all appointments will be conditioned by it, rather than by the sole condition of fitness and competency.

But to see the worst features of the present system, one must view it from the standpoint of the student. And in the first place a protest must be made against the prevailing didactic lecture and quiz method, which employs, almost exclusively, the one intellectual faculty—memory. We need to cultivate in the student the truly scientific method, *which emphasizes inductive reasoning based on observation and experiment*. One recent graduate not long ago remarked to me: "I do not remember one thing my professor taught in his didactic lecture, but the clinics I can remember very distinctly, not only the cases, but even the details of diagnosis, pathology, and therapeutics." The old method is a suspension of ideas in the mind in such a way that they do not become incorporated with past or present practical experience. Thus the student contracts a sort of "dyspepsia of the mind," or "cerebral indigestion." Moreover, by it the student's attention is directed away from the empirical and practical to the theoretical. He conceives the notion that the only equipment which a successful practitioner needs is a scalpel, scrap-blank and pencil, and a mahogany-top table. The thirty patients in his two hours a day in the business center is the outcome of this faulty educational method. Only an infinitesimal amount of what he has been taught can be put to any practical use by him. Nor is the student given the ability to acquire the right kind of practical knowledge. In the post-graduate work

I have been enabled to observe the results of these methods of education on the new as well as old graduates and find the grossest ignorance in matters relating to laboratory equipments, scientific medicine, and the physical methods of diagnosis and treatment.

This leads me to insist that all medical students should be given a practical knowledge of: 1. Hydrotherapy in all its many branches and forms. The physiologic effects of heat and cold constitute so vast a field that they ought to be known by the M.D., no matter what branch of medicine he takes up. I have known students who did not know the difference between the action on the system of water at 40 C., and of water at 55 C. 2. Hot and cold air baths have a place in therapeutics that can not be ignored by the educated physician. Only the ignorant product of the recitation room shuns these practical methods and relegates them to the domain of empirical quackery. 3. Medical gymnastics, such as physical exercise, massage, etc., is now a necessity in medical education. Under the direction of a competent physician grounded in the science and practice of medical gymnastics it would be of far-reaching value to the school, both for the professors and students, if for no other purpose than the personal benefit derived by the hard brain-racked student; the daily exercise of this branch of medical education would be a god-send. It would be a conservative and expedient policy, but the advantages are not confined to such narrow and selfish ends as the physical welfare of the student. Other professors on the faculty of such a school would soon become practically interested, to their own benefit as well as that of their patients. Students would learn to give massage to each other. The recent valuable work of Schott's method of cure for diseases of the heart is only another illustration of the wide application of the physical and mechanical supplementing the hydrotherapeutic method of treatment of this otherwise incurable disease. Take only the same time to teach this method as is required to teach the action of the digitalis series, and it will be far more valuable. Other physical methods, such as are used in the exploration of the cavities and organs of the body by means of sounding instruments, etc., for both diagnostic and therapeutic purposes, should also be taught in the medical school. Early education in those physical methods not only interests the student in "theory and practice" but develops a taste for exploration and investigation.

Electricity was formerly the useful property of quacks. Medical science has raised it to a high place in therapeutics. Electricity used internally and externally in all forms of application should be taught theoretically as well as practically. The therapeutic advantages of the electric light have recently added another useful form of electricity that may displace many drug prescriptions, but with greater success in the beneficial results derived. Finsen has shown most marvelous results from the use of the light in lupus.

Dietetics in all its branches is practically neglected in medical schools. That part of dietetics concerning the chemistry of cooking and the preparation of food is as unknown to the medical student as if the study did not belong to the science of medicine. It has a wider application and perhaps more necessary use than any single branch. Books on dietetics can not teach cooking and preparation of food. It must be learned in the diet kitchen. Discharge the cooks in the hospital and give each student an opportunity under an educated chef. If the old methods of instruction are thus supplemented by these more modern ones, the medical schools of our country will have taken a distinct step forward and the men who graduate from them will be fitted to gain the confidence of the public even more than they have in the past. If, at the same time, our medical schools could not only be affiliated with, but *incorporated into* the colleges and universities of the land, the mercenary spirit would, to a large extent at least, be wiped out, and the effect of a scientific atmosphere would be wholesome to both professor and student. In this way petty jealousies and rivalries which often result in the establishment of new schools with no endowment, poor teachers, and low entrance requirements, would be eliminated, and the standard of the whole profession raised.

FENTON B. TURCK, M.D.

Book Notices.

TREATMENT OF DISEASES OF THE NERVOUS SYSTEM. A Manual for Practitioners. By Joseph Collins, M.D., Professor of Nervous and Mental Diseases in the New York Post-Graduate Medical School. Illustrated by Twenty-three Engravings. Cloth. Pp. 602. Price, \$5. New York: William Wood & Co. 1900.

This volume is practically a manual on nervous diseases, in which special attention is given to therapeutic methods. It begins with a section on the etiology and the prevention of nervous diseases, followed by a somewhat longer one on the general application of the remedial measures. The bulk of the book is taken up with the consideration of the special forms of diseases and the remedies and measures applicable to them. It will be seen, therefore, that it is far more than merely a therapeutic work. The first section, on cause and prevention, is a very judicious summary of the general facts as known in regard to etiology and the prophylaxis of these disorders, and calls for no further special comment. In the second section the author's views are plainly expressed on the subject of serumtherapy, and he seems to believe that thus far only the thyroid is really of decided value. As regards the use of the bromids, probably the most misused drugs in the Pharmacopœia, he makes no mention of their occasional excitant effect, nor is it mentioned in his special article on epilepsy. In asylum practice this is sufficiently common to be noticed, and it is a little remarkable that while it has been observed by some of the very earliest experimenters, it has been such a late discovery by some of our leading neurologists. The author's opinion of hydrotherapy is a judicious one, and the same is true as regards electricity, where he certainly does not follow the extreme opinions of some specialists. Massage is more briefly treated, but on the whole we can agree with Collins in his estimate of its use; the same is true of his remarks as regards hypnotism. The treatment of special disorders, which takes up the greater part of the book, may be said to be according to the latest light on this subject, and a safe guide to the general practitioner. There is no mention, however, of the Baccelli method in the treatment of tetanus with carbolic acid, with which some remarkable results have been reported of late. Nor is the use of cannabis indica in migraine so entirely obsolete as might be inferred from its lack of mention. As regards the surgical treatment of epilepsy, he holds the view that is probably now held by the majority of those who have had experience with the disease, that it is practically useless as regards any permanent benefit and that even when the disease can be localized it is questionable whether serious surgical operations, such as trephining, is often justifiable, at least in those very recent cases. The present claims of some ophthalmologists are hardly more than mentioned.

Excepting in the discussion of a few disorders, such as headache, very little in the way of prescriptions and formulas is given. The treatment is stated in a general way, and any one who looks here for special prescriptions is liable to be disappointed.

Dr. Collins writes in a very lively and readable style and it sometimes even appears that the style gets away with him a little. One or two of his expressions seem a little odd, for example such as that on page 113, where it would seem that he is calling male masseurs ancille. These few minor criticisms, however, do not imply any depreciation of the work as a whole; we have nothing but commendation for the book, and it will be a most valuable addition to the library of every general practitioner.

A DICTIONARY OF TERMS USED IN MEDICINE AND THE COLLATERAL SCIENCES. By Richard D. Hobblyn, M.A. Thirteenth Edition. Revised Throughout, with Numerous Additions. By John A. P. Price, M.D., Late Physician to the Royal Hospital for Children and Women. Cloth. Pp. 838. Price, \$1.50. Philadelphia: Lea Brothers & Co. 1900.

This is an American reproduction of the well-known English work which has the sanction of long favor, this being its thirteenth edition. Special attention appears to be given to

the etymology and correct Latinity, etc., of the terms here included. It is not as full as some American dictionaries even of similar size, but we do not believe there have been many important omissions.

MANUAL OF ORGANIC MATERIA MEDICA AND PHARMACOLOGY. An Introduction to the Study of the Vegetable Kingdom and the Vegetable and Animal Drugs. Comprising the Botanical and Physical Characteristics, Source, Constituents, Pharmacopœial Preparations, Insects Injuries to Drugs, and Pharmacal Botany. By Lucius E. Sayre, B.S., Ph. M., Dean of the School of Pharmacy. Second Edition. Revised. With Histology and Micro-technique by William C. Stevens, Professor of Botany in the University of Kansas. With 574 Illustrations, the Majority from Original Drawings. Cloth. Pp. 684. Price, \$4.50. Philadelphia: P. Blakiston's Son & Co. 1899.

This volume is clearly intended as a work for the pharmacist, to the physician it will be of use simply for reference. It is practically a treatise on medical botany. The section on animal remedies is short and includes only the older pharmacopœial preparations. In this edition the author has left out the chapters on elementary botany, from the earlier one, and replaced them by an extensive section on histology and microtechnique. This, with some other alterations mentioned in the preface, ought to make it still more useful to the large class for whom it has been prepared. Its very numerous illustrations are a useful aid to the text, and the book as a whole appears to be a very valuable treatise on its specialty.

A MANUAL OF MODERN GASTRIC METHODS, CHEMICAL, PHYSICAL AND THERAPEUTICAL. By A. Lockhart Gillespie, M.D., F.R.C.P.E., F.R.S.E., Lecturer on Materia Medica and Therapeutics in the School of Medicine of the Royal College, Edinburgh. With a chapter on the Mechanical Methods Used in Young Children. By John Thomson, M.D., F.R.C.P., Assistant Physician, Royal Hospital for Sick Children, Edinburgh. Cloth. Pp. 175. Price, \$1.50. New York: William Wood & Co. 1899.

This book seems to be very well fitted to meet a want. Most general practitioners have little practical experience in some of the methods of gastric diagnosis and treatment here described, the utility of which in certain cases is undeniable. The author has described them in a way to be clearly intelligible, and where his text requires it has supplied the needed illustrations. The book is one to be safely recommended to any one who treats gastric disorders, as giving information not so readily picked out of the larger works on the subject, and in a very convenient form. The reputation of the author is a guarantee of its accuracy in details.

MENTALLY-DEFICIENT CHILDREN. Their Treatment and Training. By G. E. Shuttleworth, B.A., M.D., Medical Examiner of Defective Children, School Board for London. Second Edition. Cloth. Pp. 180. Price, \$1.50. Philadelphia: P. Blakiston's Son & Co. 1900.

The first edition of this little work being out of print and still in demand, Dr. Shuttleworth has reproduced it in this volume, with the addition of a couple of chapters giving an account of an official inquiry in which he took part, on the systems of education of the feeble-minded. The results of this inquiry were embodied in a statute which is printed in the appendix. The book has been and will continue to be one of the best brief accounts of its subject in our language, and it is well that it has again been made available.

PROGRESSIVE MEDICINE. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Assisted by Charles Adams Holder, M.D., Assistant Demonstrator of Therapeutics in the Jefferson Medical College. Volume I, March, 1900. Surgery of the Head, Neck and Chest. Infectious Diseases, Including Acute Rheumatism, Croupous Pneumonia and Influenza. Diseases of Children. Pathology. Laryngology and Rhinology. Otology. Cloth. Pp. 428. Price, \$2.50. Philadelphia: Lea Brothers & Co. 1900.

The first number for the year, of this quarterly serial in book form, includes the usual digests, as indicated in the title. The first of these is a valuable résumé of the general literature, by Chalmers DaCosta, which is both critical and full, and will

be found to be a most useful one. The second, by F. A. Packard, on infectious diseases, deserves equal commendation, and is noticed editorially in this issue. Blackader's digest on diseases of children is well done, though the literature is not so full as in the two above noticed, and the section on pathology, by Hektoen, is, as might be expected, thorough and complete, as regards the chief advances within the past year. The two concluding sections, on laryngology and rhinology, by A. Logan Turner, and otology by Robert L. Randolph, while in the main useful critical résumés of papers that have appeared, contain more omissions, if we may use an idiom, than any of the others in the book. A comparison with the recent published work of Head and Andrews will show this. As a whole the volume fully keeps up the reputation of the series.

ON FRACTURES AND DISLOCATIONS. By Professor Dr. H. Hefnerich, of Griefswald. Illustrated with 69 Plates and 126 Figures in the Text. Drawn by B. Keilitz. Translated from the Third Edition, by J. Hutchinson, Jr., F.R.C.S., Surgeon of the London Hospital. Cloth. Price, \$3. New York: William Wood & Co. 1899.

This English translation is from the third edition of the German work, and as such it will be of value to American readers. The usefulness of illustrations is well shown by the fact that three-quarters of the book is thus taken up, the text filling less than 150 pages.

Association News.

Board of Trustees.—There will be a meeting of the Board of Trustees of the AMERICAN MEDICAL ASSOCIATION in Room 237, Hotel Dennis, Atlantic City, N. J., at 10 a. m., Monday, June 4, 1900. Alonzo Garcelon, M.D., President.

Membership Receipts.—Members attending the Atlantic City meeting, and who have paid their dues for 1900, are reminded of the necessity of taking their receipts with them if they wish to avoid annoyance when they register.

The Official Program.—In order to avoid misunderstandings and to protect the interests of advertisers, attention is called to the fact that there is but one official program. This program is copyrighted by the Board of Trustees and contains no advertising matter.

Delegates to the Meeting of the American Medical Association.—Secretaries of societies are requested to forward the names of delegates as soon as possible after these are appointed or elected. George H. Simmons, M.D., Secretary, 61 Market St., Chicago.

General Business Committee.—The first meeting of the General Business Committee of the AMERICAN MEDICAL ASSOCIATION will be held at the Hotel Dennis, Atlantic City, N. J., on Monday, June 4, at 4:30 o'clock, in room 238. Subsequent meetings of the Committee will be held at the same place and hour, every afternoon, during the meeting of the ASSOCIATION, unless otherwise directed by the Committee. In order that the business of the ASSOCIATION may be effectively transacted, it is very important that all the members of the Committee should attend all its meetings. L. DUNCAN BULKLEY, Acting Secretary.

Railroad Rates for Atlantic City Meeting.—As previously announced in these columns, the Trunk Lines Association and the Central Passenger Association have granted one and one-third fare rate on the certificate plan for the Atlantic City meeting. Tickets will be on sale in the territory of these Associations from May 30 to June 7, and good to return to June 23. Action has also been taken by the Western Passenger Association and the same rate announced from all points in its territory, tickets also to be sold on the certificate plan, the dates of sale being May 30 to June 5. The return limit was made June 12 by this Association, but on account of the later limit allowed by the others, it will probably be changed to correspond with that of the Trunk Lines and Central Passenger Associations. The certificates will be signed at Atlantic City by Dr. W. Blair Stewart, N. E. Cor. Pacific and North Carolina Avenues, and a special agent

will be present on June 6, 7 and 8. The territory covered by the two first-named includes practically everything north of the Ohio River and east of the Mississippi from Cairo to St. Louis, thence east of a line drawn from St. Louis to Chicago, through Jacksonville, Decatur, Gibson, etc. The Western Passenger Association's territory to which the certificate plan usually applies comprises points west of Chicago, Peoria and St. Louis, including Oklahoma, Indian Territory, Kansas, Colorado, Utah, Nebraska, South Dakota, Minnesota, Wisconsin, Iowa, most of North Dakota and Missouri, and northern Michigan and northern Illinois.

Deaths and Obituaries.

JACOB R. WEIST, M.D., Richmond, Ind., died after only a few days' illness, May 14, aged 66. He received his degree in 1861 from Jefferson Medical College, and in 1862 was appointed assistant-surgeon of the Sixtieth Ohio infantry, and later was transferred to the Fourth Ohio cavalry. He subsequently became chief operating surgeon in the First Division of the Eighteenth Army Corps and finally was medical inspector and medical director of the Twenty-fifth Army Corps. He was a frequent contributor to medical journals on subjects of surgery and hygiene. He served as city health officer of Richmond, and as secretary and president of the Wayne County Medical Society, and as president of the Indiana State Medical Society. He was a member of the AMERICAN MEDICAL ASSOCIATION and represented the ASSOCIATION in the International Congress in London in 1881. He was one of the projectors of the American Surgical Society, and served as its first secretary.

EDWARD C. HUSE, M.D., Rockford, Ill., died May 14, aged 65 years. He was born in Massachusetts, and after graduating at Harvard, taught school until 1861, when he went to New York and attended the College of Physicians and Surgeons. Soon after receiving his degree he located in Rockford, where he had since remained. He has been a frequent contributor to medical journals, and in great demand for expert testimony.

LEWIS P. LAYTON, M.D., died at his home in Buffalo, N. Y., May 14, after a lingering illness of eight years. He was born in Erie County in 1819, and received his early education in the Springville Academy. In 1845 he was graduated from the Geneva Medical College, and immediately began the practice of medicine in Buffalo. He held many positions of honor in the medical fraternities and in local politics.

WILLIAM R. RAMSEY, M.D., Norristown, Pa., died in that city May 13, aged 68 years. He was assistant-surgeon, U. S. A., during the Civil War, and was in charge of the field-hospital at the battle of Gettysburg. He was later transferred to the frontier, and on his return practiced in Hazleton and Norristown.

EDWARD F. UPHAM, M.D., Randolph, Vt., died of apoplexy, at his home, April 15, aged 75 years. He was pension examiner for twenty-six years and had several times been president of the Vermont Medical Society, and was a member of the AMERICAN MEDICAL ASSOCIATION.

EDGAR BOLLES, M.D., Macomb, Ill., died May 14, aged 63 years. He was born in Ohio but spent most of his early life in Illinois. He was graduated from the Detroit Medical College in 1869, and after being an assistant to a physician there for some time located at Macomb.

ROBERT F. GRUBAUGH, M.D., Mansfield, Ohio, died very suddenly May 15, aged 36 years. He was graduated from the Western Reserve Medical College at Cleveland in 1888, and had since practiced medicine in Mansfield. He was secretary of the North Central Ohio Medical Society.

R. G. FURST, M.D., Lockhaven, Pa., died May 13, aged 28 years. He was a graduate of the University of Pennsylvania and for two years was connected with St. Joseph's Hospital in Philadelphia.

J. V. HARRIS, M.D., Canton, Ill., died May 7, aged 61 years. During the Civil War he served in the Sixty-fifth Ohio Vol. Inf. He was graduated from Rush Medical College, in 1871, and had since practiced in Canton.

C. W. SYDNOR, M.D., died in Stratsburg, Va., May 11, aged

67. He served as surgeon in the Stonewall Brigade of the Confederate Army.

ARCHIBALD MITCHELL, M.D., formerly a practitioner of Kingston, Mich., but lately a resident of Los Angeles, Cal., died May 17. He graduated from the Medical Department of the University of Michigan in 1872.

WILLIAM SOULE, M.D., Jewett City, Conn., died May 15, from injuries received by being thrown from his carriage five days before. He was born in Chaplain, Conn., August 24, 1827, and was graduated from Yale University in the Class of 1851.

CHARLES H. VOORHEES, M.D., Jefferson Medical College, 1850, died at his home in New Brunswick, N. J., May 13. He served in the Union Army during the Civil War, and was for a time in Libby Prison.

DEATHS ABROAD.

We note the deaths of:

S. Saxtorph, professor of surgery at Copenhagen.

L. H. Petit, M.D., Paris, editor of *Revue de Tuberculose*.

G. Planchon, M.D., Supt. of Paris Ecole Sup. de Pharmacie.

P. Sgrasso, Privat-doctent of ophthalmology at Naples.

E. van Millingen, professor of ophthalmology at Constantinople.

E. Grimaux, *agrégé libre* at the Paris Faculté de Médecine.

K. v. Limbeck, professor of internal medicine at Vienna, known for his research in experimental pathology.

Dr. Apostoli, of Paris, whose name has been so prominently connected with the application of electricity to gynecology.

Miscellany.

Early Diagnosis of Tuberculosis.—Landouzy compares the rectal temperature immediately after a walk of three or four hours in the afternoon and morning. If the temperature in the afternoon is higher than in the morning, he considers himself justified in affirming the existence of tuberculosis. Bozzolo also called attention, at the recent Antituberculosis Congress, to the significance of albuminuria as a precursor of tuberculosis, also of tachycardia *sine materia*; rheumatoid pains; certain forms of anemia, and zona.

Climate and Tuberculosis.—Lannelongue's recent experience with guinea-pigs and climate is disconcerting, to say the least. As described in the *Semaine Méd.* of May 2, he inoculated 150 guinea-pigs on the same day, with cultures of the Koch bacillus, and under identical conditions; he sent 50 to the mountains, 50 to the seashore, and placed the remaining 50 in the laboratory cellar, where they were deprived of light and almost of air. The last-named batch survived the longest and in larger numbers. The same experiment was repeated twice on the same number and with the same results each time.

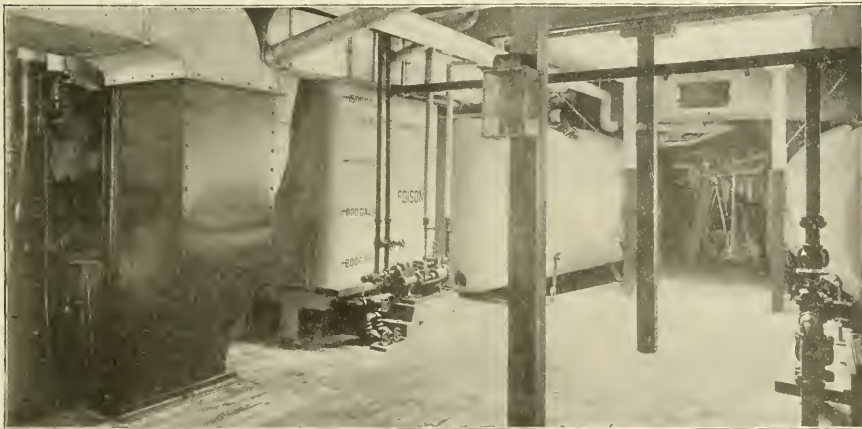
Deprivation of Salt with Bromid Treatment.—THE JOURNAL has referred to the advantages claimed by Richet and Toulouse for hypochloruration, as they call it, which is, reducing the amount of salt in the food during the treatment of epilepsy with bromids. They assert that the effect of the bromids is much enhanced by the absence of salt; and in a recent communication (*Jour. de Méd. de Paris*, April 29), Toulouse states that adults, as a rule, eat too much salt, and thus inflict unnecessary labor on their kidneys, and that more is needed with a vegetable diet than with a mixed one. He reports tests with a diet containing 2700 calories, 20 gm. nitrogen and 2.19 gm. salt. This was given to twenty adult epileptics, all old, established cases, for a period ranging from 21 to 208 days, while 1.7 to 5 of bromid was administered. The subjects did not appear to suffer in any way from the deprivation of their usual quantity of salt. The tabulated results of the tests show a remarkable decrease in the number of seizures during the hypochloruration, falling from 99 to 2; 25 to 0; 67 to 13; 47 to 2, etc., although in many instances a larger amount of bromid had been administered during the control period. In eight cases there were no seizures nor vertiges after the first fifteen days of salt reduction.

Disinfecting Steamer "Sanator."—By courtesy of *Marine Engineering*, we present illustrations of the disinfecting steamer *Sanator*, for the U. S. Marine-Hospital Service. In the March number of this publication, C. M. Green, First Assistant Engineer R. C. S., Superintendent of Construction M. H. S., describes this vessel as an interesting example of unusual marine construction, just completed, for service at Havana. The *Sanator* is provided with the most improved disinfecting and fumigating machinery, the whole plant being a decided improvement on that of the *Protector*, which, during

pine and decked with Oregon pine, the use of wood being necessary from the fact that a steel hull is quickly corroded by the solution of bichlorid, used in considerable quantities on the vessel and which can not be kept out of bilge. Her dimensions are as follows: Length over all, 161 ft. 6 in.; length from forward edge of stem to after edge of stern post, 149 ft. 11 in.; beam, extreme on water line, 32 ft.; depth of hold from top of deck beams at side to top of ceiling at keelson, 12 ft.; depth from top of main deck beams at side to top of keel, 13 ft. 3 in.; camber of deck beams, 6 in.; draft, normal, for-



DISINFECTING STEAMER SANATOR FOR U. S. MARINE HOSPITAL SERVICE AT HAVANA, CUBA.



VIEW IN AFTER END OF HOLD OF S. S. SANATOR LOOKING TOWARD STARBOARD SIDE.

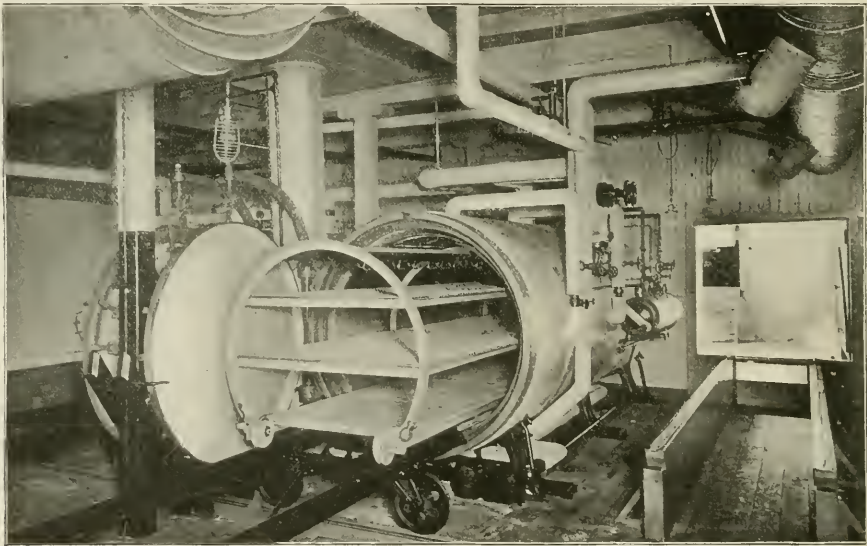
the fall of 1898, thoroughly demonstrated the efficacy of a floating disinfecting plant by its successful and rapid disinfection of troops and troop-ships at Montauk Point. The *Sanator* is undoubtedly the most complete floating disinfecting plant in the world, and is a low-powered steam vessel capable of making a maximum speed of eight knots an hour. Her hull is framed of Delaware oak, planked inside and out with yellow

ward, 7 ft. 3 in.; draft, normal, aft, 8 ft. 3 in.; displacement, normal, 640 tons; displacement, tons per inch at L. w. L., 9.4 tons; distance center to center of frames, 26 in.; depth of keel below bottom planking, 9 in. There are two steam chambers located side by side for disinfecting, their forward ends projecting through the bulkhead into the infected compartment of the hold. They are cylindrical, about sixty inches in diam-

eter outside and sixteen feet long, and each is constructed with an inner and outer steel shell, these 1 $\frac{3}{4}$ inches apart, forming a steam jacket. The chambers are built to carry a working pressure of 10 pounds per square inch. They are covered with magnesia and fitted with a complete system of steam and exhaust pipes, drains and traps. Near the bottom and through each runs a double track of angle iron with movable extensions, to transfer-tables at both ends, and along these tracks can be moved cars of light wrought-iron construction containing the goods to be disinfected. These cars are provided with removable galvanized wire trays, brass hooks, and galvanized-wire folding baskets for use according to the character of the goods to be disinfected. They are loaded with infected goods or clothing while on the transfer-tables in the infected compartments, and then pushed into the steam chamber where the disinfection is accomplished, after which the doors of the chamber are opened and the cars brought out on the after transfer-tables and unloaded, the disinfected materials being then taken up the after hatch. The length of time for disinfection depends on various conditions, but usually occupies about thirty minutes for each chamber. Steam is

Medical Women in Italy.—Fifteen women graduated at the Italian universities between 1870 and 1897 in medicine and surgery, and one has been appointed "commune physician" at Montiglio, the first woman to fill this position. She is the daughter of Dr. Musso and completed her studies at Pavia and Zurich.

Experiments on Human Beings.—The recent discussion in the German Parliament, of Neisser's inoculations of a few prostitutes with syphilitic serum, was the occasion of a violent attack on the profession as a whole and denunciation of all experimental research, by a number of lay representatives of some prominence. Among those who replied, Ministerial Director Althoff, also a layman, protested against attributing to all, the faults of a few, and exclaimed: "The faults will nowhere meet with such severe disapproval as in medical circles, for physicians, in self-sacrifice and devotion to the welfare of suffering humanity, surpass all the other citizens of the state, and set them the noblest example." Virchow proclaimed the absolute necessity of finally testing remedies on man after conclusive tests on animals: "The conscience of the physician



AFTER-ENDS OF DISINFECTING CHAMBERS—CARRIAGE PARTLY RUN OUT IN FOREGROUND.

kept in the jackets of the chamber during the operation so that the materials disinfected are thoroughly dried before being taken out. Four cars and four transfer-tables are provided. There is also an apparatus for generating formaldehyde gas and ammonia gas, and the vessel is to be provided with four Kinyoun-Francis autoclaves, which are portable formaldehyde gas generators and can be taken into the cabins or rooms of a vessel alongside, for disinfecting purposes. There are two sulphur furnaces in the forward hold compartments and sulphur bins holding forty barrels of sulphur. The bichlorid of mercury apparatus, an 1800-gallon steel tank, is located in the hold amidships on the starboard side, and above this in the dock house is a 40-gallon mixing tank with connections for steam and water, as well as a connection to the large tank below. The proper quantity of the chemical is mixed in the small tank and allowed to flow into the large one, into which has already been pumped a requisite quantity of water for making the solution. Then there is a pumping apparatus, and by means of a 2-inch hose, and spray nozzles, the solution can be sprayed even in any part of a vessel alongside.

tells him what is right and what is wrong, and a code of ethics of the medical sciences is gradually being evolved, over the entire world, which as time goes on will prove more effective, more beneficent in its results, and be more respected than the deliberations of any peace conference." Kollé, in the *Deutsche Med. Woch.*, March 15, reviews various instances of experiments on man. The most audacious on record, and without any previous experience with animals, was the inoculation of millions of healthy persons in India with small-pox virus from patients with smallpox, which was practiced for centuries by the priests. A number of persons died as the results of these inoculations but the few were sacrificed for the benefit of the many, with the consent of the authorities. Jenner inoculated a healthy person with virus from an animal suffering from a disease the nature of which he only surmised, and Pasteur had the courage to inoculate a man with rabies. Mothers sometimes send their children "to catch the measles," and yet measles has quite a high mortality. Innumerable are the instances in which physicians have experimented on themselves, and Billroth used to say that the road to our successes

leads over mountains of corpses. If laymen would divert their attention to charlatans, who, as has been shown by some recent occurrences, borrow from the medical arsenal and give mercury and other strong drugs in enormous, toxic doses, the world would be benefited, while these attacks on the regular profession tend to impair the confidence of the public in trained physicians and thus they fall an easy prey to ignorant, unscrupulous quacks.

Alterations of the Skin in Lymphatic Leucemia.—Histologic study of three cases at Neisser's clinic showed enormous deposits of lymphocytes in the interstices of the corium and subcutaneous tissue, sharply defined from the subpapillary vessels, with little mitosis, but with the lymph vessels filled with lymphocytes as in functioning lymph glands, while a lack of proliferation was evident in the lymph glands. Pinkus concludes that these accumulations of lymphocytes are not due to proliferation alone, but rather to a diminished consumption of lymphocytes. In his illustrated report in the *Arch. f. Derm.* (L. I), he asserts that an emigration of the lymphocytes from the vessels is improbable, and that it is much more likely that the accumulation of cells is due to cell-division on the spot. In lymphatic leucemia a considerable portion of the lymphatic tissue throughout the body may proliferate and produce large tumors at certain predisposed points. The qualitative and not the quantitative alterations in the blood decide the diagnosis. He distinguishes four varieties: 1. True (smooth) leucemia tumors of the skin, never found except with lymphatic leucemia, and histologically identical with the alterations in the internal organs in this disease. 2. Kaposi's lymphodermia perniciosa. 3. Sarcoma and leucemia have frequently been observed associated, and in "round-celled tumors," leucemic depositum, lymphosarcoma of mycosis fungoides are differentiated by clinical appearance. 4. It is difficult to determine the connection between mycosis fungoides and leucemia. The affection known by this name in Germany has scarcely anything to do with leucemia, but in France a protracted, diffuse erythrodermia with violent pruritus, has been noted, always connected with lymphomatosis and finally leading to the development of tumors if the patient survives to this terminal stage. Pinkus is inclined to classify this with lymphodermia perniciosa, and identify it closely with leucemia, noting its characteristics as: 1. erythrodermia; 2. diffuse thickening of the skin, mostly in the face and leontiasis, occasionally actual tumor-formation, and 3. lymphocytenia co-existing or not appearing until the cutaneous phenomena have long existed.

EXAMINATION QUESTIONS.

The following questions were presented at a recent examination of candidates for license to practice medicine in Illinois:

ANATOMY.

1. Name and locate the muscles of the eyeball. 2. Locate and describe the iliocecal valve. 3. Give the origin and distribution of the median nerve. 4. Name the membranes of the brain and spinal column. 5. Describe the heart. 6. Give origin and insertion of the gastrocnemius muscle. 7. Describe the alimentary canal from the duodenum down. 8. Describe the arch of the aorta. 9. Name the articulations of the malar bone. 10. Describe the anterior tibial artery.

BACTERIOLOGY AND PATHOLOGY.

1. How would you determine the presence of the tubercle bacilli in a specimen of sputum? 2. Give the characteristics of the bacillus tetani. 3. What are supposed to be elements of resistance or protective forces possessed by the human body against parasitic infections and intoxications? 4. Give the characteristics of the malarial organism. 5. Name the six pus cocci. 6. What is the pathology of chronic endocarditis? 7. What is the histologic structure of sarcoma? 8. What is the pathology of locomotor ataxia? 9. What are the blood changes in anemia? 10. What is thrombosis? What is embolism?

CHEMISTRY.

1. What is analysis? 2. Define simple or elementary and compound matter. 3. What is the principal atom having linking function? 4. What two kinds of molecules can be chemically distinguished? 5. How are multiples of atoms expressed in chemical notation? Example. 6. What is a base? 7. What is the difference between an atom and a molecule? 8. When are traces of albumin indicative of renal lesion? 9. What is the function of hemoglobin? 10. Give Haines' test for sugar in urine.

GYNECOLOGY.

1. Describe the minute structures of the endometrium. 2. Give the nerve and blood-supply of the ovaries. 3. What are the causes of sterility? 4. How would you give a vaginal douche? 5. What is the treatment for acute pelvic peritonitis? 6. How would you diagnose a small subperitoneal fibroid of the uterus from a salpingitis? 7. Give the successive steps in the operation for curettage

of the uterus. 8. What are the causes of dysmenorrhœa? 9. What disease of the uterus may result from childbirth? 10. What is the treatment for carcinoma of the uterus?

HYGIENE.

1. Wells, cisterns, lakes and rivers are the usual sources of drinking water. In your judgment, from which of these sources is the water most pure and why? 2. Name at least one source of contamination of lake and river water. 3. Some of the sources of contamination of well and cistern water. 4. Give a concise statement of the means to which you would resort to prevent contamination of drinking water in the several ways mentioned. 5. Mention some of the more usual constituents that render drinking water unfit for use. 6. What bacilli usually found in water show evidence of fecal contamination. 7. What physical properties may drinking water present to the senses and yet be non-potable? 8. Give as full an answer as you can of diseases traceable to water contamination. 9. Why are cases of typhoid fever rare in a new country, and why common in an old settled country? 10. In contrast to typhoid fever, why is malarial fever common in newly settled countries and relatively rare in old?

MATERIA MEDICA AND THERAPEUTICS.

1. Name four of the most important cardiac tonics and describe their physiologic action. 2. State the difference between a cholagogue and hepatic stimulant, also name examples of each. 3. Give the dose of fluid extract of ergot and describe its therapeutic action. 4. Name the alkaloids of *nux vomica*. 5. Describe the therapeutic and physiologic action of selenium and give the dose of the tincture. What is Crede's ointment, and in what cases would you recommend its use? 6. Describe the action and use of bromoforn, and give the dose for a child 2 years old. 8. What drugs contraindicate the use of oils and fats in case of poisoning? 9. What would you do in a case of poisoning with Paris-green? 10. Write a prescription suffering from membranous croup and outline the general treatment.

MEDICAL JURISPRUDENCE.

1. As regards cause, the subject of abortion has been divided into natural, artificial and criminal. A woman has aborted under somewhat suspicious circumstances. Name some facts that would induce you to think the abortion belonged to the class natural. 2. Some that would indicate the class artificial. 3. Some that would cause you to suspect criminal intent. 4. Name some conditions that would justify the bringing on of artificial abortion, what authority should be secured? 6. In case of death following criminal abortion how would you go about establishing the fact? That is, what proofs would you expect to find? 7. A woman, evidently of recent birth, is found dead. What is your opinion of a woman who is said to be its mother. In case of an examination what proof would you expect to find in the alleged mother's condition? 8. And in the event the mother had meantime died, what further proofs of maternity upon post-mortem would you expect to find? 9. To what is the term inquired it is sometimes necessary to ascertain whether a woman has borne children at a more or less remote period. How could this fact be proven? 10. How soon can one pregnancy follow another? And what is the shortest time on record between two conceptions?

OBSTETRICS.

1. What are the blood changes in pregnancy? 2. What is the treatment of varicose veins in pregnancy? 3. What vein is always contracted? 4. What are the varieties of uterine contractions? 4. What is the danger if the external and internal os uteri contract without the uterus contracting itself? 5. How would you assist in delivering the head, pelvic presentation? 6. What is "hour-glass" contraction of the uterus? How would you treat such a case? 7. What is retroversion of the uterus? What are the effects of retroversion and what is the treatment? 8. What would you do if the head was arrested in the inferior strait, pelvic presentation? 9. How would you diagnose a case of shoulder presentation? 10. How would you treat such a case? 10. What is placenta previa? Give treatment.

PHYSIOLOGY.

1. From what layer or layers of the blastoderm is the liver developed? 2. What nerves control the action of the heart? 3. Give the minute anatomy of the large intestine. 4. Describe the colored and colorless blood-corpuscles: a. As to proportion. b. As to size and composition. c. As to function. 5. Describe the respiratory changes in the blood and tissues. 6. Describe the nervous apparatus of respiration. 7. Give summary of the digestive changes in the large intestine. 8. Describe the two kinds of supporting material for the medullated nerve-fibers of the white matter of the spinal cord. 9. Name the different columns and tracts of the spinal cord and which are of ascending and descending degeneration. 10. Give in full, the distribution of the gray matter in both brain and cord.

PRACTICE.

1. Name the diseases with which uremia may be confounded and give diagnosis and treatment. 2. Give causes, symptoms and treatment of acute neuritis. 3. Etiology, pathology and physical signs of eccentric hypertrophy of the heart. 4. Give the differential diagnosis of pleurisy, periphrenic pleurisy, lobar pneumonia and phthisis. 5. Give the pathology, etiology, physical signs and treatment of chronic dilatation of the lung. 6. Chronic dilatation of the stomach, its causes, physical signs, symptoms and treatment. 7. How would you diagnose a case of bubonic plague? 8. Outline the differential diagnosis between varicella and vaccinia and outline the general treatment of the former. 9. The causes, symptoms, complications and differential diagnosis of scarlatina. 10. Write what you know of cirrhosis of the liver.

SURGERY.

1. What is hydrocele? Give treatment. 2. What are the main treatments of fractures? 3. What is adhesion and what is effusion? 4. What are aneurysms? How do you treat them? 5. What are the indications for ovariotomy? 6. How do you treat lateral curvature of the spine after the former? 7. Enumerate the different classes of fractures. 8. What is Pott's disease? Give treatment. 9. What symptoms characterize joint wounds? Outline your treatment. 10. Describe amputation of the knee-joint, lateral flap operation.

NEW PATENTS.

Patents granted of interest to physicians, May 1-8. 649,055. Apparatus for making extracts, Frederic A. Anderson, London, England. 649,284. Molding meat extracts, Henry J. Dunn, London, England. 649,257. Fracture apparatus, Charles F. Dyson, Hiram, Ohio.

649,202. Apparatus for making barium oxid, Walther Feld, Lintz-on-the-Rhine, Germany.
 649,305. Medicinal compound and making same, Ludwig O. Helmers, Hamburg, Germany.
 649,062. Disinfecting device, Louis and M. H. Levett, New York City.
 32,373. Design, Springs, Samuel C. Stearns, Detroit, Mich.
 649,718. Surgical splint, Lorenz A. Deuther, Buffalo, N. Y.
 649,826. Medicated hat-pad, Byron A. Eldred, Boston, Mass.
 649,692. Vesicant, Heinrich Hebling, London, England.
 649,521. Medicated vapor injector, Hosca W. Libbey, Boston, Mass.
 649,646. Umbilical truss, David S. Plum, El Dorado, Cal.
 649,493. Surgical instrument, Frederick A. Stohlmann and L. G. Pfarre, New York City.
 32,665. Design, massage instrument, Daniel B. Stevens, Toronto, Ont.

Queries and Minor Notes.

PRACTICE IN MEXICO.

CHICAGO, May 20, 1900.

To the Editor:—Will you kindly inform me as to the requirements for the practice of medicine in Mexico, and oblige.

B. R.

ANSWER:—A foreigner, in order to be allowed to practice in Mexico with full legal privileges—signing birth and death certificates, etc.—must pass the full examination that is required of a Mexican graduate; this examination, in the foreigner's case, is likely to be rigid, and is in the Spanish language. A full account of the requirements was given in THE JOURNAL OF Dec. 23, 1899.

The Public Service.

ARMY CHANGES.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., May 11 to 17, 1900, inclusive.

Charles Bruning, acting asst.-surgeon, previous orders directing him to proceed from New Orleans, La., to Tampa, Fla., and thence to Havana, Cuba, revoked.

NAVY CHANGES.

Changes in the Medical Corps of the U. S. Navy for the week ending May 19, 1900.

Asst.-Surgeon J. C. Thompson, detached from the *Bennington* and ordered to naval hospital, Mare Island, Cal., for treatment.

Asst.-Surgeon E. O. Huntington, detached from the *Newark* and ordered to the *Bennington*.

MARINE-HOSPITAL CHANGES.

Official list of the changes of station and duties of commissioned non-commissioned officers of the U. S. Marine-Hospital Service for the seven days ending May 10, 1900.

Surgeon Preston H. Bailhache, granted leave of absence for 10 days from May 25.

Asst.-Surgeon J. G. Cobb, directed to rejoin station at Fort Stanton, N. M., visiting Liberty and Saranac Lake, N. Y., and Rutland, Mass., en route.

Asst.-Surgeon John W. Kerr, relieved from duty at San Francisco quarantine and directed to proceed to Hongkong, China, for duty.
 Asst.-Surgeon C. W. Vogel, relieved from duty at Immigration Depot, New York City, and directed to proceed to San Francisco quarantine, Cal., and report to the medical officer in command for duty and assignment to quarters.

Asst.-Surgeon J. W. Amesse, relieved from duty at Detroit, Mich., and directed to proceed to Honolulu, H. I., and report to Surgeon D. A. Carmichael for duty.

Asst.-Surgeon A. J. McLaughlin, relieved from duty at Stapleton, N. Y., and directed to report to the medical officer in command, Immigration Depot, for duty.

Asst.-Surgeon B. H. Earle, relieved from duty at Chicago, and directed to proceed to Detroit, Mich., and report to the medical officer in command for duty and assignment to quarters.

Asst.-Surgeon E. J. Lloyd, relieved from duty at Mobile, Ala., and directed to proceed to Chicago, Ill., and report to the medical officer in command for duty and assignment to quarters.

Asst.-Surgeon John D. Long, relieved from duty at Boston, Mass., and directed to proceed to Stapleton, N. Y., and report to the medical officer in command for duty and assignment to quarters.

Acting Asst.-Surgeon E. E. Field, granted extension of leave of absence for two days.

Hospital Steward Charles W. Stephenson, relieved from duty at Chicago and directed to proceed to Evansville, Ind., and report to the medical officer in command for duty and assignment to quarters.

HEALTH REPORTS.

The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ended May 19, 1900.

SMALLPOX—TYPE STAFFS

Alabama: Mobile, May 5-12, 2 cases.
 Indiana: Evansville, May 5-12, 2 cases.
 Kansas: Wichita, May 5-12, 4 cases.
 Kentucky: Covington, May 5-12, 2 cases.
 Louisiana: New Orleans, May 5-12, 57 cases, 14 deaths.
 Maine: Portland, May 5-12, 1 case, 1 death.
 Massachusetts: Chicopee, May 5-12, 1 death.
 Michigan: Detroit, May 5-12, 2 cases.
 Nebraska: Omaha, May 5-12, 6 cases.
 Ohio: Cleveland, May 5-12, 19 cases, 1 death.
 Pennsylvania: Pittsburg, May 5-12, 2 cases.

South Carolina: Greenville, May 5-12, 3 cases.
 Utah: Salt Lake City, May 5-12, 2 cases.
 Washington: Tacoma, April 28 to May 5, 1 case.
 Wyoming: Sweetwater Co., May 4, 6 cases; Uintah Co., May 4, 4 cases.

SMALLPOX—FOREIGN.

Austria: Prague, April 22-28, 16 cases.
 Belgium: Antwerp, April 22-28, 1 case, 1 death.
 Canada: Manitoba, Winnipeg, April 1 to May 12, 11 cases 1 death; Quebec, Nouvelle France Co., March 31 to April 1, 5 cases.
 China: Hongkong, March 22 to April 7, 6 cases, 3 deaths.
 England: Liverpool, April 22-28, 9 cases, 3 deaths; London, April 22-28, 6 cases, 1 death; Southampton, April 28 to May 5, 5 cases.

France: Lyons, April 14-21, 2 deaths.
 Gibraltar: April 22-28, 8 cases, 2 deaths.
 Greece, Athens, April 22-28, 8 cases, 2 deaths.
 India: Bombay, April 10-17, 72 deaths; Calcutta, March 25, 39 deaths; Kurrachee, April 6-15, 9 deaths.
 Italy: Rome, March 22 to April 7, 2 deaths; Venice, April 14-21, 1 death.

Japan: Formosa, Tamsui, March 24-31, 134 cases, 2 deaths.
 Mexico: Chihuahua, April 28 to May 5, 3 deaths; Mexico, April 1-29, 57 cases, 42 deaths; Vera Cruz, April 28 to May 5, 8 deaths.
 Spain: Corunna, April 22-28, 1 death.
 Russia: Moscow, April 7-21, 5 deaths; Odessa, April 22-28, 7 cases, 2 deaths; St. Petersburg, April 14-21, 31 cases, 9 deaths; Warsaw, April 14-21, 2 deaths.
 Scotland: Glasgow, April 22-28, 19 cases, 2 deaths.
 Spain: Valencia, April 22-28, 1 case.

YELLOW FEVER.

Cuba: Havana, May 7, 1 case.
 Mexico: Vera Cruz, April 28 to May 5, 10 deaths.
 CHOLERA.
 Arabia: Oman, March 10, present.
 India: Bombay, April 10-17, 26 deaths; Calcutta, March 18-24, 101 deaths.

PLAGUE.

Egypt: Alexandria, May 9, reported.
 India: Bombay, April 10-17, 533 deaths; Calcutta, March 18-24, 878 deaths; Kurrachee, April 8-15, 480 cases, 402 deaths.
 Japan: Foshan, Tamsui, March 24-31, 106 cases, 74 deaths; Osaka, April 13, 2 deaths.
 New Caledonia: Numea, Dec. 17 to April 4, 123 cases, 17 deaths.

CHANGE OF ADDRESS.

Dr. C. T. Allen, from Shiloh to Tobaccoport, Tenn.
 Dr. L. F. H. Bahrenburg, from Pemberville, Ohio, to 19th Ave. and 83d St., Bath Beach, Brooklyn, N. Y.

Dr. F. E. Bennett, from Fair View to Galesburg, Ill.
 Dr. G. F. Butler, from Chicago, Ill., to Alma, Mich.

Dr. C. M. Braidwood, from Detroit to Lapeer, Mich.
 Dr. A. Cornelius, from 589 Van Buren to 525 S. Robey St., Chicago.

Dr. H. Cook, from 155 Adams St. E., Detroit to Pewamo, Mich.
 Dr. O. N. Carter, from Sandhides, Va., to Lebanon, Mo.
 Dr. H. F. Conally, from McGregor to Bruceville, Texas.

Dr. P. Conlan, from Omaha to Columbus, Neb.
 Dr. M. H. Coan, from Wyandotte to Leslie, Mich.
 Dr. W. R. Cothern, from 354 S. Hoyle St., Chicago to Melvin, Illinois.

Dr. H. C. Castor, from 340 to 184 N. State St., Chicago.
 Dr. S. T. Carzwell, from Homerville to Fowittown, Ga.
 Dr. J. H. Dyer, from Shelbyville to Wartrace, Tenn.

Dr. W. E. Duncan, from 603 W. 63d St., to 6058 Kimbark Ave., Chicago.

Dr. D. W. Detwiler, from 2099 Harvard St., to 1800 Wabash Ave., Chicago.

Dr. W. E. Frank, from Trivoli to Itasca, Ill.
 Dr. J. F. Fox, from Redland to Mulhro, J. T.

Dr. J. K. Frankish, from Philadelphia to Gwynedd, Pa.
 Dr. O. A. Fliessburg, from 102 Washington Ave., South to 1312 7th St., South, Minneapolis, Minn.

Dr. A. P. Griggs, from Atlanta, Ga., to 2027 3d Ave., Birmingham, Ala.

Dr. E. Gleitsman, from 654 N. Hoyle Ave., to 710 Fullerton Ave., Chicago.

Dr. W. A. Hibbs, from Delphos, Kans., to Lead, S. D.
 Dr. D. V. Jones, from Port Gibson to Hernando, Miss.

Dr. F. G. Johnson, from Brooklyn to Paoli, Wis.
 Dr. T. W. Little, from Long Grove to Morley, Iowa.

Dr. B. F. Long, from Baltimore, Md., to McCoyville, Pa.
 Dr. V. F. Lassagne, from Chicago to Eureka Springs, Ark.

Dr. R. Pedden, from Detroit to Fetsko, Mich.
 Dr. W. M. Phelps, from 529 Van Buren to 120 E. Kalb St., Chicago.

Dr. A. E. Perkey, from Presbyterian Hospital to 393 S. Leavitt St., Chicago.

Dr. W. C. Ramsey, from Everett Block, Akron to Hopedale, Ohio.
 Dr. G. P. Ramsey, from Crawfordville to Newtown, Ind.

Dr. W. A. Scott, from Thomasville, Ala., to Swanton, Ohio.
 Dr. W. T. Seymour, from Polo, Ill., to Reedburg, Wis.

Dr. I. J. Spear, from 2338 Eutaw St., to Ray View Asylum, Indiana Department, Baltimore, Md.

Dr. Le Roy Southmayd, from Virginia City to Great Falls, Mont.
 Dr. E. E. Stewart, Care Merck & Co., from New York City to 67 Prospect St., East Orange, N. J.

Dr. E. B. Schrock, from Ostrander to Yellow Springs, Ohio.
 Dr. H. C. Sulcher, from Colorado Springs to Denver, Colo.

Dr. J. A. Tyler, from 229 N. Champlin to 221 N. 6th St., Columbus, Ohio.

Dr. C. A. Thlxton, from 1617 to 1707 Preston St., Louisville, Kentucky.

Dr. N. A. Upechurch, from Moulas, Ga., to Summerfield, Fla.
 Dr. W. C. Weswell, from Burksville, Ill., to Warrenton, Mo.

Dr. O. J. Westlake, from City Hospital to 408 E. 12th St., Kansas City, Mo.

Dr. J. F. Willaou, from 144 65th St. to 6424 Sangamon St., Chicago.

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

Philadelphia Medical Journal, May 12.

- 1.—"Scarlatina Miliaris. J. P. Crozer Griffith.
- 2.—"Pruritus Ani, with Especial Reference to its Local Treatment. Lewis H. Adler, Jr.
- 3.—"Relation of Diseases of the Nose and Throat to Life-Expectancy. E. Fletcher Inzags.
- 4.—"Alarming Hemorrhage Controlled by Hemostatic Forceps Left on the Vessel; Wound of Femoral Vein Controlled by Means of Hemostatic Forceps; Gangrenous Omental Hernia with Practically no Constitutional Symptoms; Amputation of all Toes of Both Feet for Dry Gangrene; Removal of 280 Grains of White Wax from Male Urinary Bladder. Orville Horwitz.
- 5.—Remarks to the General Practitioner Regarding the Pessary. Frank C. Hammond.
- 6.—"Intestinal Indigestion and its Consequences. (Continued.) William H. Porter.

Cincinnati Lancet-Clinic, May 12.

- 7.—Sensory Nerves of the Genitals. Byron Robinson.
 - 8.—The New Medical Law, etc. N. P. Dandridge.
 - 9.—"Treatment of Internal Hemorrhoids. George J. Monroe.
- New York Medical Journal, May 12.
- 10.—"Study of Application of Galvano-Cautery in Nose. Beaman Douglass.
 - 11.—Kypthone, or Modified Plaster-jacket Stool for the Correction of Humpback. R. Tunstall Taylor.
 - 12.—"General Remarks on Pathology and Treatment of Stricture of Urethra. Charles Greene Comston.
 - 13.—"Technique of Lumbar Puncture. Lewis A. Conner.
 - 14.—"Treatment of Hay Fever by Suprarenal Gland. Beaman Douglass.
 - 15.—"Another Case of Typhoid Infection without Intestinal Lesions, with Positive Widal Reaction. W. Ophuls.
 - 16.—Cystitis. Henry H. Morton.

Medical Record (N. Y.), May 12.

- 17.—"Bottini's Operation for Cure of Prostatic Hypertrophy. Report of Cases. Willy Moxey.
 - 18.—"Modern Treatment of Diabetes Mellitus. Frederick Kraus, Jr.
- Medical News (N. Y.), May 12.
- 19.—"Functional and Organic Heart Murmurs in Infancy and Childhood. Abraham Jacobi.
 - 20.—"Perforating Duodenal Ulcers. (Concluded.) Robert F. Weir.
 - 21.—Metal Roller Water Tank for Application of Heat or Cold (Counter-irritation). Robert Coleman Kemp.

Boston Medical and Surgical Journal, May 10.

- 22.—"Adaptation of Pathogenic Bacteria to Different Species of Animals. Theobald Smith.
- 23.—"Bacteriotherapeutics, with Especial Reference to Tuberculosis. Edward R. Baldwin.
- 24.—"Relation of Bacteriology to Medicine. Richard C. Cabot.
- 25.—"Ideal Station for Army in Tropics. (Continued.) Edward L. Munson.

Medical Review (St. Louis, Mo.), May 12.

- 26.—"Use and Abuse of Phosphorus. L. Harrison Mettler.
 - 27.—"Treatment of Influenza. W. L. Johnson.
 - 28.—"Difficult Case of Narcosis. George C. Crandall.
- American Practitioner and News (Louisville, Ky.), March 15.
- 29.—"Etiology of Acute Diffuse Pneumonia. William N. Beggs.
- American Practitioner and News (Louisville, Ky.), April 1.
- 30.—"Surgical Treatment of Suppurative Pericarditis. John A. Oncheterloy.
 - 31.—"Two Terrible Examples." Giffard Knox.
 - 32.—"Valedictory Address at University of Louisville. Ezekiel Merrill Bartlett.

Virginia Medical Semi-Monthly (Richmond), April 13.

- 33.—The Negro. His Environments as a Slave; His Environments as a Freedman. John Herbert Claiborne.
- 34.—Report of Two Cases. 1, A Miscarriage; 2, A Retro-Displaced Pregnant Uterus. Walker B. Gossett.
- 35.—"Clinical Aspects of Infantile Diarrhea. J. W. P. Smithwick.
- 36.—"Medicinal and Surgical Treatment of Abscesses, with Clinical Histories. Eugene C. Underwood.
- 37.—Phenocell Hydrochlorid in Malaria. L. H. Warner.
- 38.—"Clinical Microscopy in Diseases of Respiratory Organs. H. Stuart MacLean.
- 39.—Difference in Cause, Symptoms, Results and Treatment of Grip and Cold. Wm. S. Gordon.

Railway Surgeon (Chicago), April 17.

- 40.—Diseases of Lungs the Result of Trauma. D. S. Fairchild.
- 41.—"Don't be in a Hurry to Amputate. J. R. Hollowbush.
- 42.—Minor Casualty Surgery; Ideals of Treatment and Results. H. L. Getz.
- 43.—Traumatic Popliteal Aneurysm. J. T. Dunn.

Annals of Surgery (Philadelphia), May.

- 44.—"Two Cases of Esophageal Diverticulum, with Remarks. Maurice H. Richardson.
- 45.—"Postdiphtheritic Stenosis of Larynx (Retained Intubation Instruments and Retained Tracheal Canule). John Rogers, Jr.
- 46.—"Contribution to Surgery of Stomach, Including Wounds, Gastrostomy, Gastroenterostomy and Gastrectomy. H. Beckman Delatour.
- 47.—"Report of Case of Recovery after Ligation of First Portion of

Right Subclavian Artery for Aneurysm of Third Portion. A. E. Halstead.

- 48.—Complete External Dislocation at Elbow. Randolph Wiselov.
 - 49.—"Report of Case of Actinomycosis Hominis of Lungs. James B. Bullitt.
 - 50.—"Report of Case of Superficial Bilateral Gangrene with Asymmetrical Lesions. George F. Wilson.
 - 51.—"Dislocation at Shoulder Complicated by Fracture through the Anatomical Neck of the Humerus. Charles Brooks Brigham.
- Journal of Cutaneous and Genito-Urinary Diseases (N. Y.), May.
- 52.—"Report of Ten Cases of Vesical Tumors, with Some Remarks upon the Cleansing of Foul Bladders and the Technic of Suprapubic Cystostomy. Granville MacGowan.
 - 53.—"Tuberculosis of the Skin in a Physician from Accidental Inoculation. Jay F. Schamberg.

Medicine (Detroit, Mich.), May.

- 54.—"Plea for More Attention to Sense Organs, Especially the Eye. J. G. Hulzinga.
- 55.—"Significance of Albuminuria. Orville A. Kennedy.
- 56.—"Diagnosis of Different Forms of Malarial Fever. Albert Woldert.
- 57.—"Electrocautery in Nose and Throat Diseases. S. G. Dabney.
- 58.—"Pancreatic Digestion from Standpoint of Comparative Anatomy of the Bile and Pancreatic Ducts in Mammals. B. K. Rachford.

Medical Standard (Chicago), May.

- 59.—Syphilis: Phenomena and Management. William S. Gottheil.
- 60.—Pyonephrosis; Nephropexy; Traumatic Epiphyseal Lesions; Osteomyelitis, etc. Nicholas Benn.
- 61.—"Preliminary Remarks to Discussion of Tuberculosis. Charles Denison.
- 62.—"Ritheln, or German Measles. Marcus P. Hatfield.
- 63.—"Contused and Perforating Injuries of Eyeball, with Report of Cases. Thomas A. Woodruff.
- 64.—Diagnosis of Heart Diseases. Albert Abrams.
- 65.—Hemorrhage and Circulatory Disturbances in Complicated Fracture. Thos. H. Manley.

Annals of Otolaryngology and Laryngology (St. Louis, Mo.), February.

- 66.—"Contribution to Pathologic Histology of Hyperkeratosis Lingualis. (Hair Tongue.) J. L. Goodale.
 - 67.—"Cysts of External Auditory Canal; Report of Case. Lewis S. Somers.
 - 68.—"Use of Suprarenal Extract in Diseases of Nose and Throat. W. H. Bates.
 - 69.—New Instruments for Correction of Irregularities of Nasal Septum. Henry W. Wandless.
 - 70.—Some Improved Nose, Throat and Ear Instruments. Edwin Pynchon.
 - 71.—Osteoma of Auditory Canal. Thomas R. Pooley.
- Indiana Medical Journal (Indianapolis), April.
- 72.—Several Unusual Cases of Skin Disease Observed in Indianapolis. A. W. Brayton.
 - 73.—Osteosarcoma of Thigh and Lung; Cystic Tumor; Destruction of Speech Center. John E. Harris.

Brooklyn Medical Journal, May.

- 74.—Dispensary Experiences. F. S. Kennedy.
 - 75.—"Some Points in Chemistry of Cow's Milk, with Reference to Infant Feeding; with Description of Method for Home Modification of Cow's Milk. E. H. Bartley.
 - 76.—"Consideration of Radical Treatment of Hemorrhoids. Wm. F. Campbell.
 - 77.—"Alcoholism and its Treatment. L. J. Morton.
- Obstetrics (N. Y.), April.
- 78.—External Cephalometry Applied to Artificially Induced Labor. M. Perret.
 - 79.—Albuminuria of Pregnancy. Samuel G. Dabney.

Western Medical Review (Lincoln, Neb.), May 5.

- 80.—"Hot Bath as Aid in Abdominal Diagnosis. George Dock.
- 81.—"Intriligamentous Growths. Thomas H. Hawkins.
- 82.—"Clinic at Jefferson Medical College Hospital. H. A. Hare.
- 83.—"New Method of Suture of Internal Ring in Operations for Inguinal Hernia. Leonard Freeman.
- 84.—Application of Onr New Law. J. G. Johnston.
- 85.—"Longitudinal Wire Suture in Radical Operation for Hernia. M. L. Harris.
- 86.—"Report of Some Cases in my Practice. M. A. Hughes.
- 87.—Abortion. (Concluded.) A. D. Wilkison.

St. Louis Clinique, May.

- 88.—Faculty's Valedictory. St. Louis College of Physicians and Surgeons. George H. Thompson.
- 89.—"Some Newer Therapeutic Agents. (Continued.) C. W. Lillie.
- 90.—Treatment of Ulcers. H. C. Allen.

Kansas City Medical Index-Lancet, May.

- 91.—Annual Address before the Western Surgical and Gynecological Association at Des Moines, Ia., Dec. 28, 1899. H. C. Crowell.
- 92.—Diphtheria and Membranous Croup. J. W. Lane.
- 93.—Quinalgen (Analgen). A. M. Wilson.
- 94.—X-Ray as an Aid in Diagnosis of Tuberculosis of Lung. J. N. Scott.

95.—"Remarks on Chorea, its Pathology and Treatment. John Punton.

Kansas City Medical Record, April.

96.—Treatment of Female Pelvic Diseases in Country Practice. E. N. Miller.

Colorado Medical Journal, April.

- 97.—"Pulmonary Complications of Typhoid Fever. Carroll E. Edson.
- 98.—"Is Change of Climate a Necessity for Successful Treatment? Charles Deinson.

- 99.—Causes and Treatment of Acute Coryza. Melville Black.
 100.—Prevention of Diseases of Eye During Childhood. E. W. Stevens.
 101.—Dame Nature's Vaginal Hysterectomy. Calvin Skinner.

Louisville Monthly Journal of Medicine and Surgery, May.

- 102.—Tubercular Peritonitis. James B. Bullitt.
 103.—Talipes Equino-Varus. Irwin Abell.
 104.—Observations on Lithemia. (Continued.) Arch. Dixon, Jr.
 105.—Report of Surgery. (Continued.) H. Horace Grant.
 106.—Systematic Anesthesia of Chloroform and Ether: Practical Points from Personal Experience of 2300 Cases. James W. Guest.

Woman's Medical Journal (Toledo, Ohio), April.

- 107.—The Therapeutic Uses of Yeast. Elsie Reed Mitchell.
 108.—Aphasia. Jennie Lyon.
 109.—Short Umbilical Cord: Report of Cases. Helen Post Wilson.
 110.—Femoral Hernia with Report of Two Cases. J. Lillian McBride.

Medical Summary (Philadelphia), May.

- 111.—Symptoms of Hysteria. Arthur E. Strong.
 112.—Let the Druggist Prescribe. J. W. Lockhart.
 113.—Treatment of Catarrhal Pneumonia in Children. Eugene C. Underwood.
 114.—Sanitary and Hygienic Sermon for the Country Doctor. A. T. Cuzner.
 115.—Syphilis. (Continued.) Wm. V. Wilson.
 116.—Cerebrospinal Meningitis. Drs. Pennebaker and Tripp.
 117.—Symptomatology and Treatment of Septicemia. J. W. P. Smithwick.
 118.—Remonstrance, Reminiscence and Remarks. Geo. H. Candler.

St. Louis Courier of Medicine, April.

- 119.—Post-febrile Insanities, Relating Particularly to La Grippe and Typhoid Fever. J. K. Baudy.
 120.—The So-Called Fetal Theory of the Cause of Eclampsia. P. C. T. Von Der Hoeven.
 121.—Preliminary Report on Etiology of Scarlatina. R. B. H. Gradwohl.

Iowa Medical Journal (Fort Dodge), April.

- 122.—Gastro-Intestinal Disorders of Children. W. S. Lessenger.

Buffalo Medical Journal, May.

- 123.—Rational Steps in Treatment of Nervous Prostration, Headache and Neuralgia. (Concluded.) Ambrose L. Ranney.
 124.—The Missile and the Weapon. A. L. Hall.
 125.—Unusual Conditions of Skin and Kidneys Following an Operation for Appendicitis. W. G. Taylor.
 126.—On a Form of the Hash Magnet. Lucien Howe.
 127.—Chronic Suppuration of Middle Ear and Chronic Empyema of Nasal Accessory Sinuses. Frank Whitehall Hinkel.

Medical Dial (Minneapolis, Minn.), May.

- 128.—Three Interesting Patients for a Recent Gradnate. H. Bowman.
 129.—The Trained Nurse. Christine Williams.

St. Paul Medical Journal, May.

- 130.—Practical Method of Estimating Directly the Quantity of Hemoglobin. T. W. Tallquist.
 131.—Bacteriological Diagnosis of Diphtheria in Minnesota. F. F. Wesbrook.
 132.—Pernicious Anemia, with Report of Case. Charles R. Hall.
 133.—Observations on 1042 Cases of Anesthesia from Jan. 1899, to Jan. 1, 1900. Alice Masary.
 134.—Tubercular Epididymitis with Report of Case. Marcus Tessler.
 135.—Foreign Body Left in Abdominal Cavity During Celiotomy; Fecal Fistula; Recovery. S. S. Hesselgrave.
 136.—Pulmonary Tuberculosis, with Gangrene of Leg. Henry Jackson.
Pearia Medical Journal, April.
 137.—Influenza and Complications. H. H. Whitten.
 138.—Herpes Zoster Frontalis. R. E. Lewis.

Medical Register (Richmond, Va.), April.

- 139.—Present Status of Insanity in Virginia. Wm. Francis Drewry.
 140.—Grip Lung. John L. Dawson.
 141.—Comparative Study of Nerve. Charles M. Hazen.
 142.—Use and Abuse of Blisters. Wm. P. Mathews.
 143.—Injuries to Skull, with Report of Some Recent Cases. Lewis C. Bisher.
 144.—Tuberculosis of Bone. A. B. Greiner.

Medical Sentinel (Portland, Ore.), April.

- 145.—Gall-Stone Fragments. Kenneth A. J. Mackenzie.
 146.—Epidemic in Eastern Oregon. Olive Hartley.
 147.—Quarantine. Titus C. Briggs.
 148.—New Method of Relief for Facial Neuralgia. W. C. Belt.

Southern Medical Journal (La Grange, N. C.), April.

- 149.—Incompatibility. E. A. Ruddiman.
 150.—Report of Some Interesting Cases with Remarks Thereon. J. W. P. Smithwick.
 151.—Clinical Aspect of Infantile Diarrhea. J. W. P. Smithwick.

Medical and Surgical Bulletin (Nashville, Tenn.), April.

- 152.—Hodgkin's Disease with Report of Case. E. G. Wood.
 153.—Valedictory. Professional Life of Dr. Marion Sims. J. R. Fleming.

Medical Fortnightly (St. Louis, Mo.), May 10.

- 154.—Medical Laws and Medical Organization in Illinois. W. T. McKoff.
 155.—Efficiency of Our Health Laws. S. T. Hurst.
 156.—Treatment of Incipient Phthisis, with Clinical Reports. Robert C. Keuner.
 157.—Cancer of Rectum in Female, with Report of Case. Wallace K. Oakes.
 158.—Abortion, its Cause and Treatment. C. W. Price.

- 159.—Observations on Obstetrics. J. B. O'Neil.
 160.—Care of Eyes of New-Born. J. F. Hill.
 161.—Climatic Treatment of Tuberculosis. George M. Randall.

Annals of Gynecology and Pediatrics (Boston), April.

- 162.—Operative Indications in Cases of Fibroma Complicated by Pregnancy. D. Delagenere.
 163.—Two Cases of Sporadic Cretinism. John Lovett Morse.

Dominion Medical Monthly (Toronto, Can.), April.

- 164.—Case of Smallpox Recently Discharged from Isolation Hospital in this City. J. G. Lamont.

Hot Springs Medical Journal (Ark.), April.

- 165.—Value of Prostatic Examination. J. Leland Boogher.
 166.—Treatment of Pulmonary Tuberculosis by Inhalation of Antiseptic Nebule. Homer Thomas.

AMERICAN.

1. **Scarlatinal Miliaria.**—After noticing this peculiar eruption in scarlatina and reporting cases, Griffith suggests that the often expressed view that miliaria is an indication of severity in scarlatina may not be tenable, as there seems to be no connection between the two. Apparently different causes act to produce the efflorescence and the vesiculation and, contrary to the opinion of certain writers, there seems to be no necessary relation between the amount of scarlatinal peeling and the degree of miliarial eruption. He favors the view of Thompson, that the development of miliaria in scarlatina depends largely on some peculiarity of the skin rather than on any intensity of the scarlatinal rash or other factor, and the observation of Henoch, as to a family tendency to miliaria in scarlatina seems to support this view. It is possible to have embarrassment of diagnosis from miliarial eruption in scarlatina, and in one of his cases the presence of other instances of the disorder was the leading factor deciding the diagnosis.

2.—See abstract of this article in our Therapeutics Department of this week.

3. **Nose and Throat Diseases in Life Insurance.**—Ingals concludes, from a study of the facts, that examinations of the nose and throat will not usually aid the life insurance examiner, but that in a limited number of cases it may cause him to reject persons otherwise acceptable, who are likely to develop diseases within a short time that will greatly reduce their expectancy of life. Hence such examination should be made whenever the personal or hereditary history and the general appearance or quick pulse leads the examiner to suspect the beginning of pulmonary or cardiac disease.

6. **Intestinal Indigestion.**—Porter describes the physiology of intestinal digestion, and, in concluding says that for the most perfect working of the alimentary canal, the system must daily produce a laxative mixture composed of bile, glycerin and soap, and when it fails to do so the common symptoms of constipation appear. This is a point to be kept in mind in the management of every case of intestinal indigestion, if the best results are to be secured.

9. **Internal Hemorrhoids.**—Monroe claims that the hypodermic injection method, although it has received its share of condemnation, is a good one, that will cure in certain cases and when properly used is perfectly safe. He discredits the deaths reported by Andrews and says that he has found him to be mistaken in some instances. For small hemorrhoids, especially in the perineal form, found so often in females, he believes there is no better treatment; and it can also be used successfully in all tumors that are above the sphincter muscle. He uses 1 dram of a saturated solution of Calvert's carbolic acid, and 3 drams of olive-oil mixed by placing the bottle in warm water, injecting from 5 to 10 drops into each tumor. He admits that there may be accidents, such as abscess or fistula but thinks that talk of heart-clot is nonsense. The preparation of the patient for this method of treatment is the same as for any other; and a weaker solution than the one given should not be used. If the sloughing is extensive or abscess or other troubles follow, they should be treated as though coming from any other cause.

10. **Galvanocautery in the Nose.**—Douglass has studied, microscopically, the effect of the galvanocautery in the nose, in order to determine the reason why this method has fallen

into disfavor, and he finds that the action of the cautery tends to form a cone of burned tissue, deepening toward the deeper structures. If it is used superficially over wide areas there results an extensive destruction of the epithelium, including the hyaline membrane. If the cautery point is rapidly pushed deeper into the tissue, the superficial effects with wide devastation of the epithelium and hyaline membrane are not noticed, and the area of reaction is more circumscribed; hence the cautery should not be used superficially or over a large surface, but should be rapidly introduced into the deeper structures and immediately drawn forward or backward. Another practical point is that the cautery point, on being placed against the epithelial surface should either not be heated or else heated only to a moderate degree—just sufficient to allow the cautery point to pass the epithelium and hyaline membrane. After this, greater heat can be turned on and the deeper structures, vessels, glands and hypertrophic masses destroyed to the bone. The old and time-honored "linear" method of cauterizing must be forsaken, since the hyaline membrane and epithelium are injured by a less degree of heat than the deeper structures. We have by the use of the superficial method, the broad based wedge or sloughing that defeats the real purpose, which is to reduce the hypertrophic parts and leave as little disturbance as possible on the surface. This method must, therefore, be discarded, except where it is desired to produce a superficial effect. In all other cases, we must use the cautery point so as to spare these superficial tissues as much as possible. He suggests a stiff wire electrode to penetrate the external tissues at a moderate heat and to be repeatedly inserted at different points along the hypertrophy. The method would vary a little according to the locality. On the septum a single puncture should be made, and that only in a case where there is dilatation of the venous sinuses of the tuberculum septi, the only condition which he thinks would require cauterization. Necrosis of the cartilago septi is very apt to result from its disturbance. On the anterior end of the inferior turbinate and posterior ends of both inferior and middle turbinates several punctures should be made in as nearly a circular series as possible. The posterior tip of either turbinate should be punctured from the posterior pharynx, a palate retractor being used. The part of the ethmoid known as the middle turbinate should perhaps seldom be cauterized, except at its posterior end, and sometimes at the anterior end, on account of its close relation to the ethmoidal cells, and theirs to the dura mater. Pachymeningitis or ethmoiditis is the danger to be avoided.

12. Stricture of the Ureter.—Cumston describes the methods of performing internal and external urethrotomy. He does not believe in the routine use of the permanent catheter in the latter operation, for he thinks that it is injurious. The only proper treatments in the case of stricture are dilatation with sounds, internal urethotomy, and, in exceptional cases, external urethrotomy. Temporary dilatation is useful in the stage of exudation or early part of the connective tissue stage, but forcible dilatation is not advised. It is also used as a preparatory treatment for internal urethrotomy, which should be employed in those cases that have a valve-like or bridge-shaped form, and where the connective tissue encircles the canal. This should be done to a limited extent only, and only after being treated unsuccessfully by dilatation. Internal urethrotomy is simply an operation intended to pave the way for future treatment by dilatation. The incision made in this way, heals rapidly, but in cases of external urethrotomy, healing takes place with interposition of cicatricial tissue between the edges of the walls of the urethra; and consequently there is an actual increase in the caliber, which can be made permanent by the subsequent passage of bougies, even if this cicatricial tissue should contract somewhat. If external urethrotomy is performed, and the central end of the urethra can not be found and there is complete retention of the urine; or if in case of traumatic stricture, the cicatricial tissue extends as far back as the neck of the bladder, there is but one method, and that is posterior catheterization. The technique of the operation is described, and caution given in regard to the antiseptics; he recommends the use of urotropin to render the genito-urinary

apparatus antiseptic, and special care to be taken with instruments and applications.

13. Lumbar Puncture.—In locating the point of lumbar puncture, three things should be considered: 1. That there is ready entrance of the needle into the subarachnoid space. 2. That the tapping is made at the point least likely to admit of damage to the nervous structures. 3. That the fluid obtained is as rich in sediment as possible. In regard to the first requirement, it is sufficiently well met by entrance through any of the lumbar spaces or through the lumbosacral space; and injury to the cord can be avoided by entering at some point below the third lumbar vertebra. The last requirement is best fulfilled by tapping in the lumbosacral space, and when the patient is a child, he would have the puncture made while in a sitting position. The essential point is to secure the greatest possible degree of ventral flexion of the spine. General anesthesia is usually unnecessary and asepsis should be as complete as possible. In very fat or muscular patients where the bony prominences are indefinite, the most satisfactory means of locating the vertebra is by taking a line between the highest points of the iliac crest, that regularly crosses the fourth vertebral spine, and the method of puncture is described. In children the fluid is reached at a depth of 2 to 3 cm., and in adults from 4 to 7 cm. There are rarely any accidents; sometimes the fluid does not flow when one is sure the needle is in the canal, but this may be due to its being plugged while being introduced, or to the contents being of a gelatinous character, as in a case reported by Paekard. A little blood stain from injury of a small vein is unimportant. More serious accidents, when they have occurred, have generally been caused by the rapid withdrawal of a large quantity of fluid.

14. Hay-Fever.—Douglass recommends the use of suprarenal gland extracts, both locally and internally, for a long period of time, in the treatment of hay-fever. He thinks that it is generally best given internally in the tablet form—5 gr. of saccharated, dried suprarenal gland administered at first every two hours, day and night, until some giddiness or palpitation is observed, or until the local examination of the nasal membrane shows that the remedy is controlling the vasomotor paralysis. After this has been done it may be given at longer intervals—probably every three hours, then every six, then twice daily, continuing in this way through the hay-fever season. If the symptoms reappear, the quantity may be again increased until they are again controlled. When used locally, it should be applied either by means of a spray or on pledgets of cotton saturated with a 6 to 12 per cent. solution. There is no other remedy used which is as useful as suprarenal gland, for it fulfills all the indications better than any other that has been introduced.

17. Bottini's Operation.—Meyer reports 12 cases in addition to those previously given, and says that 30 Bottini operations have been performed on 24 individuals, and that he finds that they show 38 per cent. cured so far, 29 per cent. much improved, 8 per cent. benefited; and a mortality of 8 per cent. directly due to operation, and 8 per cent. indirectly due to it. These cases were not selected but were operated on as they came along. One of the deaths was due to anterior incision, a method which he has since abandoned, and he thinks that in the future he can reduce the mortality.

18. Diabetes Mellitus.—The diet for diabetic cases is best ascertained by putting the patient on a standard one, taking besides the indefinite albuminous and fat-producing matter, a definite amount of carbohydrates—say 60 grains; then collecting a twenty-four-hours' urine, beginning after the first breakfast. The amount of sugar can be ascertained by polarization and titration, or by polarization before and after fermentation, to find out also the amount of substances which turn the plane to the left. In all mild cases and in non-diabetic glycosuria, we have no sugar, and in these after a period of four or five days, the daily allowance of carbohydrates is increased and the urine of the last day of such a period collected as heretofore; and this is continued until the presence of sugar is found in the urine, and we know the tolerance of the system for carbohydrates. In all cases where the glycosuria is found, the

amount of carbohydrates in the patient's diet is reduced and it is kept as free from them as possible, until the condition has disappeared, when they are increased again, and so on. Where it is impossible to suppress the glycosuria even by the strictest diet, a certain amount of carbohydrates is allowed, because it would be impossible to keep the patient from taking some, as they are essential to life. It is also of great value to know in each case the fluctuation of glycosuria within twenty-four hours, so that the distribution of the carbohydrate food can be thus controlled. To make a good diathetic list, one must know the percentage of carbohydrates in the various articles and how to substitute them. Kraus thinks that a moderate amount of carefully selected alcoholics can be used, but care should be taken to avoid any toxic effect. Balneotherapy is rather favored, since it has its advantages in taking the patient away from home to a place where proper care can be exercised, some of the alkaline-muriatic waters have also a good effect. In other cases, especially neurasthenics, it would be better to send the patient to the seaside or to some high, bracing altitude, where he can find sufficient accommodation to follow the diet prescribed.

19. Functional and Organic Heart Murmurs in Infancy.—The denial by Hochsinger and Soltmann, of the existence of functional murmurs in the first three years of life, is noticed by Jacobi, who reports a case in an infant 13 months old. He has taken care to avoid confusing it with extracardial murmurs, an error which has been committed. This is undoubtedly rare in infants under 2 years of age, but as the lungs grow and there are present tumors or adhesions between the pleura and pericardium, the murmur may appear soft or grating, and is generally heard anteriorly only. It is rhythmic, not synchronous with contraction of the heart; strong on deep inspiration; disappears when there is no breathing and is less audible in a recumbent than in an erect position. While murmurs in most cases mean organic disease, the converse is not true, and he reports a case illustrating this. Most murmurs mean organic lesions, either in the valves or in the myocardium, but in children there are conditions which occasionally make the diagnosis somewhat difficult. In persistence of the ductus arteriosus, there is a loud systolic murmur over the sternal end of the second left intercostal space, extending upward into the vessels of the neck, mainly on the left side and audible posteriorly in the left interscapular space. There is a characteristic dullness, nearly oblong, along the left margin of the sternum to the clavicle. The diagnosis is embarrassed by complications with valvular anomalies, but when not so complicated patency of the duct is compatible with a fairly long life. In congenital stenosis of the pulmonary arteries, there is a systolic murmur in the sternal part of the second left intercostal space, which is not transmitted into the carotid, unless there is a defect of the ventricular septum. There is sometimes a full feeble second pulmonary sound, with club fingers, and hypertrophy of the right ventricle, but when atresia of the artery exists these are absent, and the right heart is small or rudimentary. Jacobi has never found an absence of the ventricle unless it was complicated with stenosis of the pulmonary artery. He can not verify the statement of hooks that pulmonary stenosis with defect of the septum is characterized by hypertrophy of the heart; for the opposite condition is characteristic. Another class of cyanotic cases is due to arrest of development of the common arterial trunk, which did not separate into the aorta and pulmonary artery; and in these he found little or no hypertrophy. The loud murmur is heard over the sternum, a little to the right and left, at about the second or third ribs, and is very audible posteriorly. There are some very loud murmurs, that are audible at a distance; these are more common in adults, and always systolic, generally attributed to hypertrophy and believed to be muscular. In a few cases, he thinks there is no increase and the phenomenon is due to torn and swinging papillary muscles. Not unfrequently the general condition is better than the noise would appear to suggest. Organic murmurs are not always audible, they may decrease with the increase of the pulse and may disappear from compensation or recovery; but the disappearance does not prove the murmur functional. Myocardial changes are mainly caused

by anything that gives rise to hypertrophy and dilatation. The senile heart is very apt to exhibit hypertrophy and dilatation connected with atheromatous degeneration of the coronary and minute nutrient arteries causing muscular disturbance. What we call debility of the heart is due to a great many different conditions—intoxication, nephritis, etc. It is not functional, but is the result of organic lesions. In infants and children, myocarditis is mostly parenchymatous, and the most intense and persistent myocardial changes occur after la grippe and diphtheria. The alteration is never uniform, and that is why arrhythmia is so frequent; but no matter how many causes, either in the heart or nerves or distant organs, its most frequent origin is myocarditis. Special forms of arrhythmia are duplication of the heart sounds, which is a suspicious symptom, as it proves the exhaustibility of the heart muscle. Jacobi thinks it is apt to be caused by trouble in the myocardium, or lack of muscular myocardial coaptation.

22.—See abstract in THE JOURNAL of May 12, p. 1193.

23. *Ibid.*

24.—*Ibid.*

25. Tropical Ration.—Munson discusses the standards of diet and says that from the individual conditions that occur, we are obliged to use general averages, and he gives various tables showing the dietaries for different climates and their physiologic constituents.

26. Use and Abuse of Phosphorus.—Mettler restates the facts, as to the physiologic action of phosphorus in the system, and mentions its therapeutic uses. He considers it a reconstructive stimulant to all tissues and a special stimulant and nutritive to those of the nervous system. When required for the latter purpose the most satisfactory preparation which he has found is the phosphorus itself, prepared in elixir, or pill. For general tonic effects, he prefers the hypophosphites, especially the glycerinophosphates; while for gastric and hepatic troubles, acid salts are to be employed. Phosphate of soda is almost specific in its action on the liver, and in that class of mild neuroses dependent on hepatic insufficiency, he uses this first. He has found a small dose of phosphorus useful in certain forms of insomnia, due to an overtaxed and ill-nourished brain. In neuralgia, he has not found it very efficacious, but in functional impotence it is advantageous, as also in the early stages of locomotor ataxia. It is important, however, not to administer too large doses or continue it for too prolonged periods of time.

27.—See abstract in our Therapeutics Department this week.

29.—This article has previously appeared elsewhere: See title 88, p. 738, and title 82, p. 991.

35.—This article also appears in another journal: See title 151, this week.

44. Esophageal Diverticulum.—Two cases of this condition are reported by Richardson, both of which were successfully operated on, making a total of 16 patients thus treated, out of 56 that have been reported. The operation has been successful, and the only alternative to it, where this is impossible, is gastrostomy. In favorable cases after the removal of the pouch, the esophagus should be immediately sutured and the external wound, if closed, should be reopened on the first indication of infection. As a rule it is better to employ temporary wick drainage. Girard's method of invaginating the diverticulum, so that its internal surface projects into the esophagus, is mentioned, and he says that he has been successful with it in his practice, he, however, does not believe that it is advisable since it must produce more or less obstruction, and one that would seem more dangerous than the opening of the tube. The pathology and etiology are described, and while these pouches are called pressure diverticula, a constriction of the esophagus has not been observed in the cases reported, and so far as known, no recurrence has taken place after the excision.

45. Post-Diphtheritic Stenosis of the Larynx.—According to Rogers, the most common cause of post-diphtheritic stenosis, necessitating long-continued intubation, is a hypertrophy of the subglottic tissues, accompanied by a chronic in-

inflammation. Intubation is not the cause, as it occurs without the operation, and less often there is an ulceration and subsequently a formation of cicatricial tissue and contraction. This can not be credited to the intubation as a rule, but it may follow tracheotomy. The frequency of the post-diphtheritic stenosis is, according to Dillon Brown, about 1 in 75 or 100 cases. Others have met it less frequently, and a reasonable estimate of the average in hospital experience would seem to be about 1 per cent.

46. **Surgery of the Stomach.**—Delatour reports several cases of gastrotomy and gastroenterostomy, and one of gastrectomy in which a patient lived twenty-one months and gave birth to a living child.

47. **Ligation of the Subclavian Artery.**—Halsted reports a successful ligation of the first portion of the subclavian artery for aneurysm of the third portion. The operation was complicated by the anomalous position of the subclavian vein, lying along the artery throughout its whole course, and the right subclavian seemed to start directly from the arch of the aorta. He attempted to perform the operation without resection of the clavicle, but believes that doing so would be generally advisable, as in his case he had to make a resection before he finished. This is, he thinks, the second case on record where the patient survived the operation; and so far there has been no appearance of the radial pulse since operation was performed. 52.—See abstract in THE JOURNAL of May 13, 1899, p. 1053.

53.—*Ibid.*, April 28, p. 1070.

54. **Eye Defects.**—Huizinga calls attention to the need of watchfulness and treatment for conditions of visual defect that are very often neglected; and warns especially against consulting opticians instead of ophthalmologists for the remedy of these conditions.

55. **Albuminuria.**—The conditions in which albumin is present in the urine are pointed out by Kennedy: nephritis in its different forms, the functional albuminuria which occurs in the lithemic and hemoglobinuric forms and the neurotic type. He mentions last the extrarenal albuminuria, accompanying disturbances in the urinary organs, and cystitis, that may also be due to oxaluria.

56. **Malaria.**—The technique of examination for malarial parasites is described by Woldert, and the products which may lead to error in the diagnosis are mentioned. They are: the refractive bodies seen in the red corpuscles, the karyokinetic figures of the leucocytes, and the vacuoles and products of blood disintegration.

57. **The Electrocautery in Nose and Throat Diseases.**—Dabney has found the electrocautery useful in broad hypertrophies over the turbinated bones, with erection of the turbinated tissue, and in cases where there is loss of tone of the vasoconstrictors of the blood-vessels of that region. He rarely uses it on the septum, as only two conditions ever call for it; one a marked thickening of the so-called tubercle of the septum, where two or three linear cauteries have been useful; and the other frequent hemorrhages from erosion of the lower anterior part, not attributable to other disturbances of the circulation. He thinks, however, that it is less valuable in this condition than is claimed. In the throat, the conditions most helped by the electrocautery are the deep-seated follicular tonsil inflammation, the so-called "granular sore throat," necrosis of the fauces, and enlargement of the veins at the base of the tongue, and the so-called "lingual tonsil."

58. **Pancreatic Digestion.**—Rachford's paper is a study in comparative anatomy, showing the peculiarities of the bile and pancreatic openings into the small intestine in carnivorous and herbivorous animals, respectively. He thinks that the physiologic inference is that fats and proteids require a retarding in their passage through the duodenum, in order that they may be acted on by the bile and the pancreatic juice before they reach the alkaline succus entericus of the jejunum and ileum. This physiologic inference from anatomic facts is supported by laboratory experiments that have been previously published.

61.—This paper appeared elsewhere: see abstract in THE JOURNAL of April 21, ¶ 81, p. 991.

66. **Hyperkeratosis Lingualis.**—This condition, according to Goodale, consists histologically in a papillary enlargement and a small round-celled infiltration of the corium, together with protoplasmic reticulation, nuclear degeneration, and excessive keratin formation in the epithelium; the latter on its superior surface being prolonged upward to form filamentous processes, containing peculiar refractile pigmented granules, with which a characteristic bacterium stands in intimate association. It is of interest to note that the hypertrophy affects all layers of the mucous membrane and reaches its greatest development in the posterior and central portion of the dorsum. The condition appears to be primarily of the nature of a chronic inflammation with secondary alterations in the epithelial cells.

67. **Cysts of the External Auditory Canal.**—Somers describes a case where one of these cysts was removed. They originate: as retention cysts of the existing glands; or by the independent formation in the tissues, through softening and liquefactive changes, the material so produced compressing the cells in the immediate vicinity, and these undergoing changes, ultimately forming the cyst wall. Or they may be produced by collection of fluid between connective-tissue cells, these areas forming into one large cavity and the surrounding tissues combining into a retaining wall. Still another way is by the formation of the fibrous tissue wall around a foreign body. They are almost always located at the junction of the cartilaginous with the osseous canal, where the glands abound.

68. **Suprarenal Extract.**—Bates concludes, from six years' experience with suprarenal extract, that it is a powerful and unobjectionable astringent, but that it does not mix with other substances and must be prepared fresh whenever needed. In nose and throat disease other remedies should also be employed. He thinks that its being a natural secretion of the body prevents its causing physiologic disturbance, and that we have no other substance that can take its place.

75. **The Chemistry of Cow's Milk.**—This paper gives a careful comparison of human and cow's milk and the author's method of preparing infant food from the latter. He siphons from the bottom of a bottle of fresh milk, three-fourths of its contents into an ordinary double boiler, and adds 1½ teaspoonfuls of essence of pepsin, then warms slowly to blood heat and keeps it there until thoroughly curdled; then heats with constant stirring, until the temperature of 155 F. is reached, strains while hot, and dissolves in the whey a heaping teaspoonful of sugar of milk and the white of one egg. When this is cold he pours the sweetened whey back into the milk bottle and mixes it thoroughly with cream and top milk, and then pasteurizes the mixture. If this is found too laxative the quantity of milk sugar should be reduced. He has found this method a good one in most cases, and for the home modification of cow's milk for infants it is freely recommended.

76. **Hemorrhoids.**—Campbell operates for hemorrhoids by gradually dilating the anus and irrigating by the bichlorid solution. He then pulls the hemorrhoid out with forceps, severs the lower attachment with blunt-pointed scissors, and dissects it up from its submucous attachment until it is attached by a small pedicle containing the vessels. This is ligated with fine catgut and the hemorrhoid cut away. The operation is completed by suturing the incised edges with catgut and inserting a piece of iodoform gauze for drainage, with a sterilized gauze pad applied and retained by a T-bandage. The third day the bowels are opened by a suitable aperient, and this is continued as long as necessary. The patient sits up on the tenth day and is about on the fourteenth. He has found this uniformly satisfactory in twenty-five cases where he has used it. It does not produce the contused wounds and charred surface which are results of the ligature and cautery operations, and leaves a clean sutured out and the rectal surface as complete and perfect as ever.

77.—See abstract in our Therapeutics Department this week.

80. **Hot Bath in Abdominal Diagnosis.**—The methods of inspection in abdominal examination are more or less interfered with by the rigidity of the abdominal wall, or sometimes

simply by its thickness. In such cases the patient is often anesthetized for the purpose of completely relaxing the tissues. Deck calls attention to a method that is not only safer, but truly superior to anesthesia for this purpose, which is simply immersing the patient in a hot bath. Its advantages are less risk, less disagreeableness, and complete control of the patient's respiration, thus calling into play the powerful action of the diaphragm. The only difficulty is that it requires a bath-tub and a large quantity of hot water; and that in cold weather the patient needs a gradual cooling before going out of doors. The bath-tub should be long enough for the patient to lie almost flat, or at least with his knees drawn up. The temperature should be gradually raised from 100 to 110 F., or even a little higher.

81. **Intraligamentous Growths.**—Hawkins describes these growths and reports eleven cases.

85. **The Longitudinal Wire Suture.**—The advantages of this method of suturing the opening in the radical operation for hernia are given by Harris, as follows: it can be easily and certainly sterilized, is of non-glyseroseous character, maintains an accurate coaptation of the edges without constricting the tissue within its grasp, and is easily removed after its functions have ceased. The wire is threaded to a curved, round, non-cutting needle and introduced along the edges of the structure. The first enters the skin about 1 to 2 cm. from the inner angle of the incision and passes directly down to the inner edge of Poupart's ligament. The needle takes a grasp of this structure not to exceed 1 cm. in length in a longitudinal direction, but so as to cross some of its fibers. It then enters the conjoined tendon and the inner edge of Poupart's ligament, thus going from side to side until the entire length is traversed. It then penetrates the external oblique and skin and comes to the surface 1 to 2 cm. from the outer angle of the incision. This is not an over-and-over stitch, for when the wire is pulled tight it is perfectly straight. Each grasp of the needle should be about 1 cm. in length and no kinks should occur in the wire. When there is considerable space external to the cord, caused by early divergence of the muscles from the ligament, it is advisable to take one or more grasps of the suture external to the cord. A sufficient opening should be left to permit the passage of the cord without obstruction. The first wire having been introduced, the cord, which has been held to one side, is now restored to its normal position. The second wire taking the edges of the divided external oblique passes from without inward, closing the wound over the cord, leaving but an opening for it to pass into the scrotum. The cutaneous edges are now closed by a third wire, and the operation is finished. The ends of the wire, which are left long, are folded over pads of gauze, and a strip of adhesive plaster crosses over each end of these, fixing them to the body so that they can not slip and draw out. Sterilized gauze dressing is then applied. This operation is applicable to a large proportion of cases of inguinal hernia, and the size is immaterial so long as we have firm tendon and structures.

95. **Chorea.**—Punton notes our lack of knowledge in the pathology of chorea and discredits the general belief of its necessary connection with rheumatism or endocarditis. Heart disease is more often found as a sequel than a cause, and he thinks that the disease is more important than it is generally considered, and believes that rest and arsenic are practically the best and most reliable remedies, used together with a general tonic treatment and attention to details.

97. **Pulmonary Complications of Typhoid Fever.**—Edson discusses the possibility of pulmonary disorders occurring with typhoid, and illustrates them by cases. He says that pneumonia is most frequent and may be a pure typhoid infection, and gives the points of diagnosis between such and the complicating pneumococcal disorders. The initial chill in typhoid is not so marked, there is less pain, dyspnea and cough, and if the sputum is not rusty the suspicion of typhoid is increased. Early diarrhea and enlarging of the spleen are in favor of typhoid, but only the trained judgment can make a perfect diagnosis before the rose spots appear or the Widal reaction is present. Other pulmonary disorders that may complicate ty-

phoid are pleurisy, abscess, tuberculosis and catarrhal pneumonia, which is usually an avoidable complication.

98. **Climate and Treatment.**—Denison argues for the importance of climate in the treatment of tuberculosis, and thinks that it should stand first in the remedies to be used. Next to this he values outdoor life and exercise, then good feeding, medical supervision, inhalations, local medication, surgical interference, and special medication based on antitoxin treatment. However, in lasting results there is no single agency equal to suitable change of climate.

99. **Acute Coryza.**—The prevention of catarrhal disorders, according to Black, is best done by recognizing the fact that the skin is the natural covering of the body; and that we should not keep air away from it. He does not mean that we should go nude, but that the clothing should be such as will admit of a free passage of air to the skin. Underwear should be worn for only sanitary reasons and not for warmth. Wool should not be worn next the skin, but only for outer garments, while the material used for underwear should be linen, very loosely woven. The other clothing should be little heavier in winter than in summer, and when out of doors the overcoat should be in proportion to the severity of the weather. He claims he has put these theories into practice for five years with good results.

107. **The Therapeutic Use of Yeast.**—In 1899, T. Landau reported cases of leucorrhoea treated with local applications of yeast, and Mitchell has followed up the method and gives an account of eight cases thus treated. The summary does not show the brilliant results obtained by Landau, but justifies continuing the trial of this method. Of the eight cases, only one was entirely unaffected and that was of syphilis and the discharge not of local origin. No unpleasant after-effects were noticed.

119. **Post-Febrile Insanities.**—Bauduy finds, from an analysis of the symptoms and literature, that in the etiology of post-febrile insanity we have heredity causing unstable nervous equilibrium; disorders of the nerve centers themselves, of which fever is often only a symptom; anemia, the result of febrile processes or excessive and prolonged temperature elevation causing irritable weakness; toxic perturbation of the nervous nutrition by the retaining of waste matter causing blood changes, and, lastly, microbial invasions of the nerve centers producing a caecetic condition of these organisms.

120. **The Fetal Theory of Eclampsia.**—Von der Hoeven supports the theory that the blood poisoning in fetal eclampsia is largely due to the toxins from the fetus. This would explain the fact of its greater frequency in the case of twins, and the other peculiarities of eclampsia in primiparae. The intoxication of the child is often overlooked because of the special attention given to the mother, and the coma of the infant is mistaken for quiet sleep.

121.—This paper appeared elsewhere: see abstract in THE JOURNAL of April 7, ¶ 1, p. 863; also of April 14, title 125, p. 925.

123. **Nervous Prostration.**—Raney reiterates his well-known views in regard to eye-strain as a cause of headache and other nervous symptoms, especially those that go under the name of nervous prostration.

124. **The Missile and the Weapon.**—This article is a medico-legal study of bullets and firearms. The author shows the peculiarities of bullets as affected by the arms through which they are sent, and also the facts that can be learned from inspection of the weapon itself.

130. **Hemoglobin Estimate.**—Tallquist describes a method which is mentioned in the eighth volume of "Nothnagel's Handbuch," and that consists in placing a drop of blood on a piece of filter-paper and letting it spread there, judging of the amount of hemoglobin from the strength of the color. He has made a scale which is illustrated here in this article. It consists of ten different colors with regular interspaces to about 10 degrees, each according to the hemometer; the strongest color corresponds to the normal blood, the lightest to that caused by pernicious anemia. The blood is obtained in the usual way, by pricking a clean finger, and the drop must

amount to enough to make the stain on the filter-paper show a 5 or 6 mm. diameter; it must spread equally and slowly and the examination must be made by direct light so that the comparison can be immediately after the stain has lost its humid gloss. It is necessary to make the examination by daylight, and the paper must be perfectly white and smooth, corresponding in thickness to about fifty-five leaves to 1 c.c. Tallquist notices the fact that in specimens of pernicious anemia of a high degree the color spot on the paper will appear surrounded by an uncolored or slightly colored ring. This occurs only when the number of blood-corpuscles has gone down to about half what is normal.

132. **Pernicious Anemia.**—Ball discusses the general subject of pernicious anemia, and mentions especially the ignorance of all authorities in regard to its etiology. In its beginning it is hard to recognize, for the blood condition is not marked until the anemia is considerably advanced. The prognosis should be extremely cautious; the morbid anatomy is not characteristic. The best treatment seems to be the use of increasing doses of arsenic, rest in bed, systematic feeding, massage for the muscles, and a daily flushing of the colon.

133. **Anesthesia.**—The conclusions deduced by Magaw from experience with over eleven hundred cases of anesthesia and from a study of the subject generally are: 1. Ether kills slowly, giving plenty of warning, while with chloroform there is not given time to say goodbye. 2. If ether is given with plenty of air and the drop method, there are few, if any, bad results. 3. Firmness with a hysterical patient assures the anesthetizer more success in gaining confidence of the patient. 4. An anesthetic is dangerous as long as it is in use. 5. The mortality can be diminished by the careful selection of the anesthetic. 6. The surgeon should make the choice. 7. In most cases where artificial respiration is resorted to, it is usually the fault of the anesthetic or the method used.

148. **Facial Neuralgia.**—Belt recommends the placing of the hand, on the opposite side to that on which the neuralgia occurs, in a basin of hot water as hot as can be borne; and reports several cases of relief with this method.

151.—This article also appears in another journal: see title 35, this week.

FOREIGN.

British Medical Journal, May 5.

Secondary Suture of the Brachial Plexus. WILLIAM THORBURN.—The case reported is one of injury to the brachial plexus, situated in an accessible region of the neck external to the scalenus medius, the motor fibers above that level intact, those below it paralyzed and sensory fibers all paralyzed. The plexus was torn across and hopelessly contused in that region, but its roots were not torn away from the spinal cord. The operation was done by opening the posterior triangle of the neck, the clavicle pulled to one side, the main roots of the plexus dissected out of the cicatrix and the peripheral ends, to some extent artificially, separated into five cords which were attached to the higher ends without tension. Four years after the operation there is partial return of motor power, with occasional sensation of heat and cold and at rare intervals pain; sensation exists in the arm, but the localization of touch is defective. The wasting of the muscles still continues to a certain extent, but improvement is even now progressing. The author thinks that it is probably the only case as yet recorded of secondary suturing of the brachial plexus.

The So-called "Stave of Thumb," or Bennett's Fracture. GEORGE THOS. BEATSON.—The author calls attention to the fact that fifteen years ago, E. H. Bennett proved that fracture of the metacarpal bone of the thumb is more common than that of any other of these bones, and that it is not as usually believed, "just above the middle," but is situated at the base of the bone. The fact has not received the recognition that it should and is hardly mentioned in modern text-books. It somewhat simulates a dislocation, and the pain and swelling that accompany it so mask crepitus that the injury is generally regarded as "sprain of the thumb," and the dislocation is serious. He reports a case in which the X-ray revealed the

condition as described by Bennett, which was completely relieved by extending and thoroughly abducting the thumb and then applying a plastic splint to it. The point he calls attention to is that sprain of the thumb should be subjected to Röntgen rays, as otherwise Bennett's fracture is likely to be overlooked.

The Lancet, May 5.

Then and Now; or the Influence of Modern Surgery on Medical Practice. FRED J. SMITH.—After prefacing his remarks with some statements in regard to the possibility of zeal outrunning discretion in modern methods, which he illustrates by some of the prophylactic fads of the day, the author speaks of the progress which has been made in regard to cancer, and sums up by saying that we have gained but little in clinical diagnostic precision, much in scientific knowledge, and most of all in our power to smooth the path to the grave, by means of hypodermic medication and operative relief. In gastric ulcer he believes in operative interference if the hemorrhage reappears after a trial of medicines and remedies, and would urge it on the third repetition or confirmed persistence of hemorrhage. When the diagnosis is uncertain he would insist on rest in bed with "slop" diet, and if on resumption of active life the symptoms recur, he would suggest operation, and on the third recurrence, most strongly urge it. With gall-stones, he thinks an operation is required if there is a large stone, too large to escape by the natural routes, if there is an accumulation of smaller ones causing trouble and if any suppurative has occurred around a stone of any size. The question is to diagnose these conditions. The recurrent attacks of local pain, associated with jaundice or not, almost certainly associated with a gall-bladder large enough at least to be felt, are the strongest evidences of stone too large to pass and of the accumulations of the smaller ones. The symptoms of suppuration in this region are somewhat misleading and the presence or absence of leucocytosis would be of aid. In ascites he believes the proper method is to have the abdomen opened by the surgeon, when purges, diaphoretics, and diuretics have had a fair chance, or when there is no time to use them, owing to the urgency of the case. He thinks this better than tapping and more scientific, and it is far safer for the patient. He has never seen death arise from simple exploratory laparotomy, but peritonitis has occurred from paracentesis. It assists and clears up a doubtful diagnosis, allows removal of removable cause at one sitting and patients who are usually considered incurable have recovered after laparotomy. He thinks these five facts constitute an unanswerable case in favor of laparotomy against canular drainage, at least once in the course of every case. As regards appendicitis, he holds that we must operate instantly in fulminating cases, as soon as we are reasonably certain of pus in less acute ones, and after subsidence of the attack in milder ones. In the treatment of renal troubles, tuberculosis, if not generalized, should be very carefully diagnosed before interfering. We must ascertain by every means in our power which kidney is affected and if the other is sound. He would still advise a month's course of creosote treatment, which in his experience is the only drug method that has any influence on the tuberculous internal lesions. As regards stone in the kidney, when it is once definitely diagnosed, it is our duty to operate as speedily as possible before consecutive changes occur. Bacteriologic examination of the urine, administration of a few small doses of turpentin, and X-ray photographs are the means he mentions for the diagnosis. He does not think much of dietetic and water treatment, and believes a simple exploratory operation is justified in all cases.

Effect of Alcohol on Human Brain. VICTOR HORSLEY.—The author reviews the facts in regard to the influence of alcohol on the brain. The researches on the reaction period by Kraepelin are referred to, and they show that it is a depressant, although there may be a temporary increase of activity. The influence of the drug may be due to loss of cerebellar controlling influence as well as dissolution of the cortical cerebral constituents. The direct effect on the nerve cells themselves

is noticed, and while the action is a chemical one, he shows from the researches of Nissl and others that its effect on them is direct. From a scientific standpoint, he believes that it can not be true that the small doses of alcohol such as people take at meals have practically no deleterious effect. From a scientific standpoint total abstinence must be the course, if we are to follow the plain teachings of truth and common sense. It is the part of the scientist to point this out and the part of the politician to adopt it as a whole.

Vasectomy Relative to Enlarged Prostate and Bladder Atony. REYNALD HARRISON.—The writer sums up his conclusions relative to vasectomy as follows: 1. Vasectomy has been shown to be especially effectual in the earlier stages of prostatic hypertrophy in effecting shrinkage of the gland and the restoration of the natural process of micturition. 2. In cases where there is evidence to show that the prostate has in the course of degeneration assumed the form and structure of a fibrous growth the conditions are such, provided the symptoms of obstruction warrant the adoption of other measures than catheterism, as to render some form of prostatectomy preferable to either vasectomy or castration. 3. Where, as a consequence of sudden or protracted prostatic obstruction, secondary changes have taken place in the bladder itself, in the form of sacs, pouches, or trabeculation, the possibility of restoring its natural function by any means is extremely unlikely. Under such circumstances the induction of shrinkage of the enlarged gland will do good in affording a readier access for the catheter and in removing spasm, pain or hemorrhage connected with this or other similar processes. In a further communication he hopes to illustrate the practice of vasectomy under various conditions.

Bulletin de l'Académie de Médecine (Paris), April 17 and 24.

Diagnosis of Rabies in Dogs. NOCARD.—The lesions described by Van Gehuchten as specific of rabies in dogs (see THE JOURNAL, page 811) have been thoroughly investigated by others and Nocard reports that they were found constantly in dogs dying from rabies. But in animals killed at an early stage of the disease, the lesions were so slight as to be unreliable for the diagnosis. Consequently, when a person has been bitten by a dog in which these lesions are found, the diagnosis of rabies is imperative, but the absence of these lesions, when the animal was killed at once, does not convey any certainty that the animal was not rabid.

Vaccin from Goats. HERVIEUX.—The vaccin derived from cow-pox in the goat possesses approximately all the properties of vaccin from heifers, and Hervieux consequently recommends the goat for this purpose in countries where it is difficult to procure cattle. Tested on 250 soldiers in Kabyle the goat vaccin was successful in 78 per cent.; ordinary cow vaccin in 85 per cent.

Profound and Lasting Analgesia of the Eye with Dionin. A. DARIER.—In Darier's experience with iritis, keratitis, arthritic ulcers, iridocyclitis and episcleritis, accompanied with much pain, the application of ethylmorphin hydrochlorate or dionin, relieved and banished the pain in a few moments. A rapid improvement of the lesions was also noted in most cases. He found it very effective in a case of glaucoma, relieving the pain and improving vision from 1/16 to 1/4 in thirty minutes. He instills a 5 per cent. solution, two or three drops every few minutes until chemosis occurs. It smarts at first and then all pain is relieved. The result was negative in only one case in his experience, and in this no chemosis occurred; the patient was evidently refractory. The action of the dionin is strictly local.

Bulletin de la Soc. Med. des Hop. de Paris, April 5.

General Arsenical Melanoderma. ENRÍQUEZ.—A few instances are on record of a general pigmentation resembling Addison's disease, but less diffuse, appearing in spots and patches while respecting the extremities and face, which followed the prolonged use of Fowler's solution. In an observation described in the *Bulletin* last June, and in another more recent issue, the pigmentation still persists, although less intense, notwithstanding suspension of the arsenic. In the latest case the melanoderma was accompanied by dryness

of the throat and slight conjunctivitis, and the hands and feet assumed a lichenoid appearance.

Further Facts to be Learned with the Methylene Blue Test. F. WIDAL.—The author describes the modifications in the renal permeability of a patient, "more cardiac than Brightic," under the influence of medicinal and hygienic measures. The permeability of the kidneys for potassium iodid, at first subnormal, was restored to normal with milk diet, rest and theobromin. Methylene blue was not eliminated at all at first, but permeability improved until the blue appeared in the urine in an hour. C. Achard and A. Clerc have been studying absorption and the influence of medicines, by means of the blue test on normal subjects and others with interstitial or lead nephritis, who took each morning, fasting, a pill of 5 eg. of methylene blue, for several days. The curves show that the normal subjects eliminated the largest proportion at first, followed by a period during which all eliminated alike, and then elimination ceased in the normal but continued for a while in the rest. The period of elimination varied from forty-seven or fifty hours in the normal to eighty or 186 in the nephritic subjects. The uneliminated blue evidently accumulated in the blood in the latter, at first, until the blood became so concentrated that the same amount of blue passed through the kidney—without any change in its permeability—as passed in normal conditions without the previous accumulation in the blood. This mechanism suggests the need of caution in estimating the condition of renal permeability from elimination of the normal principles of the urine. They may become accumulated in the blood in case of deficient permeability, and then be eliminated in approximately normal amount, even with complete suppression of the functions of one kidney.

Presse Médicale (Paris), April 25 and 28.

Pulmonary Gangrene After Gastroenterostomy. J. L. PEXROT.—Pulmonary or pleural accidents in the course of cancer of the stomach have been noted, and attention has been called to their exceptional frequency after gastroenterostomy. An observation is described in which pulmonary accidents followed a successful gastroenterostomy for commencing cancer of the pylorus accompanying an old gastric ulcer. Bronchopneumonic foci in the right lower lobe first appeared, then adjacent serofibrinous pleurisy, then putrid evolution of the brouchopneumonic foci and perforation of one into the pleural cavity, with sudden, fatal pneumothorax. The writer ascribes this train of accidents to septic emboli from the gastric ulcer, the microbes probably mobilized more or less by the operation. The gangrenous foci had many points of resemblance with pulmonary infarcts: site, shape, etc., and also recalled the gangrenous pulmonary foci of embolic origin noted in the course of otitis of the middle ear in children. Whether microbial infection proceeds by way of the veins or lymphatics the lung is soon reached, and its capillary system arrests the infection and serves as a filter to prevent general septicemia. The accidents in these cases are similar to the pulmonary granula observed sometimes after curetting a peripheral tuberculous focus, but in the former instance, the mobilized microbes are anaerobic saprophytes, microbes of putrid fermentations, such as flourish in old gastric lesions and alimentary stasis. The process described is evidently one of the most important reasons for the high mortality after surgical intervention on the stomach. It also suggests the advisability of thorough lavage of the stomach before operating and the benefits of an exclusive milk diet for a few days beforehand; also the necessity of waiting several days before returning to alimentation through the mouth. Although the peritoneal serosa may be amply cicatrized in forty-eight hours, the gastric mucosa is open to microbial infection.

Technique of Radiography of Fractures. G. CONTRE-MOULINS.—Conditions should be identical and determined beforehand, for radiographic interpretation to be exact and capable of comparison. This result can be obtained by having a perpendicular line from the Crookes' tube always coincide with the center of the plate and pass through the center of the fracture. By this means the misleading effect of the oblique

rays will be abolished and the position of the bones accurately shown. Two radiographs at 90 degrees, one anteroposterior, the other lateral, will thus give accurate information in regard to the fracture, and can be repeated indefinitely with identical results. If impossible to get the member in the perpendicular line, the tube and plate can be slanted, but always retaining the same relative position.

Functions of the Kidney in Chronic Nephritis. LABBE.—Recent research has demonstrated that there is no constant relation between uremia and renal impermeability; impermeable kidneys without uremia have been noted and also uremia with permeable kidneys. Likewise it has been shown that there is no connection between uremia and the toxicity of the blood serum. The cause of uremia, therefore, can not be sought exclusively in toxic retention from renal impermeability. The toxicity of renal extract and the vasoconstrictive properties of renin have been established, and increased diuresis and excretion of urea have been observed to follow the administration of nephrin. Albarran and L. Bernard have noted that double nephrectomy is twice as rapidly fatal as double ligation of the ureters. These facts indicate that the kidney has two functions: an external, the elimination of urine, and an internal, of which little is yet known. The phenomena due to disturbances of the first function, renal impermeability, are toxic accidents, cephalæ, Cheyne-Stokes, disturbances in digestion, redness and dryness of the mouth, vomiting, diarrhea, hiccough, and mechanical cardiovascular accidents characterized at first by arterial hypertension, succeeded by arterial hypotension with asystolic edema. The syndrome dependent on the insufficiency of the internal function of the kidney is characterized by edema and albuminuria, impossible to connect with renal impermeability. The theory of hydremia or loss of the osmotic balance does not explain the production of edema. The combination of these two syndromes constitutes "renal insufficiency." "Uremia" is produced when to this are added infections and functional insufficiency of other organs: liver, heart, lungs. The syndrome of impermeability is seen in the interstitial nephritis of Bright's disease. Parenchymatous nephritis at first presents only the syndrome of insufficiency of the internal function, on which the other syndrome is superposed later. The permeability of the kidney is therefore not the only factor to be taken into account in determining the prognosis of chronic nephritis, the clinical manifestations must supplement it. Another point learned from late research is that toxic medicines can be employed in certain cases of nephritis with permeable kidneys.

Progress Medical (Paris), April 28.

Babinsky's and Schaefer's Signs. H. VERGER.—The value of these signs in the diagnosis of cerebral affections was thoroughly tested at the Bordeaux clinic, with the result that they are found less important than claimed by their authors. Babinsky's sign—extension instead of the usual flexion of the toes on excitation of the sole of the foot in case of hemiplegia—was found quite constant in cases of disturbed function of the pyramidal tract, but it requires extremely delicate maneuvers to produce it satisfactorily and it is too variable from one subject to another and even on the same patient to constitute a symptom of much importance for the diagnosis. Schaefer's sign—extension of the toes instead of flexion, when the Achilles tendon is pinched very hard in case of hemiplegia—was found to have no semeiologic value as an indication of a cerebral lesion.

Semaine Medicale (Paris), April 11, 23 and 28.

Infectious Icterus. A. CHAUFFARD.—The pathologic physiology of a typical case of infectious icterus in a young butcher was made the subject of careful study, and the apparently simple disease with recovery in a month, disclosed complex processes that would have escaped casual observation. First there was incitation and functional hyperactivity of the hepatic cell, then exaltation of its ureogenic power, followed by diuresis induced by the elimination of enormous quantities of urea (146 gms. of urea in 5 liters of urine during the first twenty-four hours after entering the hospital, tenth day of disease), leading to secondary dehydration and hyperdensity of the blood. Knowledge of these conditions imposed treat-

ment to restore to the blood the normal proportion of water it had lost. A liter of artificial serum was injected subcutaneously each day for three days, then per rectum for four days, then one-half the quantity for a day or so, by which time the patient had become hydremic and the artificial serum was suspended. Chauffard asserts that the exact moment of commencing convalescence in acute diseases can be determined by the weight. As soon as the weight ceases to diminish or remains stationary, and commences to increase, convalescence is established.

Vertebral Manifestations of Typhoid Fever.—The four recorded cases of typhoid spondylitis commenced abruptly during convalescence or a few weeks after recovery from typhoid fever, with intense pain and sensitiveness in the lumbar region of the spine, accompanied with fever, great weakness in the lower limbs, and lancinating pains. Knee-jerk was abolished and in one case continence of urine and feces. There was tumefaction in the painful region in two. All recovered. The serum test proved useful in differentiating. If the pains are bearable, rest in bed and sodium salicylate may be effectual, but intense pain requires a plaster cast which relieves at once and arrests the progress of the osteomyelitic process.

Centrablatt f. Chirurgie (Leipzig), April 14.

Head Covering for Aseptic Operations. K. SCHUCHARDT.—A light, springing metal band, 2 cm. wide, fits over the head from the eyebrows to the base of the hair. It has a small plate at each end and a projecting button at the crown of the head. The lower part of the face, including the end of the nose, is then covered with a strip of gauze, 110 by 45 cm. square, the upper corners drawn smooth and buttoned to the button on the metal band. A triangular piece of gauze is then put on the head, one straight edge 150 cm. in length, across the forehead above the eyes, and the two side points tied together behind over the third point. The head, beard and face, except the eyes, are thus completely covered. The gauze never slips out of place, and scarcely interferes with the breathing. The simplicity and security of the contrivance and the ease with which it is put on, impel Schuchardt to recommend it in high terms, insisting that asepsis is not possible when hair and beard are exposed. Surgeons, attendants and nurses in his service all wear this head covering, which is also useful in caring for the sick and in disinfecting rooms.

Deutsche Medicinische Wochenschrift (Leipzig), May 3.

Improvement in Serumtherapy. A. WASSERMANN.—Ehlich has shown that the bactericidal effect of bactericidal immune sera is due to the presence of two distinct substances, one serving to kill the bacteria, and the other serving merely to fasten the former to the bacteria. Each is powerless without the other in proportionate amount. He calls the substance which fastens the bactericidal substance to the bacteria, the "between" or "immune body," while he applies the name of "end body" or "complement" to the directly bactericidal substance, which is probably some kind of a digesting ferment. Buchner gave the name of "alexin" to the bactericidal substance in normal serum to which he has called attention. The "between body" is not found in the normal organism in proportionate quantity. It does not appear in large amounts until evolved during the process of immunization or spontaneous recovery from the infection in question, and this is what constitutes an "immune serum." This analysis shows that two factors are required to cure an infection by means of a bactericidal immune serum: 1, a sufficient amount of the "between body," i. e., of the immune serum, and 2—which is equally important—a sufficient amount of the end body, i. e., of the substance which is fastened by the "between body" to the bactericidal cell and then destroys it. If the amount of either of these substances is less than required, the infection proceeds unmoled. Wassermann states that in all previous serumtherapy only one of these factors, the "between body"—the immune serum—has been taken into account. This was supplied to the infected organism in abundance, but the need for the second, the complementary factor, was overlooked. The only benefit derived was from the co-operation of the abundant "between body" with the small amount of the corresponding

bactericidal end body which it found already present in the organism. When this was used up, the "between body" had no further sphere for its usefulness. Wassermann therefore considers it rational that both "between body" and end body should be supplied in serumtherapy, and he accomplishes this by injecting normal serum simultaneously with the immune serum. His experimental results have brilliantly confirmed the correctness of his premises. He compares the mechanism of the process to interlocking wheels. The "between body" is the intermediary between the end body wheel and the bacteria wheel. Each is useless without the rest, and all are useless unless the interlocking wheels have exactly the requisite number and style of teeth. Or, to use Fischer's simile of a lock and key, certain "between bodies" fit into certain end bodies and into certain bacteria, and not into others. Future research must determine which end bodies are best adapted to co-operate with certain "between bodies" and the kind of infection in which they are most active. It by no means follows that typhus immune serum, from an immunized horse, will co-operate with the end bodies in normal serum from a goat, for instance. The correct complements for given immune sera must be sought which will not only fit the "between body" and the bacteria, but will also escape being bound or destroyed in the infected organism. In his experimental research he found normal serum from beef cattle answered his purpose, and announces the important fact that guinea-pigs injected with three loops of living typhus culture and then injected in a half hour with .5 c.c. of typhus immune serum mixed with 4 c.c. of fresh, normal beef serum, all survived in good health, while control tests with normal serum or immune serum alone all terminated in the death of the animal in twenty-four hours. "The addition of fresh end bodies—the bacteria-destroying substance—derived from normal cattle, immeasurably increases the infection-arresting power of our immune sera, and thus enhances the possibility of curing with them an existing infection in man."

Red Bone-Marrow and Myeloblasts. O. NAEGELI.—The bone-marrow cells without granules are not lymphocytes but specific elements of the bone-marrow, according to the conclusions of Naegeli's research. He suggests the name of myeloblasts for them, as they are undoubtedly the preliminary stages of the myelocytes and possibly also of other marrow elements. They are characterized by the absence of granules and nucleoli, and the reticulated nucleus, which is more strongly basophil than the protoplasm. They vary from the size of a lymphocyte to that of a myelocyte. The smaller have round nuclei, richer in chromatin; the larger, oval nuclei, with more protoplasm. The myeloblasts are the phylogenetic and ontogenetic ancient primitive form of marrow cells. They remain even in the adult, as the preliminary stage of myelocytes. They are involved in the pathology of the bone-marrow, as they appear predominantly in case of pernicious anemia—retrogression of the blood-formation into embryonal conditions, megaloblastic and myeloblastic marrow—of typhus—paralysis of the function of the bone-marrow—and of myelogenic leukemia. They increase to a slight extent in many other diseases, especially in secondary anemia—carcinoma, tuberculosis. The myeloblasts may pass into the blood, and are found numerous in it in cases of myelogenic leukemia.

Report of German Malaria Expedition. R. KOCH.—In concluding this third report Koch states that his tests of prophylactic doses of quinin have shown that an interval of seven days after two "quinin days" is sufficient to prevent relapses. His method of treating malaria is, therefore, to give the patient, when free from fever, usually in the early morning hours, one gram of quinin, repeated every day until the malarial parasites have disappeared from the blood. Then follows a pause of seven days, then two more quinin days, then the seven-day pause and two quinin days, and so on for two months at least. The results have been most excellent. In a few cases gastric disturbances prevented absorption and subcutaneous injections of the quinin were resorted to. The hospital at Stephansort has been almost cleared of patients, but time alone will show whether this is due to his prophylactic

measures or is merely a transient lull. There have been very few new cases, although the weather and work is most favorable for malarial infection, and anopheles abound. He observes that the experience of persons coming from a non-malarial region to live in a malarial is similar to that of the children born in the latter. They all become infected, but after three or four years acquire a sufficient degree of immunity. The Europeans at Stephansort must have all come from non-malarial regions, as none escaped infection, the first attack of fever appearing in three or four weeks after their arrival on the coast. He adds: "the only exceptions to this rule are the two members of the malaria expedition who have remained free from infection to date, undoubtedly owing to their systematic prophylactic use of quinin." He outlines the history of the colony in regard to malaria, as follows: it must have existed among the natives for a long time, possibly brought originally from the Malay archipelago or the Moluccas by traders. The first Europeans who visited the country, and especially the first immigrants, must have paid a heavy tribute to this infection. But gradually the prospects became better as the emigrants became more and more immune. Then the physicians began to report that in consequence of this or that sanitary measure, or increasing agriculture, etc., "malaria is diminishing." But suddenly it breaks out again; not as the reports announce, in consequence of certain meteorologic conditions, but every time when a large number of new and freshly susceptible workmen are imported. They have to acquire, in the same way as the children of the country, their gradually won immunity which enables them to live permanently in a malarial region. The sacrifices may be great in some instances; 125 died out of 273 Chinese brought from Hongkong in 1898, the majority from malaria, and many of the survivors are still under the influence of the infection. Similar catastrophes are liable to occur whenever susceptible persons are brought to the colonies unprotected by prophylactic measures. He concludes by stating that if his assumption is correct, that malaria is restricted to man, then it will prove possible, by exterminating the parasite in man to cut the life thread of malaria, as it were, and accomplish its gradual disappearance. Working toward this end he instituted treatment as above described for every one in whom the malarial parasites were discovered.

Wiener Klinische Wochenschrift, April 10.

Cause of Initiation of Birth Act. J. THENEN.—After reviewing and rejecting all other theories advanced to date, Thenen explains the mechanism of the birth act and the phenomena of pregnancy in general as the specific reaction of the female organism to the stimulus of the living fecundated ovum. This reaction consists, in the uterus, of changes in size, etc., and also in a specific functional behavior, which holds the natural tendency to contraction in check. The placenta reaches its maximum of growth by the thirtieth to thirty-fourth week, and then ceases to grow. The blood with which it is supplied passes first through the fetus, which appropriates its most nourishing elements, and the placenta fails to receive sufficient nourishment and hence degenerates after the thirty-fourth week. As the retrogressive phenomena in the placenta become more and more marked, the close, vital connection between fetus and maternal organism hitherto existing is interfered with. The placenta degenerates more and more, finally the specific stimulus transmitted through it by the ovum ceases to be felt by the uterus, which then returns to its normal physiologic behavior and expels what has become a foreign body, no longer a vital part of itself. Febrile affections, mechanical irritation, etc., induce contractions of the uterus which may hasten the retrogression of the placenta and actual labor pains occur as the vital connection between fetus and uterus becomes severed.

Influence of Alcohol on Reducing Power of Urine. A. GREGOR.—The reducing power of the urine is increased by alcoholic drinks, especially beer, due exclusively to the alcohol contained in them. This increasing reducing power should be credited chiefly to grape-sugar, although all the reducing substances, creatin, etc. are also evidently increased.

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INTRALARYNGEAL INSUFFLATION.

FOR THE RELIEF OF ACUTE SURGICAL PNEUMOTHORAX.
ITS HISTORY AND METHODS WITH A DESCRIPTION
OF THE LATEST DEVICES FOR THIS PURPOSE.

BY RUDOLPH MATAS, M.D.

NEW ORLEANS, LA.

In man, as in the lower animals, the sudden admission of air in the normal pleura, whether this occurs accidentally or as the result of deliberate purpose in the course of operative interventions in the thorax, is a condition always fraught with much danger to the patient and anxiety to the operator.

It is not a small, accidental puncture or aperture communicating with the pleural cavity, permitting the gradual entrance of air and the production of a partial pneumothorax, that is feared, but it is the large openings which allow the rapid and free entrance of air, and that are followed almost invariably by collapse of the lungs, cyanosis and evidences of defective oxygenation and arrested respiration, that have led the surgeons of all times to dread the production of traumatism or surgical pneumothorax as one of the greatest evils in intrathoracic surgery.

The evidence on this subject is so complete that it is almost superfluous to discuss it. Nothing can be added to the experimental evidence which, beginning with the classic researches of Glück, Block, Marcus, Schmidt and Biondi in the early '80s, ended with Murphy's work in 1897, or to the clinical observations which, commencing with Richerand's historic case of resection of a thoraco-parietal tumor in 1818, have accumulated in such numbers that a mere list of the contributions referring to this grave accident would make up a large-sized volume.

It was the fear of pulmonary collapse that led Diefenbach, with all his temerity and daring, to command that in operating on thoraco-parietal neoplasms the surgeon "should halt at the pleura," and Stromeyer, Albert, Heinecke, and Bardeleben were scarcely less emphatic. Roser recommended long meditation before undertaking the removal of any tumor of the chest that might involve the pleural serosa. Billroth himself, in 1857, for the same reason declared that he was not in favor of the extirpation of tumors involving the thoracic parietes. Subsequent events have shown that while great progress has been accomplished by a better appreciation and control of septic conditions and the improvements in the technique of anesthesia and hemostasis, and better results have been obtained for this reason alone, the dangers from pneumothorax have remained until quite recently an unchanged factor in the mortality.

Whatever the essential causes of the asphyxia caused

by acute traumatic pneumothorax, they are always associated with the sudden, free, large opening of the normal pleura, and with the interference of the pulmonary respiration induced by the collapse of the lung; while the phenomena vary in intensity according to individual conditions, and in some few cases are so slight that they can be disregarded, it is the duty of every surgeon, whenever he is about to undertake an operation on the chest or neighboring regions which might involve the pleura, to assume that pneumothorax is inevitable, and that he must be prepared to prevent or meet its evil consequences.

It is the risk of acute pneumothorax that has led surgeons like Krause and Tuffier to advise the detachment of the pleura to facilitate the extrapleural exploration of the lung, just as detachment of the peritoneum to facilitate the *extraperitoneal* exploration of the abdominal cavity was advised at a time when the risk of peritonitis was more seriously feared than now. Notwithstanding Tuffier's brilliant and unique success with this method, which in 1894 permitted him not only to explore but to extirpate a tuberculous apex, the procedure is, as a rule, impracticable, and has not been repeated. The fear of shock and the interference with respiratory functions will prevent the general adoption of Bazy's method of direct intrapleural exploration which that surgeon was the first to practice with success in 1895.

Bazy makes an incision in the intercostal space just long enough to admit the index finger into the pleura, being careful to plug the wound with the finger while exploring. H. Delagenière, with less regard for the dangers of pneumothorax, would open the pleura freely for exploratory purposes, trusting to his ability to quickly seize the retreating lung and suture it to the wound to prevent complete atelectasis. Poirier, Lejars, Ricard, Monod and others have adopted Bazy's procedure, but with varied results. The advantages of free and direct *intrapleural* exploration of the lungs to determine the existence or non-existence of adhesions, to localize lesions of the lungs and other intrathoracic organs, and to determine their operability, are too obvious to be insisted upon; but such a procedure, no matter how carefully or aseptically conducted, is fraught with risk, and will never appear to the general surgeon in the same light that he now regards exploratory laparotomy. *Until the danger of seriously interfering with the respiratory functions, by inducing acute collapse of the lungs, is clearly eliminated or is reduced to a safe minimum, the analogy between the pleura and the peritoneum from the surgical point of view will never exist.*

The methods that have been tried to counteract the disastrous effects of acute pneumothorax in the course of operations in the chest are, with few exceptions, more the results of instinct and empirical experience than of a clear understanding of the physiologic con-

*Read at the meeting of the Southern Surgical and Gynecological Association, held at New Orleans, November, 1899.

ditions that are at fault. The dominant idea thus far has been to act in such a way as to prevent the further encroachment of air on the crippled lung rather than to restore respiratory function by inflating the collapsed lung directly. From the days of Richerand, and long before him, as shown by chronicles of the medieval surgeons, by the evidence furnished in the old *Chirurgie* of Guy de Chauliac and of Maître Ambroise Paré in penetrating wounds of the chest, the first step taken by the operator was to immediately seal the opening, a practice which, in spite of the many vicissitudes which it has undergone, is still recognized as efficient in producing some measure of relief. Sealing the wound has been found to do good in all cases, but in many the relief experienced by this means is only partial, as e. g., in Doyen's case of thoracic resection for neoplasm, in which the final relief to the dyspnea was obtained only after the air contained in the pleura had been removed by aspiration. I could also quote one of my own experiences in which I explored a wounded pericardium and lung through a large trap-door opening and yet obtained no marked relief to the pneumothorax after the external wound had been sealed completely. In other instances relief has been obtained by seizing the retreating lung and suturing it to the parietal opening which is plugged by it—Pean, Roux, Delangenière, Bayer, Murphy, Parham, etc. This practice is sound and undoubtedly efficient, but it is only available after the shock of the primary collapse of the lung and partial asphyxia has added materially to the dangers of the operation; it is certainly not a preventive of atelectasis, and this is surely a greater desideratum than the relief of this condition when it has actually occurred. The procedure adopted by Lawson, who prepared a tuberculous lung for pneumectomy by the preliminary injection of sterilized air into the pleura, while certainly successful in his case, is not available in the majority of traumatic and acute conditions in which the maintenance of the respiratory function of the lung, and not its permanent suppression, is essential for the welfare of the patient. Neither is Witzel's suggestion to inject water so as to produce an artificial hydrothorax; nor Murphy's plan of injecting nitrogen gas an available method in acute cases, since by all of these procedures the ideal—viz., the maintenance of the lung function—is not considered. Dr. Murphy's latest suggestion to steady the mediastinal septum by placing a long forceps on the hilum of the collapsed lung, or by pulling and drawing it out to the external wound, is consistent with his theory of the cause of acute pneumothorax, and is, no doubt, valuable, but it is not a satisfactory solution of the problem, since it only relieves the pneumothorax *after* the initial shock of acute pulmonary suppression has been sustained.

The artificial or preliminary production of adhesions to obliterate the pleura, and thus obviate the dangers of atelectasis as well as of sepsis, is clearly of little avail to the surgeon who is dealing with acute conditions, or is seeking a means of diagnostic exploration. Adhesions are really serviceable only after the necessary diagnostic explorations and manipulations have been accomplished. The production of adhesions will always remain our sheet-anchor in dealing with circumscribed septic conditions in which the dangers of contamination—as in evacuating pulmonary abscesses, tuberculous vomica, gangrenous foci, draining cysts, etc.—are to be avoided; but when our aim is to explore the lung for the localization of these lesions, when we seek to remove foreign bodies from the bronchi or

esophagus, or when we are exploring the wounded pericardium, lung or diaphragm, or when we would extirpate thoracic, mediastinal and other neoplasms, the ideal is to maintain the respiratory function uninterrupted until the operation is completed, after which the artificial production of adhesions will find its legitimate sphere of application.

Therefore, while recognizing the greater or less value of all the suggestions hitherto made to prevent pneumothorax, and to relieve it when it exists, it is still evident that the ideal indication—viz., to maintain the respiratory function of the lung in the course of intrathoracic operations—can only be successfully met by a method of direct rhythmical insufflation of the lungs through the larynx or trachea which will neutralize the collapsing effect of atmospheric pressure by increasing the intrapulmonary tension.

The procedure that is most effective in realizing this great desideratum—viz., the prophylaxis of pneumothorax—is the artificial inflation of the lungs and the rhythmical maintenance of artificial respiration by a tube inserted in the glottis directly connected with the bellows or an air-pump. Like other discoveries, it is not only elementary in its simplicity, but the fundamental ideas involved in this suggestion have been lying idle before the eyes of the profession for years in spite of the accumulated evidence of its utility in other non-surgical conditions.

While the suggestion of insufflating the lungs for the maintenance of the pulmonary function in thoracic operations is an essentially modern and very recent conception, it is a new idea only in so far as its application to thoracic surgery is concerned. In principle it is a very old one, as is shown by a glance at the history of its therapeutic application.

If we investigate the subject we find the germinal ideas that have inspired its application in lung surgery in at least three different directions: 1, insufflation as an aid in the resuscitation of persons dying, or apparently dead, from drowning or suffocation; 2, insufflation in pediatric and obstetric practice—to restore asphyxiated infants; and, finally, 3, intubation of the larynx for the relief of asphyxia in cases of acute and chronic laryngeal stenosis, more especially in the obstructive laryngitis of diphtheria. In all of these conditions medical history shows that even in the earlier times intrapulmonary insufflation for surgical purposes had been clearly anticipated by various appliances intended to arouse and maintain the activity of the pulmonary function.

INSUFFLATION AS AN AID IN RESUSCITATION OF PERSONS DYING, OR APPARENTLY DEAD, FROM DROWNING OR SUFFOCATION.

It would be embarrassing to state when insufflation for asphyxia was first suggested or practiced, but it is evident that the importance of respiration and the fatal consequences of its prolonged suspension must have been empirically appreciated by the most primitive and ancient peoples. According to Depaul, the first written references to insufflation are to be found in the Holy Scriptures. But, without retracing our steps so far back into the shadows of the past, we find, according to the same authority, that Paracelsus (1493—1541) made use of a bellows which he connected with a tube that led to the mouth of asphyxiated persons. Panarolus at a later date employed the same means to restore persons suffocated with charcoal fumes. Monroe, of Edinburgh, made use of a large bellows with which he insufflated air into the larynx through the pharynx. Sub-

sequently the advent of experimental medicine and the study of the physiology of respiration stimulated the ingenuity of laboratory workers, and a great number of machines, pumps and bellows were devised to study the respiration by artificial insufflation with a canula inserted in the trachea.

The medical men of the latter part of the eighteenth century and those of the first half of the present century were especially active in inventing insufflating appliances. These were not only applied to animals in laboratories, but to human beings. The "emergency chests," "first-aid" outfits and the "boîte de secours" which were supplied to police surgeons and life-saving stations on the coasts of England, France and the Continent were not considered complete without some form of air-pump or apparatus for intra-oral, nasal or pharyngeal insufflation.

The list of special appliances designed to accomplish the last two procedures would make up a formidable catalogue, but to quote those more generally known we would mention William Hunter's and Monroe's instruments in England, who used bellows with intralaryngeal tubes. Desgranges, of Lyons (1786) was the author of a pump which he called the "pyulque." Hans Courtois, of Tournay, in 1789, invented a double pump which alternately injected and aspirated air into the lungs through a tracheotomy canula. To avoid the complicating operation of tracheotomy, Fine, of Geneva (1800), devised a special intralaryngeal tube made of leather, which he inserted through the nose. Pia and Garcy used long gun-elastic tubes or laryngeal catheters, which were loosely fitted into the nose or into the larynx through the glottis. The experiments of Goodwyn (1788) contributed considerably toward the general adoption on the Continent of an English pump devised by Nooth. The intralaryngeal canula of James Curry (1791) was also well known. It was simpler than Courtois' machine, and could be used either in the nose, larynx or trachea. John Murray modified this appliance so that it would inject warm air. Cap, of Lyons (1828), also described an intubating-tube attached to a pump. Lecat, Louis, Tissot, Reamur, Fontana, Marc, A. Portal, in France; Johnson, in England; and Troja, in Italy, were strong advocates of insufflation of the lungs for asphyxia, believing this the best method to restore the victims of asphyxia from no matter what cause.

Renewed attention was excited in the question in 1829, when Leroy (D'Étiolles), in a memoir addressed to the French Academy of Sciences, declared that if at that time (1829) the number of persons saved from drowning had perceptibly diminished since the earlier days of Pia (1774), it was due to the indiscriminate application of insufflation of air into the lungs, which was then the common practice. He based his opinions on numerous experiments which he performed on rabbits, foxes, goats and sheep, in which deaths had occurred with alarming frequency as a result of the sudden and forcible insufflation of air into the trachea. Other animals, such as dogs, had resisted this sudden insufflation, but had only suffered from bad symptoms for a number of days.

The French Academy appointed a special committee, consisting of Dumeril and the celebrated physiologist Magendie, who confirmed Le Roy's observations, and extended his experiments to the dead bodies of newborn infants and adult human cadavers. These observations showed that the sudden, violent injection of air into the lungs might lead to acute emphysema, rup-

ture of the smaller bronchi and laceration of the lungs, with the production of acute pneumothorax and secondary collapse of the organs. The general conclusions arrived at by the committee were that, while gentle insufflation was not dangerous, there was decided danger in the practice when this was intrusted to inexperienced or unskilled hands. Notwithstanding the opposition of Marc, Albert (of Wiesenthal), Piorry and others, Le Roy's report produced a lasting impression, which was decidedly unfavorable to the further advance of the practice of insufflation and contributed largely to its decline, until 1845, when a new movement was vigorously started in its favor through the exertions of Dr. Depaul, the learned professor of obstetrics at the Faculté.

INTUBATION OF THE LARYNX AND INSUFFLATION OF THE LUNGS IN PEDIATRIC AND OBSTETRIC PRACTICE.

With Depaul's advocacy of intralaryngeal insufflation in asphyxiated infants began a new and fruitful epoch in the history of insufflation. In his monumental memoir, "Sur l'insufflation de l'air dans les voies aériennes chez les enfants qui naissent dans un état de mort apparente" (*Journal de Chirurgie*, 1845), he reviewed, in a masterly, exact and thorough manner, all the experimental and clinical evidence on the value of pulmonary insufflation in all its phases. He concentrated his chief effort, however, in the study of the treatment of the asphyxia of the new-born. He demonstrated that all the arguments against insufflation were idle and were based on erroneous conclusions, and proved, by numerous illustrations drawn from his vast

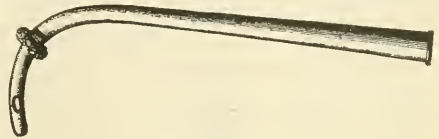


FIG. 1.

The original Chaussier tube for intubation of the larynx and insufflation of air in asphyxia neonatorum. The broad end of the tube is used for direct mouth insufflation. (From Depaul's article in the "Dictionnaire Encyclopédique," vol. xliii, 13th series, p. 601.)

and unlimited experience, that it was a precious and most reliable method of resuscitation in such cases. He revived the old intralaryngeal tube of Chaussier, his predecessor at the Maternité, and established the latter's claims as the real founder of the method of insufflation in infants. (Vide Chaussier's "Considerations sur les secours aux enfants qui naissent dans un état de mort apparente," Procès-verbal de la distribution de Prix faite à la Maternité, 26 Juin, 1806.) Depaul slightly modified the Chaussier tube, and made it a permanent part of the obstetrician's outfit in his time. He demonstrated, among other things, that the insufflation of air into the trachea was equally as effective in expanding the lungs of the fetus that had never breathed as in restoring the breathing of the infant that had already partially inhaled air.

His instrument, the Chaussier-Depaul tube, was shaped somewhat like a curved, hollow, conical urethral catheter with rounded end, and was provided with a flanged neck or guard which limited its penetration into the trachea. The long, extraoral extremity was provided with a mouthpiece, to which the operator's lips were applied, and through which he blew directly into the infant's trachea. (Fig. 1.)

The Chaussier tube found a strong advocate in the distinguished Madame Lachapelle, who relied upon it

largely in her practice. But other writers, such as Meunier and Noel, of Strassburg, Lobstein and Flamant, rejected it because of the alleged difficulties encountered in its introduction.

Depaul's persistency, however, overcame all objections made against insufflation, and new impetus was given the subject by those who busied themselves in modifying or improving his simple but effective canula. Among the numerous inventions that followed after Depaul's memoir of 1845, the "*aerophore pulmonaire*," which Dr. Gairal presented to the Academy in November, 1879, deserves special mention in this connection. It consisted in a long intubating canula provided with a short laryngeal curve which he had attached to a compressible rubber bag, very much like the modern Politzer bag. The canula entered the glottis, and air was supplied by this rubber bulb. It differed practically from the Chaussier tube only in the addition of the rubber bulb, which took the place of the operator's lungs. (Fig. 2.)

In 1877, Pros, of la Rochelle, added a new but impracticable laryngeal insufflator, which was provided with a tongue-depressor and an epiglottic elevator combined. This was probably never used by anyone except its originator.



FIG. 2.

Gairal's aerophore for intraglottic intubation, with detachable rubber bulb for direct insufflation of air in asphyxia neonatorum. (From Depaul's article in the "*Dictionnaire Encyclopédique*," vol. xliii., 13th series.)

In 1877, Ribemont described a new tube which differed from the old Chaussier canula in its curve. This curve was based upon an anatomic study of the parts, and had attached to it an air-pump. Its intralaryngeal end resembles and closely suggests the present form of O'Dwyer's intubating canulas. Like Gairal, he adapted a detachable bulb to the handle of the intralaryngeal tube. The compression of the bulb was graduated by certain marks according to the quantity that it was desired to insufflate with each compression of the hand. (Fig. 3.) Other modifications in the insufflating apparatus were introduced by manufacturers. One of these consisted in a double or compound bellows which simultaneously aspirated the vitiated air and injected fresh, pure air, just as Doyen has done recently with his modern and ingenious apparatus.

Depaul objects to all the modifications of his tube and to all insufflating appliances as unnecessary complications. He says that at least in new-born infants the elastic recoil of the chest and lungs is amply suffi-

cient to expel all the vitiated air during the full expiration that follows a forced inspiration. A little experience and practice in inflating the lungs by the direct expiratory efforts of the operator will furnish an infinitely safer and more satisfactory insufflator than any mechanical inflator, since the operator is better able to appreciate the resistance of the lungs to the intrabronchial pressure. In this way the degree of inflation is thoroughly adjusted to the chest capacity. While this is no doubt true, it is nevertheless possible to obtain equally excellent results with a small bulb or bellows of 100 to 200 c.c. capacity, and in view of the greater convenience of this method to the operator, it must be regarded as an advantageous modification. In this connection I am much pleased to direct attention to the



FIG. 3.

Ribemont's intubating canula for direct insufflation of air in asphyxia neonatorum. (From Depaul's article in the "*Dictionnaire Encyclopédique*," vol. xliii., 13th series.)

fact that one of our Fellows, Dr. J. D. Bloom, the able surgeon in charge of the Charity Hospital of this city, has recently adapted the intralaryngeal canula of the O'Dwyer apparatus to the needs of pulmonary insufflation in asphyxia neonatorum. (Fig. 4.)

His apparatus is furnished with a rubber bulb or bag, which reminds one of the Gairal and Ribemont instruments. The conical and graduated forms of the O'Dwyer tips make them fit easily into the glottis and render the instrument one of the most useful yet devised. The facility with which the O'Dwyer canula is applied, especially in the new-born infant, will, I trust, tend to popularize and revive the practice of intralaryngeal insufflation in this frequent and fatal condition, since it is by far the most direct and effective method

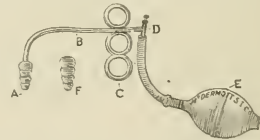


FIG. 4.

Dr. J. D. Bloom's adaptation of the O'Dwyer intubating canula for intraglottic insufflation in the treatment of asphyxia neonatorum. The rings (C) are used as a handle to steady the intraglottic canula, and are constructed exactly as in the original O'Dwyer tube. The bulb (E) is a Davidson syringe rubber bulb with a valve at its free end to permit the entrance of air.

of expanding the lungs and inducing artificial respiration. It is far superior, I am convinced, to Laborde's rhythmic traction of the tongue, Schultze's, Sylvester's, Hall's, Daniel's, and other indirect methods that are at present in vogue in obstetric practice.

In a rather hasty review of the literature of artificial respiration and the various mechanical appliances that have been invented for this purpose in the course of the present century—a literature which is adequately represented by the large collection in the surgeon-general's library at Washington—I have been struck by the close similarity, in principle at least, of two American inventions suggested and described independently and at a long interval of each other. The first is the apparatus described by Dr. Truehead, of Galveston, Texas, in 1869. (*Ein Apparat Zur Kunstlichen Respiration bei*

Asphyxia, Mitth. a.d. Sitz-Protok. der Gessellschaft f. Geburtsch. in Berlin, 1869-72, i., 154-156, 2 pl.) This rather complicated appliance was originally intended to insufflate air into the lungs by means of an intubating canula which was inserted into the glottis and larynx. There are at least two sizes of the intralaryngeal pieces, graded to suit the ages of the patients—chiefly newborn infants. The laryngeal piece is pyriform in shape, and is made to conform to the size and outline of the glottic orifice. It fits closely to the larynx, and its conical shape facilitates its tampon action. The mouthpiece is shaped like a curved catheter, and this is connected to a bellows which works on a vertical axis and automatically injects and aspirates air in and out of the trachea in a rhythmical fashion. As a true intubating canula and respiratory machine supplied by a bellows, it clearly anticipates—though it is a far more complicated way—the second American invention, with which we are familiarly acquainted as the Fell-O'Dwyer apparatus. Truehead's description is fully detailed and well illustrated in "Transactions of the Berlin Obstetrical Society" for 1869-72. I have not been able to find any reference to Dr. Truehead's original work in English, and my only source of information is from the paper in the German proceedings. It is certainly worthy of a distinct place in the history of American inventions for the relief of asphyxia neonatorum, and is entitled to precedence over the Fell-O'Dwyer apparatus, as it anticipates in principle almost all the essential characteristics of this latter but more simple appliance. It is curious that, notwithstanding its American origin, we should have been so thoroughly ignorant of its existence in this country, and that we should be compelled to acknowledge our indebtedness for all the information available to German sources.

INTUBATION OF THE LARYNX.

Another source of inspiration which has led to the present form of intralaryngeal insufflation by intubation as a substitute for the tracheotomy canula for surgical purposes is found in the efforts made at various times in medical history to intubate the larynx for the relief of asphyxia when caused by acute or chronic laryngeal obstruction. The suggestion which culminated in O'Dwyer's epoch-making observations, first published in January, 1880, can be traced back, as we are told by Dillon Brown, to Hippocrates, who said that "canulasshould be carried into the throat along the jaws, so that air may be drawn into the lungs." Intubation was practiced by Desault in 1801, by Finaz in 1813, and subsequently by Lallemand, Benoit, Depaul, Loiseau and Gros, in France; by Weinlechner, Trendelenburg and Von Huttenbremer, in Germany; by Patton, Liston, Sanctuary and Macewen in England; by Horace Green in this country, and by a host of others too numerous to mention. But the experiments of all these workers, with the solitary exception of Bouchut's brief experiments and failures with short tubes, in 1858, were made with catheters or long tubes of similar make. It is to O'Dwyer, therefore, that the greatest credit is due for establishing intubation in its present form, and it is due to his unswerving and indefatigable perseverance, patience and mechanical ingenuity that the present form of apparatus has attained its marvelous efficiency.

O'Dwyer's resurrection of Bouchet's crude ideas on intubation, and his magical transformation of the bloody and tragic picture of tracheotomy in diphtheria into a simple, painless and bloodless bit of technical jugglery, has practically closed for all time one of the

most animated chapters in the history of surgery. By similarly transforming the tracheotomy canula of the insufflating apparatus that Dr. Fell, of Buffalo, has devised for the sustained practice of artificial respiration in opium narcosis he has opened a new chapter of still greater interest and promise than that which his previous achievements had brought to a close.

While thus, according to Fell and O'Dwyer all the credit that is due them as independent investigators, and for perfecting and simplifying an apparatus which has proved itself thoroughly efficient and reliable in maintaining artificial respiration, it must be recognized that the idea of applying this method to the needs of thoracic surgery originated in other sources, and that in writing the history of the subject in its surgical relations, due credit must be given to other and independent investigators.

(To be continued.)

INTUBATION OF THE LARYNX.

CHAS. J. WHALEN, M.D., LL.B.
CHICAGO.

Intubation of the larynx, which has been employed in many thousand cases in this country and abroad, has now taken its place with tracheotomy as a well-recognized procedure in the treatment of obstructive dyspnea.

Before taking up the technique of the operation, I will briefly consider its history and the indications for the employment. The passing of a tube, as for instance a catheter, for the relief of laryngeal obstruction is of ancient origin, but it was not until 1858 that Bouchet, of Paris, devised special instruments for this purpose. Unfortunately for Bouchet, owing partly to the defective condition of the instruments, the profession of Paris, led especially by the great authority, Trousseau, not only condemned but ridiculed the new method. Criticism coming from such an authority as Trousseau caused the treatment to meet with so little favor that it was soon entirely abandoned.

While catheterism of the larynx has since at various times been attempted by McEwen and others, it was the genius of the late Dr. Joseph O'Dwyer, of New York City, that brought the instruments to a degree of perfection which left nothing to be desired, for in 1881, just twenty-three years after Bouchet's experiments, O'Dwyer, without knowledge of any previous attempt, produced instruments of a satisfactory nature and at the same time established the validity of Bouchet's statements. From that time the operation has been growing in favor, and with many operators has superseded tracheotomy as the primary operation in laryngeal stenosis, and this is especially true with the profession in Paris. On the other hand, however, in Germany and England O'Dwyer's invention has been but little used.

Before the advent of serum treatment for laryngeal diphtheria, in a series of 7070 cases collected by Lanke, Dillon Brown, McNaughton and Maddren, the mortality was 60.4 per cent., while since the use of antitoxin, in 1155 cases collected by Welch and the American Pediatric Society the mortality was 26.2 per cent., showing a reduction of 34 per cent. by the use of the serum treatment. The results of tracheotomy have likewise been greatly improved by the antitoxin treatment, and in nearly the same ratio as in intubation, a collection of 23,941 tracheotomies for croup in pre-antitoxin days, collected by Prescott and Goothwaite, gives a mortality of 71.3 per cent. Of 873 tracheotomies performed after the use of serum the mortality was 40.9 per cent. It is

useless to multiply evidence, for from all parts of the world the testimony is the same, that the mortality in cases of laryngeal diphtheria requiring operation has been reduced over 50 per cent. In all the cases that are of diphtheritic origin, I advise the very early use of antitoxin, for it not only causes the membrane to loosen rapidly and prevents its reformation, but it also reduces the period of wearing the tube and, by using it at this stage of the disease, you may avoid a more serious operation of intubation. It has been verified in a report by the American Pediatric Society, that in 60 per cent. of the cases of laryngeal diphtheria intubation is not required if reliable serum has been used in the first stage of the disease. In a total of 1700 laryngeal cases there were 668 of intubation with 82 deaths, a mortality of 27 per cent.

A few years ago so enthusiastic were some of our physicians over antitoxin that they were loudly claiming that we would have no further need for intubation tubes. Physicians who act on that supposition will sooner or later meet with disappointments in cases where they have relied wholly on the antitoxin to relieve dyspnea and have delayed intubation until it is too late. Again, it should be remembered that diphtheria is not the only disease that is likely to cause stenosis of the larynx, for it may be produced by the pseudomembrane which results from the streptococci or staphylococci as well as the Klebs-Loeffler bacilli. It may also be associated with measles or scarlet fever and be produced by edema resulting from traumas, as by scalds, corrosive substances or direct injury.

No matter how these patients are treated, we are bound sooner or later to come face to face with cases that demand the operation of intubation in order to save life. Again, in some patients who have been injected with antitoxin the membrane fails to come away in from twenty-four to thirty-six hours, and where these patients show symptoms of laryngeal obstruction it would not be safe to wait for the action of the antitoxin, for delay might cause the patient his life. It is better to intubate as soon as signs of stenosis develop; here is one of the situations where an unnecessary operation will do no harm, and therefore the physician need not hesitate as he would before deciding to make a tracheotomy. The reader will at once question the possibility of these two operations being rivals. Having had more or less experience with intubations and tracheotomy in the last five years, I believe that instead of the two operations being rivals they are complimentary, one to the other, each having well-defined indications for its employment. So far as prognosis goes the mortality from intubation is very similar to the number of fatalities following tracheotomy.

Generally speaking, intubation in private practice should be accorded first place because it is less formidable and can be done by the country practitioner alone. Having none of the essentials of an operation and requiring no skilled assistance, being bloodless and requiring no anesthetic, leaving no wound to heal and no subsequent disfiguring cicatrix, parents will much more quickly consent to it than to tracheotomy. The rapidity with which it can be done when once the knack of performing it is acquired makes it essentially the operation of emergency. Since the period of diphtheritic stenosis has been so shortened by antitoxin, tracheotomy as a routine operation is hardly justifiable, at least until the lesser one of intubation has been attempted.

First among the conditions suggesting tracheotomy in preference to intubation I would mention timidity and

inexperience in introducing and extracting intubation tubes; next a morbid condition which always contraindicates intubation; again, remoteness of the physician from his patient with the possibility of stenosis following quickly after the expulsion of the tube; then the possibility of the intubation tube stopping up from membrane which can not be relieved by inexperienced attendants as can be done in tracheotomy, would suggest the latter operation, and tracheal pseudomembrane as well as spasm of the larynx always suggest the cutting operation in preference to intubation.

Regarding the scope of intubation in acute stenosis in adults it can usually be substituted for tracheotomy with advantage; also in acute edema of the larynx in adults, unless complicated, I would consider a few gentle attempts at intubation justifiable. In chronic stenosis the use of the intubation tube has been employed successfully in many cases, and it has proved satisfactory in chronic syphilitic stenosis of the larynx where there has been difficulty in dispensing with the tracheal tube because of granulations growing in the region of the wound, and it has been proved in these cases that the tube can be worn for a considerable time without harm or inconvenience.

As to the indications for laryngeal intubation, in a word they may be said to be the same as in tracheotomy, namely, restlessness and unremitting dyspnea; do not wait for marked cyanosis for this may be too late a symptom; the earlier the operation is performed the greater the chance for recovery; fortunately in these days the question of operation for euthanasia is rarely raised, but even that may occur. I believe that at the present time many patients with laryngeal obstruction are allowed to die without any attempt at operative interference because tracheotomy is not considered practical under the circumstances and the alternative operation is not sufficiently known. It follows as a necessary corollary that the family physician who treats diseases which directly or indirectly may cause laryngeal obstruction should educate himself to intubate without waiting for skilled assistance, for if the best results are to be obtained in intubation it must be done early and we must not wait to send to a neighboring town for a specialist skilled in this work. I have been called long distances to intubate, and in some cases the necessary loss of time resulted in the death of the patient, the family physician waiting for symptoms such as gasping inspiration or cyanosis before suggesting consultation, and at the same time lessening the patient's chances for a favorable result. It is unfortunate for patients that physicians rely so much on the specialist in these cases. This tendency to neglect the cultivation of the special branches makes the general practitioner become less and less the all-around man, less self-reliant and equal to all emergencies, and also a less valuable member to the profession. All honor to the old-time country doctor of the best type, who, under the greatest disadvantage, was able with equal skill to meet every possible emergency, and was never daunted by any difficulty or danger.

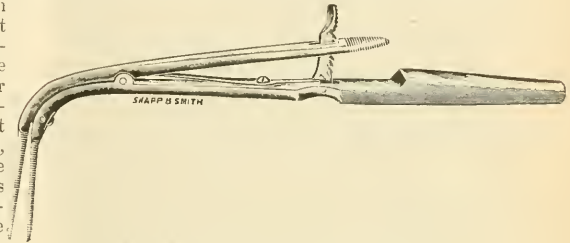
While specialism has unquestionably advanced the science and art of medicine and surgery, it has a great tendency to produce a narrower type of medical men, and this is especially true of the vast numbers of recent graduates who are rushing into specialism before they have properly mastered the relations of the different portions of the field of medicine to others, or the system at large: by devoting their constant toil and energy to one small subdivision of work, they become practically machines and useless in regard to other portions of the same in-

dustry. It is again the old problem of the survival of the fittest. With the proper use of the advantages and with an earnest and high purpose of doing the best possible, the general practitioner can and should use the results of special work in such a way as to enlarge his powers and advance his usefulness.

There is only one way to properly learn the operation of intubation, and that is by the frequent introduction of the tube on the cadaver until one's fingers are thoroughly familiar with the landmarks and the mechanism of the intubation set. In the past two years I have taught over 500 senior students intubation on the cadaver, and I have failed to find a single one who could not, after a few lessons, perform the operation on the cadaver after the technique had been fully explained.

The instruments required for this operation consist of six tubes graduated for children less than 12 years of age. There is a gauge for measuring the tubes to determine the proper size for any given age, an applicator for introducing the tube, an extractor for withdrawing it, and a mouth gag. There have been a great many attempts made toward combining the introducer and extractor into one instrument, and thus doing away with the obturator, which would materially cheapen the cost price of the entire set, the expense being the chief objection to the O'Dwyer instruments. Chief among the intubation sets on the market in which the extractor and introducer have been combined in the same instrument are what are known as the French intubation set and the rational one. After considerable experience, both on the living subject and on the cadaver, I have come to the conclusion that neither of these instruments is practical, especially for extubating, which is the difficult part of the operation, while the insertion of the tube can be done with any instrument providing the beak is not too long to prevent the direction of the end of the tube into the larynx at the proper time. With the French instrument the shortness of the beaks and their being directly at right angles to the handle, compel the operator in extubating to elevate the outer end of the instrument tightly against the incisor teeth, and when this is done the beaks can not be properly inserted into the opening of the tube, more often failing to reach the tube at all excepting in very small children. The rational intubation instruments have been receiving much advertising of late, but our experience on the cadaver, as well as a personal one on a living subject, tells me not to endorse this set, for it is far from being satisfactory. The number of introducers or extractors makes it again as complicated as the O'Dwyer set. Besides the difficulty in remembering the instrument to be used in extracting, it must be borne in mind that the lower blade has to be held by the operator directly on a line with the upper one, otherwise it can not be inserted into the tube; this adds more or less confusion to the operation, and even when this is done properly there is far more difficulty in getting the beaks into the opening of the tube than is experienced with the O'Dwyer extractor. Dr. John Edwin Rhodes has informed me that he has found this rational intubation instrument unsatisfactory as an extubator; indeed, he had even to abandon it recently and resort to the O'Dwyer, with which extubation was made without difficulty. All physicians who have done more or less intubating know that at times the manipulation of the instruments becomes quite difficult, the O'Dwyer set requiring both an extractor and an introducer, the latter being quite complicated, and a trigger-key provided to push the tube off the obturator. This is unnecessary, for the reason that inexperienced operators are liable to con-

centrate their minds too much on this trigger-key, relieving the obturator from the tube, thus prolonging the time the finger should be in the patient's larynx, while as a matter of fact the tube has finally to be pushed off the obturator with the left index finger. Again, the screw on the introducer is liable to become loose and does not hold the tube firmly in the right position. In the O'Dwyer set the obturator has to be screwed home firmly so as to prevent rotation at the time it is being introduced; while this is being done it not infrequently happens that the major axis of the head does not lie antero-posteriorly, owing partially to failure of adjustment by the maker, but more likely to result from the wear of the thread of the screw. These objections, together with the difficulty of getting new tubes to fit old obturators, caused me one year ago to have the introducer and extractor combined in the same instrument. In this new instrument no adjustment of the screw is necessary; the major axis of the tube is always fore and aft; instead of a screw the tubes are attached by a simple catch arrangement and are detached by the same mechanism.



WHALEN'S INTRODUCER AND EXTRACTOR.

The introducer and extractor is modeled (see illustration) very closely after the O'Dwyer extractor. The lock on the handle of the instrument prevents, in extubation, the tube from dropping back into the larynx or esophagus at the critical time when it is being turned over the base of the tongue, and the beaks, being of proper length, allow the hand of the operator to be in the easiest possible position when operating. From experience in twelve or fifteen hundred intubations on cadavers I feel it safe to recommend this instrument for general work.

The tubes have been modeled somewhat after those made by Ferraud. The top opening has been made funnel-shaped, slanting from the rim toward the center, which greatly facilitates the introduction of the beak when the tube is in the larynx. Another change which has been made is that the lower end has been cut off at an angle of about 45 degrees slanting from right to left, and this facilitates the passage of the tubes between the vocal cords. The hard-rubber metal-lined tubes are much used at the present time, and are in every respect the ideal ones, being sufficiently light to be expelled by the child in case the lumen becomes occluded, and yet requiring an extreme effort on the part of the child for expulsion by coughing.

The operation of intubation is not very difficult, providing one has had previous practice on the cadaver. The tube is selected according to the age of the patient, the length for the different years being indicated on the gauge. The age is not the only guide, for a very large child will often require a tube of larger size than its age would indicate. Two assistants are required, neither of whom need be skilled. The child is wrapped in a

blanket or sheet, which is pinned closely about the neck so that the arms are pinioned, and it is placed in a sitting position on the lap of the first assistant, its head being inclined slightly backward and held by the second assistant, who is standing behind the child. The gag is fixed in position between the left molars, the mouth being opened as widely as possible. The tube is now threaded and attached to the introducer, which the operator holds in the right hand with the fourth finger through the safety thread to keep it out of the way. He now introduces his left finger into the mouth, having previously covered the finger by a cot to prevent inoculation in case the gag becomes displaced and the finger is bitten. The first landmark is the epiglottis. In very young children it is not always easy to feel this owing to the softness of the tissues; in cases where the soft parts are much distorted by the swelling a valuable landmark is the cricoid cartilage, which lies directly behind the epiglottis and the opening of the larynx. Immediately below the epiglottis is the entrance to the glottis, bounded below by the two arytenoid cartilages. It is important for the successful performance of the operation that these cartilages should be clearly recognized. To do this it may be necessary to pass the finger down to its utmost extent. Once the arytenoids are felt the opening of the glottis must lie immediately in front of the pulp of the finger. Keeping the finger then in position, slip the tube quickly into the mouth, pass it along the palmar surface of the finger down over the epiglottis until the ball of the index finger is reached. The handle of the introducer is then slightly raised so as to direct the point of tube into the glottis, and the tube passed on until the collar of the tube is felt. The mechanism for relieving the tube is then put in action with the right thumb and the introducer withdrawn, the tube being kept in position meanwhile with the left index finger. In inserting the intubation tube it is very important to work strictly in the middle line, otherwise you will be likely to get the point of the tube behind the epiglottis and into the cul-de-sac on either side.

The actual operation of intubation, if properly performed, ought not to occupy more than ten or fifteen seconds, and with practice such dexterity is obtained that the entire operation requires but a few seconds from the time the finger is introduced. If the operator fails to pass the tube in at once the finger and tube should be immediately withdrawn to give the patient time to breathe before making a second attempt. It is more surgical to make several gentle attempts than to make one bold one which is almost certain to do irreparable damage. The most reliable indication of the tube being in the larynx is that the breathing at once becomes aphonic, the child coughs and brings up more or less accumulated secretions, while if the tube is passed into the esophagus no change is observed in the respiration. The instantaneous relief of dyspnea afforded by this operation is among the most cheering spectacles which the surgeon ever sees, the patient quickly falls to sleep, the respiration diminishing and the cyanosis rapidly disappearing.

Being satisfied that the tube is really in position the gag is removed and the child put to bed; before doing this, however, I always remove the safety thread. The habit of some physicians of tying the thread over the ear and leaving it for some days is not only inconvenient for the physician but it is also annoying to the patient. The thread should always be immediately removed unless there is some evidence of loose membrane below the tube. To remove it you proceed as for introducing the tube, the index finger holding the tube in position while with

the other hand gentle traction is made on the end of the thread after the ends have been severed. The tube should be allowed to remain until the diphtheritic membrane has disappeared from the throat and the expectoration has become thin and viscid. In pre-antitoxin times the average was about seven days, while under our present mode of treatment it has been reduced to from thirty-six to seventy-two hours. The after-treatment of cases of intubation should be directed to the original disease as before operation. The child should not be allowed to lie on its face, for in this position a slight cough might expel the tube. It sometimes happens that the tube is coughed out soon after its introduction, because too small a size has been used. In these cases dyspnea does not return for a few hours so that there is nearly always ample time to notify the attending physician. When called because of dyspnea after operation you should, by digital examination of the throat, satisfy yourself that the tube is really in place, for in the absence of the attendant it may have been coughed up and swallowed. A case of this kind came under my own observation about a year ago. No bad effects occur from this accident, however, for the tubes are always passed through the intestines without difficulty.

Many consider feeding during the period of tubation an objectionable feature, and have greatly exaggerated its danger. The most satisfactory position in which to feed a tubated patient is probably at an angle of 45 degrees, or in a reclining position which allows the liquid nourishment to gravitate over the epiglottis. Nursing infants may continue at the breast after operation, and ordinarily they have but little difficulty in swallowing, while older children often experience considerable difficulty in taking fluids. Another method of feeding consists in placing the patient supine, with the head much lower than the body, and feeding from a nursing bottle or through a tube. In this position fluids can not run into the trachea, but will be forced up the esophagus into the stomach. Feeding is always easier after the first day or two, and patients who wear the tube for chronic disease soon experience no trouble whatever, showing that the difficulty depends more on the inability to co-ordinate the muscles of deglutition when the tube is in place than on mechanical causes. One more hint in the after-treatment in cases of intubation or tracheotomy resulting from diphtheria is, never lose sight of the fact that many of these little patients are in a state of profound systemic poisoning, with the heart muscle very much weakened, and that part of the secret of later success lies in recumbency with appropriate nourishment and heart tonics, for which alcohol and strychnin are specially indicated.

The accidents and complications which may occur during intubation consist chiefly in pushing off the false membrane in front of the tube as it enters the larynx; this I have never known to occur, and we have it on so good an authority as Dr. O'Dwyer himself that he never encountered this accident in his extensive experience with intubation. If on the introduction of the tube there is no reaction to its presence, no violent fit of coughing, we may conclude that the trachea is lined with pseudomembrane and that the chances of the patient will be greatly improved by removing the tube and performing tracheotomy at once. It is therefore always desirable when intubating to have the instruments in readiness for performing tracheotomy should it become necessary.

Blocking of the intubation tube rarely occurs, perhaps because of the tube being straight instead of bent as with

tracheotomy tubes. In cases where the tube has become blocked with mucus it has invariably been coughed up with the obstruction. Bronchopneumonia does occasionally occur after intubation, but not nearly so frequently as in tracheotomy. Hemorrhages may result, but are usually of little consequence, coming as they do from the membrane of the fauces; this accident will always be avoided by the skilled operator.

If the tube selected should be too small, the probable result will be its non-retention, as it may be at once coughed up. If this happens it will be necessary to replace it by a larger one. There is very little danger of the tube dropping into the trachea, because its collar is of sufficient size to prevent such an accident.

Extubation is always a critical period in the treatment of a case by the O'Dwyer method. This procedure is usually more difficult than the introduction of the tube. The child is placed in the same position as for its introduction, and with the index finger of the left hand the operator guides the extractor down to the larynx, where it is felt to strike against the end of the tube. It is then moved about gently, no force being used, until it drops into the opening of the tube. The blade should then be separated and firmly held while the instrument and tube are withdrawn, special care being observed not to relax the pressure just as the tube is being turned out of the larynx, for if this is done the instrument will slip and the tube may either fall back into the larynx or be swallowed. This accident can not happen with the new instrument that I have devised, because once the handles are locked they can not be separated unless done purposely by the operator. Special care should be taken that no pressure is made on the head of the tube in attempting to introduce the extractor, for the tube might possibly be pushed below the vocal cords, an accident that has happened in a few cases. There is, however, a very simple and sometimes quite an effective method of removing the tube, which requires the use of no instruments and which was discovered in Paris by one of the house surgeons at the Hospital des Enfants Malades. This is the method of expression. It is performed thus: The nurse takes the child on her knee, the operator faces the child and with the left hand over the vertex places the right thumb on the trachea, grasping the neck with the fingers. He then simultaneously compresses the trachea backward and upward, and jerks the child's head downward into the nurse's lap, and in the majority of cases the tube drops out without further trouble. This method of expressing the tube I believe to be an unscientific, dangerous and uncalled-for process, and it should only be resorted to in emergency where any procedure to save life would be justifiable.

34 Washington Street.

good results, I have secured a series of pictures representing fractures of the limbs. These have not all occurred in my practice; a few have been treated by surgeons of reputation. They were not selected with a view of doing honor to the surgeon; had they been, I would have left out the very ones most needed to demonstrate the fact that we may have marked deformity and still have a useful limb.

In offering this collection of pictures, representing the different fractures and their conditions as shown by the skiagraph and photograph, I have no apologies to offer,



believing that they show just what the surgeon of the past has done, and what the majority are doing at the present time. In the examination of these, especially



248 and 249.—Fracture of leg. Four months after injury. Functional results perfect.

the skiagraphs, the first impression will be as mine was; that there must be something radically wrong in the procedure that would permit such departure from the proper anatomic appearance of the bones. Any surgeon who will look with patient honesty for an ideal re-

FUNCTIONALLY GOOD RESULTS IN THE TREATMENT OF FRACTURES AS VIEWED BY SKIAGRAPH AND PHOTOGRAPH.

BY B. X. TORREY, M.D.
CRESTON, IOWA.

By functionally good results, I mean those cases where the patient has good use of the part that has been injured; if it be a leg, he walks without a crutch or cane; if an arm, it can be flexed, extended or rotated sufficiently for practical purposes.

In order to more fully demonstrate the difference between the skiagraph and the photograph of functionally

*Read before the Iowa State Medical Society, Des Moines, May 16-18, 1900.

sult, among his victims of the past, may look without finding the object of his quest, if such ideal involved the notion of exact anatomic alignment of the fragments; especially will he be disappointed if he expects such perfection in cases where the fracture was oblique or the fragments separated. He will be surprised to find that each and every one will present a deformity, more or less, of some kind, when viewed by the X-ray.

The results of a transverse green-stick fracture, or in those cases where the fragments have not been displaced, will show, from mechanical reasons only, angular or rotatory deformities; but in those fractures, buried as they are in excited muscular tissues, the obtaining and maintaining of exact anatomic relations would be an accident. It will be observed, in some of the pictures presented as illustrating this paper, that the results as viewed by photographs are all that could be desired; and others, while showing some deformities, are still within the limit of what would be considered good functional results. View the same cases by the X-ray, and it will be found to present angular rotatory and the overriding deformities, or a combination of any two or more—depending to a great extent on the bone fractured, the



254. Compound fracture of leg 8 months after injury. Functional result perfect. There is no shortening. The apparent overlapping of fragments is due to the callus.

A.—End of fragments. B.—Callus which gives appearance of overlapping.

location of the fracture, whether a leg or an arm, a simple, compound, or compound comminuted, and the cause producing it. I am convinced that a careful, comparative study of this kind, made by any surgeon on his own cases, will smash some of his idols, will be conducive to humility, and make him cautious about critical remarks concerning the work of his fellow practitioner.

I would ask especial attention to No. 254, a male, aged 30, and weighing 190 pounds. He jumped from a spring-wagon, producing a compound fracture of the tibia, and simple fracture of the fibula. At this time, eight months after injury, he walks without a crutch or cane, with a very little limp, and he gets off and on trains in the capacity of a traveling man. Represented by the photograph and examined by manipulation, one would consider his a splendid result, all things considered, and I was especially satisfied with it until it was skiagraphed.

It would not take the search-light of an X-ray to find a marked deformity in Case No. 258, a male of 200 pounds, who has quite a limp. He plows corn and does other work pertaining to the farm. The injury was caused by getting his foot caught in a hay-press, produc-



Photograph 254.

ing a compound comminuted fracture of both bones to the extent of leaving spiculae of bone sticking to the hard wood of the press. Only his persistent demand that it should not be amputated is the reason that he has



Photograph 254.

it in the place of a wooden one. Certainly a wooden one would be more symmetrical if not so handy. This case was treated in the early days of antiseptic surgery.

No. 248, a boy, 8 years old, was injured by a horse

stepping on his leg, producing a simple fracture of both bones. As shown by the photograph and by manual examination, one would think we had an ideal result, yet by the skiagraph we find not only an angular deformity, but a partial displacement of the individual fragments.

Nos. 265 and 266 represent a fracture of the femur and humerus, following a railroad accident in which the leg was lost below the knee. This case was treated in a Kansas City hospital, and by a well-known surgeon, but under some disadvantages, as all the injuries occurred at the same time.



258.—Compound comminuted fracture of leg. Twelve years after injury. Functional result good enough that patient has but a slight limp, and does general farm work.

I would call especial attention to Nos. 290 and 291, which present a photograph and an X-ray picture of a compound fracture of the leg, treated by a surgeon in Kansas, eighteen months ago. The X-ray findings are good, the alignment being practically perfect, while on the other hand the photograph shows marked rotatory deformity. The patient has a stiff ankle and a limb that is far from being functionally perfect.

The examination of fractures and the results obtained, by means of the X-ray, have been almost entirely confined to the profession, and it is a question of very grave importance to each individual member. To-day

you are criticising my ability as a surgeon through the representation of these pictures. To-morrow the general public will expect and demand the same privilege of looking over your work, and from the same standpoint. What will their criticism be? Have they not been led to believe, when the result from external appearance seems good and they have good use of the parts, that the union of the fragments was as smooth and complete as a cabinet-maker's splice? I do not refer to those severe crushing injuries—where they could see for themselves or where the astute surgeon has explained the probable results, if not allowed to amputate, but to those of more frequent occurrence, simple fractures of the leg or arm.

Through my investigation of fractures occurring in the limbs, with the fluoroscope and skiagraph, I have come to the following conclusions: 1. That both the surgeon and the public have believed they were attaining more perfect anatomic results than it is possible to get in the great majority of cases. 2. That the surgeon



Photograph 258.

should realize and the public be taught that the getting of a good functional result without deformity, as viewed by the unaided senses, constitutes the practically ideal, and that X-ray cosmetics is a refinement beyond the reasonable hopes of this day and age. 3. That we must not expect an ideal result in oblique or any other fracture where the fragments have been separated. 4. That it would be impossible to correctly coaptate a fractured bone buried in muscular tissues, and recognize it, without the use of the fluoroscope. 5. That very few, if any, oblique fractures of the larger bones of the leg or arm are treated without shortening and other deformities. 6. That the public has the impression that all fractures are transverse and the surgeon should always procure an end-to-end approximation. 7. That angular deformities alone can be corrected or prevented by lateral splints. 8. That the only way we can be sure of a correct reduction would be under the fluoroscope, with an anesthetic and superextension, or by incision, with

mechanical fixation of the fragments. The use of the fluoroscope would be impossible in many cases, and the indiscriminate practice of incision would do more harm than good. 9. That oblique fracture of the tibia, when both bones are broken, is one of the hardest of fractures to treat without marked deformity—especially if it be

muscles are located on one side of the bones; there is an element of torsion in the force that produced the fracture. 10. That extension would give us less shorten-



265.—Fracture of humerus (Left) 14 months after injury. Functional result good.



266.—Fracture of femur 14 months after injury. Result of railroad accident. Other injuries necessitated amputation of leg. Doubtless making proper extension impossible.



Photograph 265.

compound or produced by indirect violence—from the fact that there is not room for traction; the stronger



Photograph 266.

ing, less deformity and better results in fractures of the long bones; but too much extension and too long contin-

ned, would interfere with the physiologic condition of the joints, while stricture of the tissues between joints, sufficient for traction, would interfere with the circulation, and might produce blister, ulceration and non-

except those having end-to-end approximation, and that without perceptible inconvenience or pain to the patient. 12. That a skiagraph picture may exaggerate a deformity, but it might be hard to make an interested party



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290 and 291.—Compound comminuted fracture of leg, 18 months after injury. Operation to encourage union was done 5 months after injury; another 11 months after injury. Result: good apparent alignment as seen by X-ray, but there is marked rotary deformity, ankylosis of ankle joint and fixation of toes in position of extreme flexion.

believe it. 13. That an X-ray picture, if interpreted according to our former notion, or the ideas now held by the general public, would be unjustly exacting for legal purposes. 14. That we may expect a mechanical device



Photograph 290.



Photograph 291.

union. 11. That weight of the limb, such as would result from the too early use after fracture of the leg, would increase or might produce deformity, in all cases

for fixation independent of muscular tissues; whether it is foreshadowed by Dr. Parkhill's clamps, the peg, screw or some other contrivance, no one can tell. 15. That

every up-to-date surgeon should have access to or own an X-ray machine—a portable one would be very handy. 16. That the fractures viewed and presented in illustrating this paper, fairly present the average results obtained by the past and present methods of treating fractures. 17. That the application of the X-ray to surgery, while it presents many advantages, may also bring annoyance; but since it is here and here to stay, it behooves us to make a careful study of its findings in order that while we enjoy the advantages, we may avoid the injury that might arise from its misapplication, and prevent its being made to bear false witness through misinterpretation of its findings.

I wish to acknowledge my obligation to Dr. F. E. Sampson, of Creston, who has prepared the skiagraphs and photographs used in illustrating this paper.

ON REMOVAL OF THE CERVICAL SYMPATHETIC IN GLAUCOMA AND OPTIC NERVE ATROPHY.*

BY JAMES MOORES BALL, M.D.

Professor of Ophthalmology in the St. Louis College of Physicians and Surgeons; Oculist to St. Joseph's Ophthalmic and Surgical Sanatorium.
ST. LOUIS, MO.

I propose to consider the surgery of the cervical portion of the great sympathetic nerve in certain ocular diseases. European oculists and surgeons have performed sympathetomy for glaucoma and exophthalmic goiter. I have gone further, and in one instance removed the superior cervical ganglion for simple atrophy of the optic nerve. I have performed sympathetomy four times up to July 20, 1899. First the cases will be reported; then the conclusions will be drawn.

CASE 1.—EXCISION OF SYMPATHETIC FOR GLAUCOMA ABSOLUTUM.

Mrs. B. S., aged 36, has had pain in and around the right eye for two months, and examination showed vision in this eye reduced to light perception; tension +3, and the pupil widely dilated. The anterior chamber was shallow, the cornea cloudy and slightly anesthetic, the media slightly cloudy, still allowing the fundus to be seen. The episcleral vessels were enlarged. Circumcorneal injection was present and the optic nerve cupped. A diagnosis of chronic irritable glaucoma was made. The left eye presents immature cataract, and vision in this eye is 20/70.

Knowing of the flattering results obtained by Jonnesco and others, by excision of the superior cervical ganglion in absolute glaucoma, I explained the operation to the patient, and obtained permission to operate. On May 15, 1899, the patient was anesthetized, chloroform being employed. An incision four inches in length was made on the right side downward from the mastoid process, extending along the posterior border of the sterno-cleido-mastoid muscle. The external jugular vein was cut and tied. The sterno-cleido-mastoid was then separated from the trapezius muscle, and the spinal accessory nerve was cut. A deep dissection was then made, exposing the carotid sheath. This was opened to enable us to locate the pneumogastric nerve beyond question. The carotid, internal jugular vein and pneumogastric nerve were then pulled forward, enabling us to see the rectus capitis anticus major muscle, on which the superior cervical ganglion rests. Tearing through the fascia the ganglion was found and stripped. The ganglion was

then cut high up with curved scissors and all its branches severed. About one inch of the trunk of the sympathetic below the ganglion was removed. The wound was closed with interrupted sutures and the neck placed in a plaster cast. The time required for operation was fifteen minutes, and immediately after it was noticed that the right eye was suffused with tears, the right conjunctiva much injected and the right nostril moist. The intra-ocular tension was +2. The patient slept well all night, without medicine, being free from pain for the first time in over two months. Tension had steadily decreased to +1.

On May 16, slight ptosis was noticed on the right side. This symptom is yet present. On May 19 the circumcorneal injection was much less; the conjunctival hyperemia and lachrimation were still present, while the ptosis was slightly increased and tension was +1.

At the present date—July 23, 1899—this patient has no pain. The retinal arteries are increased in size. Tension is +1. Vision has increased from light perception to ability to count fingers at three feet. The conjunctival injection which followed the operation has disappeared; the optic nerve has a color more approaching the normal. The ptosis is less.

This was the first sympathetomy made in America for glaucoma.

CASE 2.—DOUBLE SYMPATHETOMY FOR GLAUCOMA SIMPLEX.

Miss M. E., a German, aged 43, was sent to me on June 14, 1899. For two years sight had been failing, until at this time vision was as follows: R. E. = 0; L. E. = light perception. Tension was +3. Both optic nerves showed marked cupping of the disc; the vessels were pushed to the nasal side. She stated that she had never had pain in the eyes and had not consulted an ophthalmic surgeon.

I advised her to submit to an excision of the left superior cervical ganglion; she consented, and on June 15 the operation was performed by myself, assisted by Dr. E. C. Renaud, at St. Joseph's Sanatorium, in the presence of Drs. J. C. Murphy, A. R. Kieffer and S. A. Grantham. The operation was difficult owing to the abnormal position of the vagus nerve. This was outside of and external to the carotid sheath, and was much smaller than normal; it was not larger in diameter than the head of a pin. It was identified by irritating it and watching the effect on the heart. The superior cervical ganglion was removed and one-half inch of the trunk of the sympathetic below. Shortly after the operation there was lachrimation, ocular congestion and contraction of the pupil on the corresponding side. On the second day she counted fingers at 2½, and on the third at 3½ feet. Slight ptosis was present.

She left the hospital on the eighth day. At this time she counted fingers at four feet. There was only slight if any reduction of tension during the eight days she was in the hospital. In counting fingers she saw the nasal side of the retina—temporal field. I did not see her again until June 30, and she was then counting fingers at five feet. Tension on that day was normal. She had light perception in the right eye.

On July 16, I excised the right superior cervical ganglion, without difficulty, and on July 7 she counted fingers at seven feet with the left eye, and could see the hand at four inches with the right. I examined her on July 20, when vision remained the same, the tension of the right eye was +1, and of the left +2. She was well pleased to have the small amount of vision she possessed.

*Read before the Ninth International Ophthalmological Congress, at Utrecht, Aug. 17, 1899.

CASE 3.—SYMPATHECTOMY FOR OPTIC NERVE ATROPHY.

T. J., aged 46, an inmate of the St. Louis City Hospital, a laborer, was admitted on account of blindness. There was no history of syphilis, rheumatism, nor any systemic disease. The patient was of limited mentality. No history of his family could be obtained. He claimed to have had good health all his life, with the exception of an attack of malarial fever several years ago. The patient had been a moderate drinker of alcoholic beverages. In appearance he was robust, and he complained only of loss of vision, which, in the left eye had been failing for eleven months, in the right for seventeen weeks, according to his statement. Until seventeen weeks before this he could see enough with the right eye to get around. Since then vision had steadily declined until he had light perception only—and this only apparent when light was concentrated on the eye by the ophthalmoscopic mirror. Vision of the left eye = 0.

The pupils were widely dilated. The ophthalmoscope showed, in the right eye, a white disc, particularly on the temporal side; the arteries slightly reduced in caliber,

fundus, except that a cilioretinal artery in the upper part of the disc had doubled in caliber.

So far as I know, Case 3 is the first instance in the history of medicine of an excision of the superior cervical ganglion, or of any part of the sympathetic system, for the relief of optic nerve atrophy. Although the operation was not of benefit in this particular instance, yet I am not willing to concede that it will prove valueless in cases of non-inflammatory atrophy in which vision is not entirely lost. In truth, I expect it to prove beneficial in such cases, sufficiently often to justify the procedure.

I was led to make this experimental operation for several reasons: 1. The use of glonoin is often followed by an improvement in vision in cases of simple atrophy of the optic nerve. 2. Glonoin enlarges the retinal vessels, as has been proved by ophthalmoscopic examination. 3. There is no question that in glaucoma simplex—a disease in which there is an atrophy of the optic nerve—improvement in vision follows sympathectomy. 4. Excision of the cervical sympathetic is followed by an increase in the blood-supply of the orbital contents.

Microscopic Appearance of Section of Normal Superior Cervical Ganglion.

Microscopic Appearance of Section of Normal Superior Cervical Ganglion.

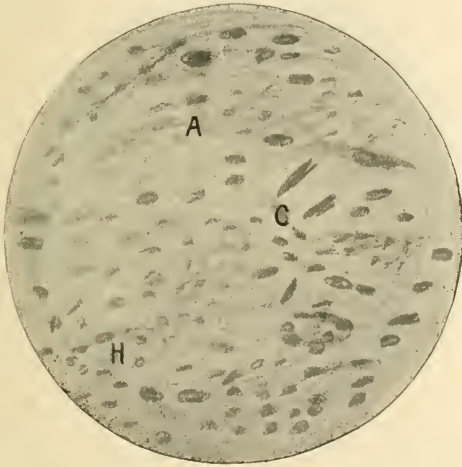


Fig. 1.—(Leitz, No. 3 objective, No. 4 ocular)—A, connective tissue; H, blood vessel; C, nerve cell.

Fig. 2.—(Leitz, No. 7 objective, No. 4 ocular)—D, nerve cell; E, blood vessel; F, connective tissue; G, nerve fibers.

veins normal. There was shallow, atrophic cupping of the nerve head. The retina and choroid were normal, the vitreous and lens clear. The left eye showed a disc of a dead white color throughout the whole area, arteries very small, atrophic excavation pronounced, veins reduced in caliber, and choroid normal. The macula was not visible in this eye, owing to the much reduced blood-supply. The vitreous and lens were clear. Vision was as follows: R. E. = perception of concentrated light. L. E. = 0.

Diagnosis: R. E. = optic nerve atrophy. L. E. = complete atrophy of optic nerve and retina.

Treatment: Resection of the right superior cervical ganglion of the sympathetic was done. The operation was followed by conjunctival congestion, laceration and contraction of the pupil, slight ptosis and hypotonia.

No appreciable change in the patient's vision followed, and ophthalmoscopic examination made two weeks after operation showed no change in the appearance of the

PATHOLOGIC CHANGES IN THE EXCISED GANGLIA.

The microscopic examination of three of the excised ganglia was made by my friend, Dr. Carl Fisch, of St. Louis. The specimens were those from Cases 1, 2, and 3. Of the two ganglia removed from Case 2, only the first one—the left—was examined.

Transverse and longitudinal sections of the three specimens were studied microscopically, by means of a great number of different staining methods. Owing to the method by which the ganglia had been preserved—weak formalin solution—the employment of the Golgi-Marchi—and the more delicate Nissl stains was rendered impossible. In general it may be said that the pathologic changes found were the same in the three cases, although a little less pronounced in No. 2 than in 1 and 3.

Most striking of all was a very marked hyperplasia of the connective tissue, which in some places resulted in dividing up the ganglion into small groups of nervous elements separated by broad bands of fibrous elements.

The walls of the vascular structures showed decided sclerosis: the connective-tissue sheaths of the ganglionic cells were much increased in thickness. In Case 1, small foci of round-cell infiltration were seen in this hyperplastic growth, of an inflammatory character. No plasma nor mast cells could be demonstrated.

The ganglionic cells were markedly pigmented. Together with a number of cells normal to all appearance there were great numbers showing different stages of degeneration. As a rule the nucleus, besides having lost part of its peculiar staining property, had assumed the parietal position; the nucleus was reduced in size or even missing in a large percentage of the cells. While in some cells the chromatic elements were well preserved, in others the process of chromatorhexis and chromatolysis could be followed up through all of its stages. Only comparatively few cells were seen showing the normal dendriform processes; very often the processes were short, ending bluntly, or they had even disappeared altogether. The general peripheral network of processes was much reduced in volume and compressed by the pressure of the

in order to locate the pneumogastric nerve. I consider this very important because: 1. The nerve is sometimes outside the sheath, as happened in my second case in which the pneumogastric was much atrophied and was external to the sheath. 2. Differentiation of the cervical sympathetic from the vagus is sometimes difficult. Often, in operating on the cadaver, I have found both nerves enclosed in the same fascia. It is needless to say that excision of the vagus instead of the sympathetic would not only defeat the object of the operation, but would add a serious complication. Differentiation of these nerves after opening the carotid sheath is not usually difficult, for in working upward the operator comes upon the ganglionic expansion of the sympathetic. The ganglion is seized with forceps and stripped. Its branches are cut first, then the cord passing below is severed, and lastly the ganglion is cut above, as high as possible. It is best to use curved scissors and to have the finger under the ganglion while traction is made, thus cutting on the finger and avoiding injury to the underlying structures.

Microscopic Appearance of Section of Superior Cervical Ganglion in Chronic Irritative Glaucoma (Case 1).



Fig. 3.—(No. 4 ocular, No. 3 objective, Leitz)—A, nerve cell; B, nucleus of connective; C, connective tissue; D, vein; E, small capillary.

connective-tissue formation. Only very few medullated fibers were seen. Unfortunately it was impossible to study their structure with the Marchi method.

The general pathologic aspect was that of a decided sclerosis, originating in inflammatory processes going on in, and starting out from, the walls of the vascular structures. The changes of the nervous elements were most likely not idiopathic, but due to pressure and inhibited nutrition.

The plates accompanying this paper have been made from drawings of sections of superior cervical ganglia.

TECHNIQUE OF THE OPERATION.

The ordinary precautions for surgical cleanliness are to be observed, and general anesthesia employed. The incision should be made along the posterior border of the sterno-cleido-mastoid muscle, starting at the mastoid process and running downward to within an inch of the clavicle. The sternomastoid is separated from the adjacent muscles, the spinal accessory nerve cut and the carotid sheath reached. This dissection is made with the fingers. The carotid sheath should always be opened

Microscopic Appearance of Section of Superior Cervical Ganglion in Chronic Irritative Glaucoma (Case 1).

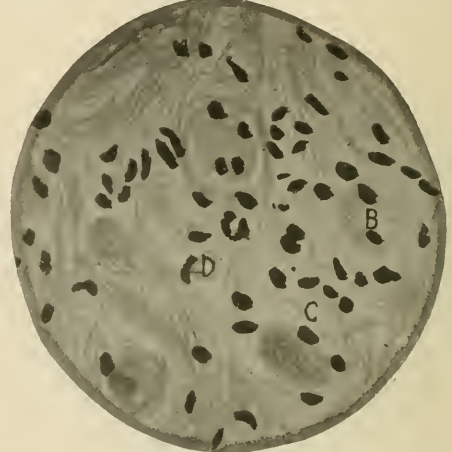


Fig. 4.—(No. 4 ocular, No. 7 objective, Leitz)—A, nucleus of connective tissue; B, nerve cell; C, connective tissue; D, vein.

If the middle ganglion is to be removed, it will be best to excise it first and then work upward. If the entire chain of the sympathetic is to be removed, as is done for epilepsy, and as is now advised in exophthalmic goiter by Jonnesco, the operation is one of great difficulty owing to the location of the inferior ganglion. This is situated near the neck of the first rib. One of my friends, who is a skilful surgeon, in removing this ganglion ruptured the vertebral artery near its origin and was obliged to tie the subclavian to check the hemorrhage. After the latter has ceased the wound is closed with superficial sutures. The hemorrhage in removal of the superior ganglion is usually trifling, only a few small vessels being cut. The external jugular vein was cut in my first case, but not in the others. The patient leaves the hospital on the eighth or ninth day.

Jonnesco's¹ method, according to his latest communication on the subject, is different. He always employs the pre-mastoid route where only the superior ganglion is to be removed, reserving the post-mastoid for the excision of the entire chain. The carotid sheath is split,

the internal jugular vein and sternomastoid drawn outward by a retractor; a second retractor draws the vagus and internal carotid inward. In the space made the superior ganglion is found. The deep vertebral fascia is opened, all the branches of the ganglion isolated and cut by blunt, curved scissors; when this has been done the ganglion is attached only by nerve strands above, a strong pull is made and the ganglion gives way. The excision is then completed by cutting the inferior strands. In closing the wound, he uses both deep and superficial sutures.

He mentions a transient dysphagia and pain in the craniomandibular joint as occurring after this operation. EFFECTS OF EXCISION OF SUPERIOR CERVICAL GANGLION.

The effects of removal of this ganglion are immediate and remote: The immediate are relief of pain, lacrimation and conjunctival injection, together with a discharge from the corresponding nostril, unilateral sweating, and contraction of the pupil. Often there is an immediate reduction in intra-ocular tension. These effects are noted within five minutes after the excision.

Microscopic Appearance of Section of Superior Cervical Ganglion in Glaucoma Simplex (Case 2).

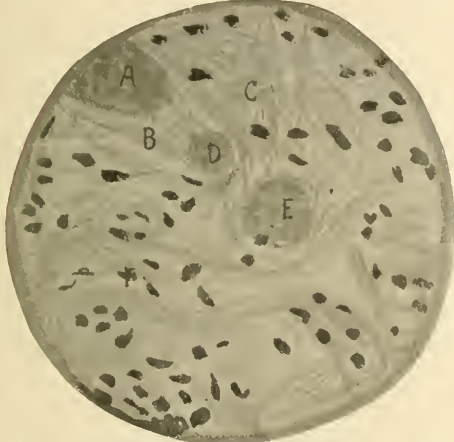


Fig. 5.—(No. 4 ocular, No. 7 objective, Leitz)—A, vein; B, connective tissue; C, nerve cell; D, small capillary; E, larger capillary; F, nucleus of connective tissue cell.

The remote effects are ptosis, which appears on the third or fourth day, improvement of vision, and in some instances a tardy contraction of the pupil and a tardy reduction of the intra-ocular tension. To these there must also be added a slight sinking of the eyeball into the orbit, and a feeling of heaviness in the head. What I have just written applies particularly to cases of glaucoma.

In exophthalmic goiter, after the excision of the ganglia, the exophthalmus and tachycardia are said to improve almost immediately and a reduction of the goiter soon follows.

Although Jonnesco speaks of the immediate reduction of the intra-ocular tension, yet this does not always occur. In my second case, at the end of eight days the tension was +2. On the sixteenth day the tension was normal. In my first case reduction of the tension was immediate. The relief from pain in the first case was immediate and lasting. This patient had not been free from pain for two months previously. The slight ptosis following sympathetomy is to be attributed to paralysis

of Müller's muscle. Sinking of the eyeball is no doubt due to paralysis of the unstriated peribulbar fibers found in Tenon's capsule. Contraction of the pupil is usually an immediate result; it may, however, appear tardily. Thus in my first case the pupil was unchanged until the fourth day after the operation; and it did not become at any time as markedly contracted as in the other two patients. In the third case—that of optic nerve atrophy—the pupil was markedly contracted within five minutes after the excision.

The lacrimation, conjunctival injection, and nasal moisture are transient symptoms which are usually absent after the first day.

In this connection it is interesting to note that Mr. Jonathan Hutchinson, as early as 1866, recognized many of the ocular symptoms of paralysis of the cervical sympathetic, and wrote a paper thereon.²

HOW DOES EXCISION OF THE CERVICAL SYMPATHETIC REDUCE INTRA-OCULAR TENSION?

This is a question difficult to answer—difficult for the reason that we are not sufficiently acquainted with the

Microscopic Appearance of Section of Superior Cervical Ganglion in Simple Atrophy of the Optic Nerve (Case 3).



Fig. 6.—(No. 4 ocular, No. 7 objective, Leitz)—A, connective tissue; B, nucleus of connective tissue; C, nerve cell.

physiology of the production of aqueous humor under normal surroundings. Panas and Duvigneaud have assumed rightfully that "If the nervous mechanism of intra-ocular secretion or, to speak without hypothesis, the action of the nervous system on intra-ocular tension can be known, the pathology of glaucoma will be cleared up, iridectomy will be explained, and perhaps a new and scientific basis for the treatment of glaucoma will be established."³ Many observers have sought to solve the problem. Donders attributed the hypertension to a neuro-secretory cause and believed the trigeminus to be the agent of excessive secretion. He held that section of the trigeminus should relieve intra-ocular tension, while section of the cervical sympathetic could have no particular influence.

His views were overthrown by experiments made by Wegner in 1866, on rabbits. By means of manometers placed in the anterior chamber, he sought to record variations in the intra-ocular tension. He proved to his own satisfaction that the trigeminus takes no part, while section of the cervical sympathetic produces hypotonia,

and irritation of its upper end, and causes hypertonia. He held that section of the cervical sympathetic enlarges the blood-vessels of the eye; the blood then flows under reduced pressure, and intra-ocular secretion is lessened. Almost identical results were obtained by Adamück—1866-68—who experimented on cats.

Von Hippel and Gruenhagen believed that the cervical sympathetic contains vasoconstrictor fibers for the eye. Their experiments were made on cats and dogs. They found that irritation of the upper end of the cervical sympathetic causes in the cat a hypotonia, while its extirpation increases intra-ocular tension. While, according to Wegner, the hypotonic action proceeds from the enlargement of vessels caused by cutting the cervical sympathetic, and the contraction of the blood-vessels caused by the irritation of the nerve causes a hypertonic action, the contrary view is held by Adamück, Von Hippel and Gruenhagen.

However this may be, there is no doubt that the trigemimus plays no great part in the production of ocular tension. Furthermore, the inefficiency of Bedal's operation—stretching the nasal nerve—is explained by the fact that it is the cervical sympathetic, and not the trigemimus, which influences intra-ocular tension.⁴

Jonnesco believes that the ocular sympathetic fibers from the brain and spinal cord pass through the superior cervical ganglion; permanent or intermittent irritation of these is accompanied by dilatation of the pupil, narrowing of the small intra-ocular arteries, contraction of the peribulbar muscular fibers, and probably an increased action of the elements which produce the aqueous humor. "As a matter of fact," says Jonnesco, any increase of the blood-pressure will produce a permanent or intermittent narrowing of the arteries and cause the extravasation and increase in aqueous humor; then it is probable, although not definitely settled, that a permanent or intermittent irritation of the excito-secretory fibers is followed by an increase in the secretion of aqueous humor; the permanent or intermittent dilatation of the pupil pushes the iris into the iris-angle, closes the canals of the filtration zone, and hinders or prolongs the exit of aqueous humor from the eye; the permanent or intermittent contraction of the unstriated peribulbar muscular fibers closes the efferent veins of the eyeball, and hinders the venous circulation of the eye—hence the dilatation of the intra-ocular veins.

He holds that excision of the superior cervical ganglion destroys all vasoconstrictor fibers of the eye. The arteries relax, the blood-pressure is lowered, and extravasation is reduced. This operation destroys the excito-secretory fibers, thus limiting the amount of aqueous produced. The fibers which dilate the iris are destroyed, hence the contraction of the pupil reopens the iris-angle and removes the obstacle to the outflow of aqueous. The nerve-fibers supplying the unstriated muscular apparatus, contained in Tenon's capsule, are destroyed, hence the pressure on the efferent veins is removed and ocular circulation is re-established.

Jonnesco believes that the starting-point of the nervous derangement producing glaucoma is central: "When one removes the ganglion the point of origin of the influence will not be removed but the communication between this center and the eyeball is destroyed."

Regardless of the differing views of physiologists concerning the mechanism of the reduction of ocular tension, based on experiments made on the lower animals, there can be no difference of opinion concerning the effect of excision of the superior cervical ganglion in the human subject. The operations made by Jonnesco, and

others on the Continent, and by myself in America, prove that removal of the superior cervical ganglion causes a marked reduction of intra-ocular tension in glaucomatous cases. That the same effect occurs in eyes with normal tension is evident from my third operation—that done for optic nerve atrophy.

EXTENT OF SYMPATHECTOMY IN DIFFERENT DISEASES.

Up to the present time excision of the cervical sympathetic has been performed for the following diseases: epilepsy, exophthalmic goiter, glaucoma and optic nerve atrophy. The question naturally arises: How extensive an operation is necessary in these affections? This I will attempt to answer:

In epilepsy it is necessary to excise the entire cervical chain on both sides for the reason that, according to Jonnesco's theory, it is necessary to convert a state of cerebral anemia—which he assumes is the condition in epilepsy—into one of cerebral hyperemia. Since the carotid plexus is formed by branches from the superior ganglion, and the vertebral plexus arises from branches which have their origin in the inferior cervical ganglion, it is evident that the entire cervical sympathetic must be removed.

In exophthalmic goiter, although Jonnesco in his first operation excised only the superior and middle ganglia, he now believes it necessary to remove the inferior as well, for this reason: from the superior ganglion the ocular fibers arise; from the inferior the vasodilator, cardiac-accelerator, and, probably, the secretory nerves of the thyroid gland. If eye, thyroid and cardiac symptoms are to be relieved the entire chain must be excised.

In glaucoma removal of the superior ganglion alone is necessary. All of the sympathetic fibers of the eye, with the exception of those which pass directly from the cerebrum by way of the trigemimus, are connected with the superior ganglion.

In optic nerve atrophy, if it should be proved that non-inflammatory atrophy of the optic nerve can be improved by sympathectomy, removal of the superior ganglion alone will be necessary, for reasons already given.

If the glaucoma is unilateral, it is necessary to remove only the corresponding ganglion.

HISTORY OF SYMPATHECTOMY.

In 1889, Alexander, of Edinburgh, resected the superior ganglion on both sides. In 1892 Jackson resected the vertebral plexus and cut the cord connecting the middle and inferior ganglion. The third operator was Kummel, who excised the superior ganglion on one side only. In 1893 Bojdanik made a bilateral resection of the middle ganglion. In 1896 Jaboulay made a bilateral section of the sympathetic cord, above and below the middle ganglion. These operations were all made for epilepsy.

In regard to exophthalmic goiter, Jaboulay made a simple section of the sympathetic early in 1896. In September of the same year Jonnesco excised the superior and middle ganglia.

Jonnesco was the first, in 1896, to do a bilateral resection of all three cervical ganglia, though it is claimed by a Polish surgeon, Baracz, that he proposed the same in 1893. To Professor Jonnesco furthermore belongs the credit of having first excised the superior ganglion for glaucoma in September, 1897.

Ball, of St. Louis, was the first to remove the superior cervical ganglion for optic nerve atrophy. The date of this operation was June 24, 1899.

Terrier, Guillemain and Malherbe, in their "Chirurgie du Cou," 1898, were among the first to give the surgery of the sympathetic a place in a text-book.

Among those who have operated on the cervical sympathetic for the relief either of glaucoma or exophthalmic goiter, or both, are Abadie,⁵ Réclus,⁶ Gerard-Marchant,⁷ Chaffand and Quénu,⁸ Jeunet,⁹ Bled,¹⁰ Ball, Renaud, and Bartlett.¹¹

Panas is opposed to sympathectomy in glaucoma.¹² He reports seeing a patient in whom, three months after the operation, vision was still declining.

Francois-Frank,¹³ at a meeting of the Paris Academy of Medicine, held May 23, 1899, spoke of the effect of sympathectomy on the circulation of the thyroid gland, brain, and eyes, and on the heart. He believes that the operation can easily produce good results.

Doyon¹⁴ has described the trophic changes produced in the rabbit by excision of the cervical sympathetic.

CONCLUSIONS.

From a study of the cases of sympathectomy made by Jonnesco and others, and from the observation of my own cases, I offer these conclusions:

1. Excision of the superior cervical ganglion is a most valuable procedure in glaucoma.

2. It is of more value in glaucoma simplex than in inflammatory glaucoma.

3. In inflammatory glaucoma, on which iridectomy has been done without benefit, excision of the superior cervical ganglion should certainly be tried.

4. In cases of absolute glaucoma with pain, sympathectomy is to be tried before resorting to any operation on the eyeball.

5. In cases of simple optic nerve atrophy, sympathectomy may possibly be beneficial if done before vision is entirely lost.

6. In cases of exophthalmic goiter, which do not improve under hygienic medicinal and electric treatment, excision of the cervical sympathetic on both sides is to be advised.

7. In unilateral glaucoma excision of the sympathetic ganglion is to be done only on the corresponding side.

8. In the hands of a careful operator, excision of the superior and middle ganglia is a safe operation but removal of the inferior ganglion can be done safely only by the most skillful surgeons.

9. The postmastoid route is to be preferred in excision of any part, or all of the cervical sympathetic.

10. The fact that glaucoma is improved by sympathectomy and the finding of pathologic changes in the excised ganglia suggest the conclusion that this affection is due either to a permanent irritation of the cervical sympathetic, or to an irritation located elsewhere and transmitted by means of the cervical sympathetic.

I wish to extend my thanks to Drs. E. C. Renaud and Willard Bartlett for valuable assistance in the preparation of this paper; to Dr. Carl Fisch for the pathologic report; and to Dr. R. B. H. Gradwohl for the illustrations.

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THE DOCTOR IN THE PUBLIC SCHOOLS.*

BY G. W. HIETT, M.D.
PITTSBURG, PA.

Shall we put a well-educated physician in each of the public schools? is a question; and if not why not? Let it be a physician who will make a thorough study of the pupils, classify them with reference to their physical and mental development and aptitude, both for study and play.

Without bone and muscle and without a plentiful supply of wholesome blood, the brain and nervous system can not long remain intact and properly perform their respective functions. The daily expenditure of brain energy and nervous force must necessarily have its corresponding recuperation by sound sleep, proper food, and wholesome exercise in the open air. This applies to all classes and conditions of ages, and especially to school children.

The excellence of the public school system everywhere is conceded. It is apparently almost perfect. The present system of education is broad, comprehensive, and fulfils the order of discipline in the extreme. It teaches effectively and well. Its superintendents, principals and splendid army of teachers are all, without exception, thorough. The youth of the land are yearly made better and better by the unselfish devotion and self-sacrificing efforts of the teacher.

The sanitary boards and bureaus of public health are likewise very quick to look after infection, and to quarantine the school in case of an epidemic of disease. They inspect the schools and the homes of the children, and in general perform a very efficient service, which concerns not only the school and the homes of school children, but the community. They are prompt in preventing the spread of infection, by quarantine, disinfection, etc. The law has, it is true, given them only limited powers, but it will give them more and better ones in the near future. To prevent disease ought to be, and is largely, the high ambition of physicians, as well as of the public generally. Medical men, of all people, know well the nature of diseases, and the extent and severity of their prevalence. They know a well-nourished and strong body when they see it, but likewise, and as a consequence, the well-nourished and well-supported brain and nervous system. The one is the necessary complement of the other. Brain energy and nervous force anticipate a sound, strong body. A vigorous, active brain must have a rugged physical make-up to support it or it will weaken, dwarf, and get out of balance sooner or later; it will become one-sided; some of the faculties will go wrong, and the beauty and harmony of all the faculties that go to make up a well-ordered brain will be marred, and sometimes almost totally destroyed.

To study the aptitude of each individual child, and take a careful survey of his physical construction, is the only sensible basis in any attempt at a classification of the pupils for the purpose of instruction. Without such a basis of classification harm is being done every day in our present system of teaching, resulting, in many instances in an irreparable injury to both the mind and the body. Any school system that educates the mind—the faculties, the intelligence—of the child, at the too great expense of the body, is vicious, radically wrong, and must be corrected. This is not being done, but it is here and there gaining the attention of the school boards

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and the physicians and educators generally, and the dawn of a new era in our present methods of classifying pupils will speedily come to pass. State medicine, if given the power, will put humanity on a better footing by producing, and wisely training, a more vigorous progeny, more free from disease, deformities and imperfections of all kinds.

The extent to which the world has gone mad on the subject of education and the refinements is not only remarkable, but it is appalling. No sensible parents force their child to eat the same quantity and kind of food. Why not take each individual child into account and study him from his own individual standpoint? Surely the nourishment, growth and development of the body, at the least, can not be hindered thereby. The same kind of sports and harmless indulgence that is well suited to the one child may not prove so wholesome to the other. The great plan of creation contemplates all these individualities, both physical and mental, and the respective environment of each—all these differences in the mental and physical wants of the early life of its creatures.

In the army and navy, the physician plays a very important part in selecting the individuals who compose the rank and file of good soldiers and splendid sailors, by a close, systematic scrutiny from his professional standpoint, of the whole make-up, physical and mental and moral, of the candidate. The ranks of the police and fire departments of the cities are likewise guaranteed at the hands of the physician. How much more important is it that the children in our schools should be carefully examined by him so as to secure to all of them the greatest and best development as a whole, and thereby guarantee to each child the true, wise, and harmonious measure of right development of body, mind, and heart that his birthright proclaims shall be his. Out of the human beings thus educated, there must necessarily be a grander and a more satisfying prospect of getting at all times better leaders for all the vocations of life.

The physician in the schools should be quite independent of the school board, the superintendents, and the teachers, and be connected, if you please, with the department of health, and be responsible to the head of this department, and to him alone. What the physician could do, in a generation, would make such a splendid showing in the direction of the right development, both physical and mental, as well as moral, that every thoughtful parent and citizen would be lifted up and relieved of, in great measure, the terrible load of discouragement and disappointment that is now daily and yearly being meted out to so many of our most hopeful people. But let such physicians be none other than those who are well disciplined, of broad views and scholarly attainments. Let their knowledge of human nature in general and of children in particular be of the broad type, and not second in importance to their attainments in anatomy, physiology, hygiene and mental science, and practical medicine.

Exercise the body, if you would preserve and sustain an active mind. Physical exercise stimulates the circulation which regulates waste and repair, cell birth, cell growth and cell development. It is a powerful stimulant of all the vital forces. Physiologic exercise is needful to every boy and girl; much more is it needed with those children who are born apparently at some disadvantage with the world—the ones whose degree of physical or mental vigor is below par. The soil for these

should manifestly be a little different than for the others, and their exercise should be modified. This can easily be done by a proper classification. As it now is each public school may be compared to a big funnel or hopper into which boys and girls are annually shoveled and come out dead, dying, distorted, deformed, disfigured—yes, and deprived too in some instances—specimens of the race with only a few who are at all fitted to survive the struggle of life's great battle.

Such an annual educational exhibit, if you bunch them all together, might with little impropriety, as well as with a great deal of respect for veracity, be at least to a large extent truly styled an exhibition of vanity, perverted tendencies and a disqualification, as well as a disinclination to grasping things practical and things real. Such an exhibition, such education, truly does not bespeak nor guarantee an abiding and enduring civilization.

What is the substantial, the only safeguard to an enduring civilization? Truly, first of all a progeny that is born right, sound to the core, with physical, mental and moral breeding of a high order to start with, so that when educated and trained and disciplined, it will exhibit strength, resource, power. Such a progeny, and such alone can build a civilization that will live long and weather the storms of adversity and harvest in abundance the precious fruits of useful and wholesome living—such a progeny will beget a still higher order of beings, and in this way essentially and truly is mankind lifted up; in this way is man everlastingly benefited; in this way does he crown with brightness and glory the ever hopeful tendency; in this way does the Spirit who made us all mete out to us our greatest blessings; in this way as a result of a truer and better education do we creatures after the law harvest the golden sheaf of righteousness, which is the prime, the beautiful result of all education. Amen, then, to our public schools! They truly are the great bulwark of our present civilization. Let us educate, and educate and educate, but let us do it rightly so we may have the greater and better if not the greatest and best, results for the efforts put forth in this direction.

As an adjunct, then, to the cause of education, as a potent factor for good results along the lines of a better classification of the pupils for purposes of instruction; as a teacher of sanitation, hygiene, etc., with all that these terms imply, I cheerfully recommend to the school boards and educators and people at large the services of the good, the thoughtful and up-to-date American physician. He truly knows the importance of building or securing a large school-yard or playground first, and then the modest school-house afterward, with proper air and light and heat and water and proper sanitation in general. He knows better than others the nature of the diseases that affect mankind at large and school children in particular. His usefulness in preventing disease and thereby benefiting the public health is of no mean proportion. His knowledge of the varying types of infant and child life, of its growth and development, certainly makes it quite natural that he should be chosen by the school board or by the state to arrest and prevent disease and lend his voice in the selection of the proper and wholesome course of study. That the doctor in the school will do an efficient and useful service to the pupils and the community at large, no thoughtful observing person will deny. That the cause of education will be better served and achieve better and more-lasting results must likewise be admitted. That his assistance will

render the pupil to a greater extent mindful of his individual and personal wants and needs, must also be conceded; because he of all persons knows human wants and needs and suffering in a way that no other person does. It is he who well knows the importance of the strong and vigorous body, without which the mind must sooner or later give way, or become unbalanced and distorted.

A good physician in every public school in the land will, in one single generation, bestow on mankind a far richer heritage than the present system of teaching and the present method of doctoring. It is high time that the very worthy teacher and the capable physician should get together in our public schools, that the children of the laud may suffer less, have less sickness and disease and death among their ranks, and have a training and discipline and an imparted knowledge vastly more suited to their individual and personal wants and relative environment. It is too much to ask or expect all of this at the hands of the teacher, who is of all people truly burdened with tasks and required to teach pupils more than twice too much. It is neither necessary, nor does it educate, in the broader sense of the term. Who of us as grown, mature individuals does not know how trying it is on both the mind and the body to undertake to do too many things at once? What a strain and what, in many instances, are the results obtained? Usually not what one would wish.

The task to be performed must be measured by the capacity to do or perform; not only the mental effort, but the physical force or vigor necessary to support that effort. Again, I repeat, let us classify the pupils not only with reference to their mental aptitude, but also to the degree of health and physical vigor necessary to support that aptitude. This, then, I conclude, as I stated in the beginning of my short paper, is the prime basis for classifying pupils for purposes of instruction, and without this basis of classification there can be no progressive, as well as the most highly productive school work.

TUBERCULOSIS IN COLORADO.

METHODS OF DISSEMINATION AND MEASURES FOR ITS RESTRICTION.*

BY G. E. TYLER, M.D.

SECRETARY COLORADO STATE BOARD OF HEALTH,
DENVER, COLO.

The records of the Denver Bureau of Health show the following mortality from tuberculosis:

Years	1893	1894	1895	1896	1897	1898
Total deaths from tuberculosis	435	377	428	368	489	501
No. specified as contracted in Colo.	49	51	64	66	88	99
Per cent. contracted in Colo.	11.26	13.52	14.95	17.93	17.99	19.77

This steady increase of the number of deaths from tuberculosis contracted within Colorado is sufficient to merit the earnest attention of all who are in any way interested in the prevention of the unnecessary spread of disease. At the August meeting of the Executive Committee of the State Board of Health, the secretary and Dr. J. N. Hall were authorized to seek a conference with the governor, the state dairy commissioner and the state veterinarian with a view to outlining a plan whereby the unnecessary spread of this disease might be restricted. An informal conference was held Sept. 26, 1899, and on September 30, the two last named officials met with the executive committee for a full discussion of the problem.

Owing to its far-reaching importance, and in order that there might be the largest possible collection of data, adjournment was had for three months and the parties to the conference were directed to obtain all information possible. The scope of the inquiry conducted by the State Board of Health has included all possible sources of infection known to sanitarians. For all practical purposes these sources of infection may be divided into three classes, as follows: 1. The expectoration of consumptives. 2. The milk from tuberculous cows. 3. The flesh of tuberculous animals. This does not mean that other sources may not exist, but no others of importance are known to exist. Of course it has been proven that tuberculosis is transmitted by heredity. But these cases are so rare that this possesses merely an academic interest; and it would doubtless augur better for sanitary control of this disease if people's minds were disabused of the idea that heredity is a factor of any importance in the actual transmission of the disease. Of course, too, the disease has been acquired by accidental inoculation, as during a surgical operation or an accidental cut at an autopsy. But so far as present knowledge goes the sanitarian is concerned with the three sources mentioned, and with no other.

Expectoration.—It is a fact so well established as to need no argument that the expectoration of consumptives contains the tubercle bacilli, and that these bacilli are the cause of the disease in others. It is also well established that so long as the expectoration is kept moist the tubercle bacilli are not distributed through the air; but so soon as it dries they are liberated and float in the air as fine particles too small to be observed, and that their inhalation with the breath causes the development of the disease in others. So long therefore as consumptives are allowed to spit on the streets the air is liable to contain these germs. So long as they are allowed to spit on the floors of street-cars or other cars, of halls and other public places, there is danger to the public. So long as they are allowed to spit on the floors of hotels or boarding-houses there is danger to the other occupants of these places. Moreover, the danger increases proportionately as the sunlight and fresh air decrease, so that the danger from indoor expectoration is considerably greater than from out-door spitting. It frequently happens that through ignorance, carelessness or feebleness the consumptive spits on bed linen, where the matter dries and becomes a source of danger. How frequent is it the practice to spit in the handkerchief all know. The handkerchief dries quickly, and each time it is used the germ-laden dust infects the atmosphere. The question has been raised as to the relative degree of danger from expectoration in the different stages of the disease. Apparently some have considered the danger slight in the early stages, but great in the later periods where there is cavity formation and profuse expectoration. When it is considered that the earliest diagnostic method recommended to-day is the examination of the expectoration for the tubercle bacilli, and that they are frequently found before the physical examination reveals the presence of the disease, it will be seen that the earliest cases are sources of danger. When it is further considered that the cavity cases with abundant expectoration often show comparatively few tubercle bacilli, but do show immense numbers of the pus organisms, it will be concluded that the variation of danger in the different stages is not so great as at first supposed. An important question concerning the expectoration is: Who are liable to be endangered by carelessness in disposing of the sputum? 1. The consumptive himself. It can hardly be doubted

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that many cases terminate fatally by reason of reinfection with the patient's own expectoration, and that these persons might have recovered had they been more careful in this regard. 2. All persons coming into more or less intimate association with the consumptive. The number of nurses, wives, and others who are constantly associated with consumptives who take the disease is not small. Cornet investigated the death-rate from consumption among certain religious orders devoted to nursing. "In a review of 35 cloisters, embracing the average number of 4028 residents, among 2099 deaths in the course of twenty-five years, 1320 (62.88 per cent.) were from tuberculosis." "The mortality in prisons has been shown by Baer to be four times as great as outside." (Osler.) It is notorious that the insane placed in asylums have a large death-rate from this disease. But in hospitals where due care is taken, as that at Falkenstein, the disease is rarely acquired, and indeed it is claimed that at that institution no nurse or attendant has ever taken the disease. 3. All persons, that is, the public generally, are to some degree endangered by the expectoration on the streets, in cars and other public places. Dr. W. C. Mitchell and the late Dr. H. C. Crouch absolutely demonstrated that the expectoration of consumptives continues to be a source of danger after at least thirty-five hours of exposure to direct sunlight. No one will question, therefore, that the expectoration has abundant opportunity to become thoroughly dry and to be wafted over a large area, thereby endangering, to some degree at least, the health and life of every citizen. 4. Animals are liable to contract the disease from the expectoration of human consumptives. The identity of animal and human tuberculosis, first announced by Koch, but often disputed since, has at last been demonstrated beyond the possibility of a doubt. The reasonableness of the proposition that animals may and do contract the disease from man is not therefore open to question. In a recent summary of Continental opinion on this subject Conn says: "So long as calves come in contact only with their mothers the amount of tuberculosis is very small; the amount of the disease, however, increases rapidly year after year: this increase in the disease is directly proportional to the contact with man. In sanitary institutes, where the attendants of the cattle are presumably in considerable measure suffering from tuberculosis the amount of tuberculosis among the cattle is always very great. There are practically no cases of healthy herds where they are attended by the patients of sanitary institutes. The condition of the herd may be always predicted from the condition of the family that has charge of the herd. If the inspector looks first at the people on the farm and finds one or two of them that appear to have traces of tuberculosis he can predict with absolute certainty that he will find the same disease among the cattle." Of interest in this connection is the fact that it is only in comparatively recent years that the existence of bovine tuberculosis in Colorado has been admitted. Though this is not the sole reason for the development of the disease among Colorado cattle it can hardly be doubted that the constant influx of consumptives to our state and their employment in attending cattle has had considerable influence.

Dairy Products.—That cows suffering from tuberculosis may give milk containing the tubercle bacilli is universally accepted among competent observers. Tubercle bacilli have repeatedly been found in such milk. Animals have been inoculated with the milk and died from typical tuberculosis. Other animals have been fed the milk of tuberculous cows and have succumbed to the dis-

ease. Conn says: "It is the universal opinion in Europe, and in this country, of those who have looked into the matter that there is a danger to mankind in the use of tuberculous milk." Hirschberger states that an owner of a herd of cows known to be tuberculous withdrew the milk from market and used it without boiling to fatten his pigs. Almost without exception they became tuberculous and the entire stock had to be killed. Osler says: "There is no reason to believe that young children, or even adults, are less susceptible to the virus than calves or pigs, so that the danger of the disease from this source is real and serious. The great frequency of intestinal and mesenteric tuberculosis in children no doubt finds its explanation here. In Woodhead's analysis of 127 cases of fatal tuberculosis in children, the mesenteric glands were involved in 100." Dr. Martin, on behalf of the Royal Commission of England, experimented with milk from tubercular cows on guinea-pigs, rabbits and pigs. The milk from cows with tuberculosis of the internal organs but not of the udder produced no results. With that from cows with tuberculous udders every inoculation was positive. He then fed 27 animals with varying quantities of milk, and 19 developed tuberculosis. The abdominal organs were chiefly affected in those which developed the disease. Sometimes there was generalized tuberculosis; sometimes the glands about the mouth and the angle of the jaw were affected. When the location of the disease is compared with the location of the disease in children who live largely on milk, the conclusion seems warranted that the infection in both cases is from a common source. In commenting on these experiments Dr. Martin says: "The milk of cows with tuberculosis of the udder possesses a virulence which can only be described as extraordinary. In those cows where the tubercle bacilli were found in the milk, the feeding experiments were uniformly positive, as well as the inoculation experiments. It is noticeable, too, that a small dose of the milk diluted four times gave tuberculosis to all the animals fed, and that a dose of even .05 to .1 c.c. diluted with non-infected milk was sufficient to produce tuberculosis." A boarding-school in Paris had fourteen girls, nine of whom developed tuberculosis in a short time. It was discovered that they had all been using milk from one cow and that that cow was markedly tuberculous. (Conn.) A daughter of Dr. Goss, without hereditary taint or predisposition, was quite healthy up to the age of 17, when she sickened and died in about ten months. The autopsy showed extensive tuberculosis of the abdominal organs and mesenteric glands. Her father had been in the habit of taking her every week to a small farm which he owned, and her chief delight was to drink milk fresh from the cows. Four out of the herd of five cows proved tubercular and two had udder tuberculosis. No other source of infection was discovered. (Kilpatrick). Mayo says, and he speaks from the standpoint of the veterinarian: "As tuberculosis of cattle is identical with that of man, and the disease can be transmitted to mankind through the milk and flesh, which furnish so large a part of the food of man, the importance of this disease is apparent." The entire subject of milk infection was taken up by the Massachusetts Society for the Promotion of Agriculture, the results of the studies of Professor Ernst being published by this society. He found that tubercle bacilli sometimes occur in the milk of cows having no demonstrable tuberculous lesion of the udder. This was determined by cover-glass preparations, as well as by inoculations of animals. Further, it was found that the feeding of infected milk to animals

caused the disease in a certain proportion of cases. Ernst came to the following definite conclusions: 1. While the transmission of tuberculosis by milk is probably not the most important means by which the disease is propagated, it is something to be guarded against most carefully. 2. The possibility of milk from tuberculous udders containing the infectious element is undeniable. 3. With the evidence here presented, it is equally undeniable that milk from diseased cows with no appreciable lesion of the udder may, and not infrequently does, contain the bacillus of the disease. 4. Therefore, all such milk should be condemned for food. Bay examined 351 separate specimens of cows' milk by centrifugation, and in 51 found tubercle bacilli.

There are those who assert that the danger to the public health from such sources is so slight as to be of no practical importance. Those making this statement are frequently directly or indirectly connected with dairy work. But if their argument is sound it should be accepted. It may be well, therefore, to examine their chief statements. They assert that unless there be general tuberculosis or udder tuberculosis there is probably no danger. They make the further statement that dairymen will of themselves, without supervision, separate a cow suffering from general tuberculosis from the milk-producing herd. What assurance has the public that this will be done voluntarily? Granting that many dairymen will do it, the public demands, and has a right to demand, that such separation shall not depend on the volition of a dairyman. In view of the fact also that here in Colorado dairymen have had to be forced to separate cows with notorious evidence of tuberculosis, the statement seems too insignificant for further attention. This is not saying, however, that many would not do this; but I do contend that the dairymen as a class could not be depended on to do it. It is also true that there may be widespread bovine tuberculosis without sufficient symptoms to excite suspicion. N. S. Mayo, M.S., D.V.M., says: "It is astonishing how badly an animal may be diseased and to all appearance be in good health. Several years ago I was called to treat a pure-bred Shorthorn cow that, until the day I was called, had appeared in excellent health. The disease was diagnosed as tuberculosis and she was destroyed. Post-mortem examination showed both lungs badly diseased, a tuberculous abscess in one lung containing a pint of pus. Her heart was a mass of tuberculous tissue, weighing 16.5 pounds, and almost every internal organ more or less diseased. This cow had a sucking calf two months old at her side. The calf was destroyed, and was found to have a tuberculous abscess in one lung as large as a walnut, and the bronchial lymphatic glands were also diseased." In view of the difficulty of diagnosis, and in view also of the findings of Professor Ernst, above quoted, and of the further fact that no one can say at what moment a cow suffering from a local tuberculosis may develop a general one or udder tuberculosis, it is certainly an irrational procedure to allow the sale of milk from a cow with a local affection of this nature. It is also worthy of note that the very persons who minimize the danger to human beings from such milk, emphasize the fact that this milk should be Pasteurized or sterilized before feeding it to calves or pigs. One more argument used seems to demand notice: Some assert that during the past forty years bovine tuberculosis has greatly increased, while during the same time human tuberculosis has decreased, and this in spite of the fact that there has been a considerable increase in the use of dairy products. If the truth of these assertions should

be granted the conclusion does not follow that there is little or no danger from milk. For far greater attention has been paid during this period to the prevention of infection in other ways than ever before. But Sir Richard Thorne, medical adviser to the Local Government Board, London, said, on Nov. 9, 1898, that the increase of tuberculosis had gone hand in hand with a steady increase in the consumption of cows' milk as a food, English people being habitual consumers of uncooked milk. In Iceland, which is without cows, human tuberculosis is unknown. Japan was free from tuberculosis until cows were introduced from America. Since that time the disease has rapidly developed until now nearly one-third of all deaths are due to this disease.

It is established beyond cavil that milk is a sufficient source of danger to demand the earnest attention of health officials. There appears to be no reason for not accepting without question the doctrine of the danger of milk from tuberculous cows.

Meat.—"There has been a large amount of investigation in connection with the possibility and the probability of tuberculosis being carried from animal to man in the flesh of the animal used as food. A very large amount of experiment in this connection has been carried on in the last fifteen years. These experiments have in large degree consisted in feeding tuberculous flesh to animals known to be subject to the disease, and then noticing whether its consumption produces tuberculosis in the animals thus fed. The result of these experiments has been conclusive enough. While it does not always happen that tuberculosis will follow the eating of tuberculous material by such animals, it has resulted in a sufficient number of cases to show beyond peradventure that this disease may be transmitted by the flesh of animals suffering from the disease." (Conn.) It is interesting to note that in New York City, for six years, the average annual death-rate from tuberculosis per 100,000, among the Russian Polish Jews, was but 76.72, while for the remainder of the population it was 427.75. When their scrupulous care as to meat inspection is considered, one can not help wondering if this may not have some effect in producing this wonderful relative freedom from the disease. The almost unanimous opinion concerning the danger from meat is that if there is general tuberculosis the entire carcass is unfit for food. But if the disease be localized the affected part is all that need be condemned. Thorough cooking kills the germ, but so much beef is eaten rare that anything less than the above plan indicates is unsafe.

What evidence is there of bovine tuberculosis in Colorado? It appears to be the general opinion of observers that little, if any, exists among range cattle. This is not strange in view of the continuous out-of-door life which cattle of this class lead. Tuberculosis bears a rather close ratio to the indoor life and forced feeding of cattle. Yet Dr. Hillkowitz and I witnessed the slaughter of a cow from the range, one that had never been outside of Colorado, which had a beginning pulmonary tuberculosis. As to the disease among dairy cows, no one who has investigated the matter will contend that it does not exist. The Denver Bureau of Health has made promiscuous tests, as follows: In 1897, 477 tests, 10 condemned, about 2 1/10 per cent; in 1898, 4 tests, 1 condemned, 25 per cent.; in 1899, 101 tests, 6 condemned, about 6 per cent.; total number of tests 582, total condemned 17; per cent. condemned, about 3. Dr. Hillkowitz, in his interviews with Hebrew slaughterers, found that not one of them would knowingly buy a dairy cow for slaughter because of the known prevalence of

tuberculosis among this class. At a certain Denver slaughter-house, notorious for bad cattle, one of the butchers told me he thought 90 per cent. of all dairy cows slaughtered there were tuberculous. No butcher interviewed, and they have been at random, has put the percentage lower than 30. A prominent one who tries to buy the best heaves told me he would not knowingly buy dairy cows, but said that in spite of all care he is compelled to reject a considerable number of carcasses.

There are practically but two methods of determining the presence of tuberculosis among cattle, viz., post-mortem inspection and the tuberculin test. The symptoms are so latent and obscure and the physical signs are so uncertain by reason of the thick chest walls of the animal that the disease may advance extensively before it is suspected. As yet there has been no adequate and systematic slaughter-house inspection in Colorado. The other duties of the city meat inspectors prevent their giving much attention to this matter, so there are no data at hand from which absolutely to determine the per cent. of tuberculous animals coming to slaughter. The State Board of Health has tried to obtain the estimate of the butchers without bias, and this opinion is recorded above. Every one knows that no adequate testing with tuberculin has been made, but the available statistics are quoted above. To hazard a statement of the amount of bovine tuberculosis in Colorado would therefore be unwise. But it can be asserted with positiveness that the disease exists. It is also probably true that a complete testing of all dairy cows within the state would reveal a larger prevalence than has been supposed. Certainly it is true that unless measures are taken to lessen its spread the percentage will increase rather than otherwise.

This introduces an idea which has not received sufficient consideration, but which, nevertheless, is exceedingly important, i. e., that the prevention of bovine tuberculosis is of marked importance to the dairymen and stockmen themselves. Tuberculosis enters a herd in the first instance from without, by one of the methods above mentioned. Once it has entered, its spread is certain under ordinary conditions. This means a prospective loss of a percentage at least of the stock and the continual infection of fresh animals. Instances are recorded where owners have been forced to entirely restock their farms because of the continual spread of the disease. Conn says: "The statistics being collected in the last few years are tending to show that bovine tuberculosis is not only on the increase but on the very rapid increase. Twenty-five years ago the amount of tuberculosis reported from slaughter-house inspection was only 3 to 5 per cent. To-day it is 10 to 50 per cent., and more often approaching the higher than the lower figures."

In Germany, in 1895, there was a direct loss to the farmers of \$1,500,000 from the condemnation of carcasses of slaughtered cattle alone. It should be remembered, too, that German inspection does not condemn every tuberculous carcass, so that this represents but a small part of the money value of the tuberculous animals. Though it is probably true that our percentage is lower, the danger is present, and it is far more economical to attack the problem now than it will be if a few years are allowed to pass in inaction. Therefore, the dairymen and all breeders of stock should welcome rather than oppose a practical move in this direction.

How can the milk supply be protected? Not by examining the milk for the tubercle bacilli, because milk from a tuberculous udder may be free to-day and full of bacilli to-morrow, and to analyze every milking is a physical im-

possibility. Not by mere inspection of the herd. Though this would reject the majority of animals with advanced general tuberculosis and those with pronounced udder disease; there are real dangers, according to the statements of competent authorities—e. g., Mayo and Ernst—from animals in which the disease can not be discovered by even close inspection. There remains but one known method, the use of the tuberculin test and the prohibition of the sale of milk from every animal not shown free from reaction. The simplicity of the test makes it easy of application. Its absolute freedom from danger is now acknowledged. Its accuracy may be understood from the following figures given by Mayo: Out of 11,313 cattle tested, 5,737 reacted. On post-mortem, 5,746 were found tubercular. Two reacted that did not show tuberculosis and 9 did not react, but were tuberculous. This shows an average of but one error in every 1,028 tests.

This testing should be done by officials only, in order to be sure of its accuracy and to guard against fraudulent certificates. The method is simple, but takes time. The tester takes the temperature of the animals every two hours, from 6 a. m. to 8 p. m., and records this as a basis for comparison. At 10 p. m. he injects 2 c.c. of tuberculin (B. A. I.) hypodermically. Beginning at 6 a. m. of the following day he records the two-hourly temperature until 10 p. m. If the temperature rises 2 F. or more above the corresponding temperature of the day before, the animal is considered tuberculous.

What shall be done when tuberculosis is discovered in a herd? 1. The reacting animals should be separated absolutely from the non-reacting, without delay, and there should thereafter be absolutely no communication of the herds, as by using the same feeding places, watering troughs, etc. The reacting animals should be marked with an imperishable mark or brand. 2. The barn which they have occupied should be completely disinfected. 3. The sale of milk from the reacting herd should be stopped at once. 4. It is not necessary to order the slaughter of every reacting animal. If a man has but one or two reacting animals he will probably prefer to kill them. But even then he need not suffer great financial loss. For unless there is general tuberculosis he should be allowed to fatten the animal for beef, if he will consent to slaughter under competent inspection. But if he has a considerable number of reacting animals he probably will wish for some other solution of the problem. If he can and will absolutely separate and keep separate the two herds, and if he will separate the calves of the reacting herd, have them tested and bring them up on non-infected milk, there is no reason why he should not be allowed to use these diseased animals to build up a healthy herd. But this latter plan depends for its success on rigid observance of the conditions mentioned.

The two greatest hindrances to the solution of this problem have been the objection, on the part of the owners, to the financial loss involved in compelling the slaughter of their animals without compensation, and that on the part of the state to the enormous burden involved in compensation. With these two objections removed there should be active, earnest co-operation of all concerned. I believe the two plans presented do away with the objections, for the farmer will be able to sell many diseased animals, getting good compensation therefor, and where his herd has become largely invaded he can, by proper care, build up a healthy one and be assisted in doing so. He must lose only those animals which would soon die. On the other hand, the state does not need to spend a great amount of money for condemned animals. I am

thoroughly convinced that it will pay the owners to take up this problem and pay the necessary expenses of testing if some competent authority will guarantee the accuracy of the work. But it is doubtful if they will without some encouragement.

The question now confronting us is: What shall we do to lessen the spread of this disease among animals and mankind?

1. The continual education of the public is essential to success. Every person should be informed as to preventive measures. I therefore recommend that a carefully worded circular suitable for popular distribution be prepared by the State Board of Health, and that an effort be made through local health officers, physicians, libraries and schools to put this circular in the hands of every resident of Colorado. This circular should set forth the dangers from expectoration and from milk and meat supply, and the measures necessary to prevent the danger.

2. Public expectoration should be lessened by proper placards and be prohibited by ordinances in the larger places of the state. Women's clubs, city improvement societies and the public press will be of great aid and I recommend that their active co-operation be secured where possible.

3. I recommend that all rooms where deaths from consumption are reported be disinfected immediately by the local health officers.

4. All insane asylums, prisons, reformatories and hospitals should be required to keep tubercular and non-tubercular inmates separate. For state institutions this is the work of the State Board of Health; for others it is the work of local boards of health.

5. So far as possible dairymen should be persuaded to have their herds tested and use this as a means of advertising. But as this is insufficient, I recommend that by the promulgation of health regulations or by the passage of ordinances where necessary, dairymen be compelled to produce official certificates of freedom from tuberculosis before they are granted permits to sell milk. Due notice must be given, but this ordinance can go into effect by July 1, 1900, if the matter is properly pushed, and I recommend that date. Where necessary it will be well to compel the payment of a certain sum per head for every cow in the milk-producing herd, and to utilize this fund for testing and sanitary supervision. The State Board of Health is willing to select competent men for this work on request of local officers, and to frame and publish rules governing such testing and inspection; in short, to facilitate the work in every way. It seems to me desirable to have an agreement between the local boards and the State Board of Health, so that no inspector will be employed without authority from the latter. Uniformity of regulations and complete records of the work can thus be secured, and no confusion as to conflict of authority can arise.

6. I also recommend that the employment of tubercular persons on dairy farms or at milk depots be absolutely prohibited, by ordinance.

7. Ordinances should be passed prohibiting private slaughter-houses and requiring that all animals be slaughtered at public abattoirs under competent inspection. If federal meat inspection can be secured, all condemned meat should be destroyed in order to prevent its being placed on the local markets. If federal inspection can not be secured, a tax should be levied on the slaughter business sufficient to meet the expenses of inspection.

8. I further recommend that the active aid of the pub-

lic press be enlisted in furthering all phases of this important work.

These measures were definitely agreed on at a conference of state and local officials held on Dec. 23, 1899, and will be carried out by the responsible officers.

REGULATION OF THE PRACTICE OF MEDICINE.*

BY JUDGE JOHN I. DILLE.

DEAN OF HIGHLAND PARK COLLEGE OF LAW,
DES MOINES, IOWA.

The power and the duty of the states to regulate the practice of medicine have been fully established. It is the inalienable right and imperative duty of the government, by legislation, to promote the health, morals, education and good order of the people. This right, vested in the people in their sovereign capacity, has been likened to the individual right of self-defense, the exercise of which is a part of the law of self-preservation. The police is a plenary power, and may be exercised by the state to regulate or prohibit things inconsistent with the public welfare.

No other function of government has been so frequently appealed to, nor so successfully exercised, and none other is of greater importance to the people, individually and collectively. We look to this power for the suppression and punishment of crime, the preservation of public peace, the regulation of dangerous employments, the sale and use of dangerous commodities, the prohibition of acts inconsistent with public morals, the protection of the weak from the aggression of the strong, the ignorant and unwary from the power of the cunning and the unscrupulous, and for the maintenance of the public health.

It is by virtue of this power that the state maintains prisons, confines lunatics, regulates the conduct of vagrants, establishes fire limits, regulates the use of dangerous machinery and public conveyances, forbids lotteries and gambling, prescribes quarantine regulations, prohibits adulteration of foods, controls the liquor traffic; in short, it is the weapon to battle with all of the evils of society.

It is under this classification that the state regulates trades, occupations and professions, notably those of plumbers, engineers, pilots, masters of ships, telegraph operators, druggists, pharmacists, lawyers and physicians.

Some physicians question the propriety of such legislation. It is urged that the ignorant are inclined to look on such legislation as an attempt by the physicians in practice, to monopolize the business, and that under defective or poorly-executed laws the dishonest and incompetent succeed in getting certificates to practice, and their pretensions are made respectable thereby. My judgment is that the united efforts of the profession could not effect a repeal of the legislation on this subject. The necessity for such legislation is firmly fixed in the minds of most intelligent laymen, as the legislation on the subject in nearly every state in the Union from the earliest period to the present time shows. It would seem to be your duty to the public to assist in formulating such legislation and in making the same effective. The man of science can hardly afford to shrink from public duty because its discharge is unpleasant, nor because some of the beneficiaries are incapable of appreciating the protection afforded by his efforts. The self-consciousness of public duty well performed, and the approbation of

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posterity, are the only certain rewards of the faithful and efficient public servant.

Public welfare demands that the physician and surgeon possess knowledge and integrity; knowledge to properly diagnose the case and to apply appropriate remedies, and the integrity to deal honestly with his patients. It is certainly unnecessary to demonstrate that a well-disciplined mind, thoroughly familiar with the several branches that compose the science of medicine, is essential to the diagnosis of a case, and that such diagnosis should precede treatment; and it is equally patent that the physician's or surgeon's skill and honesty are unknown to the people, if he be inexperienced or in a strange community. The purpose of legislation on this subject is to furnish to the people proof of these essential qualifications, by requiring appropriate certificates from duly constituted state authorities, and that such certificates be made accessible to all by being recorded in a public office of the county.

Legislation regulating the practice of medicine is common to all of the states, and its constitutionality, when framed on proper lines, has been universally sustained. The exercise of the police power, especially in the regulation of occupations, trades and professions, has been persistently resisted as an encroachment on personal liberty. Our first conception is that every man has the right to follow any occupation, trade or profession he may desire, without let or hindrance from the state, and that to earn an honest living in any place and in any legitimate calling, without restriction, is an inalienable right. That this reasoning is fallacious and ignores one of the fundamentals of government is made plain by the following recent deliverance by the Supreme Court of the United States:

It is undoubtedly the right of every citizen of the United States to follow any lawful calling, business or profession he may choose, subject only to such restrictions as are imposed upon all persons of like age, sex and condition. This right may in many respects be considered as the distinguishing feature of our republican institutions. Here all vocations are open to every one on like conditions. All may be pursued as sources of livelihood, some requiring years of study and great learning for their successful prosecution. The interest, or, as it is sometimes termed, the "estate" acquired in them—that is, the right to continue their prosecution—is often of great value to the possessors and can not be arbitrarily taken from them, any more than their real or personal property can be thus taken. But there is no arbitrary deprivation of such right where its exercise is not permitted because of a failure to comply with conditions imposed by the state for the protection of society. The power of the state to provide for the general welfare of its people authorizes it to prescribe all such regulations as in its judgment will secure, or tend to secure, them against the consequences of ignorance and incapacity, as well as of deception and fraud. As one means to this end, it has been the practice of different states, from time immemorial, to exact in many pursuits a certain degree of skill and learning upon which the community may confidently rely; their possession being generally ascertained upon an examination of the parties by competent persons, or inferred from a certificate to them in the form of a diploma or license from an institution established for instruction on the subjects, scientific and otherwise, with which such pursuits have to deal. The nature and extent of the qualification required must depend primarily upon the judgment of the state as to their necessity. If they are appropriate to the calling or profession, and attainable by reasonable study or application, no objection to their validity can be raised because of their stringency or difficulty. It is only when they have no relation to such calling or profession, or are unattainable by such reasonable study and application, that they can operate to deprive one of his right to pursue a lawful vocation.

The present Iowa medical practice act, which super-

sedes all previous legislation on the subject was passed in 1897, and provides that the Board of Medical Examiners may issue certificates to physicians, authorizing them to practice medicine, surgery and obstetrics in the state, as follows:

1. Persons who began the practice of medicine in the state before Jan. 1, 1899, and have passed the examination prescribed by the act.

2. Persons who began the practice of medicine in the state before Jan. 1, 1899, and who had diplomas from medical schools in good standing, issued before said date.

3. Persons who begin the practice of medicine after Jan. 1, 1899, have diplomas from medical schools in good standing, have passed the required examinations before the Board and have furnished evidence that the applicant has attended four full courses of study of not less than twenty-six weeks each, no two of which shall have been given in any one year.

4. A person who goes from place to place and solicits persons to meet him for professional treatment at places other than his office at the place of his residence, is an itinerant physician, and in addition to procuring a certificate from the Board, as other physicians are required to do, must also pay \$250 per annum for the use of the state.

Each applicant for a certificate must pay a fee of \$20. The certificate must be recorded in the office of the county recorder, who receives a fee of 50 cents for recording. The Board may refuse to grant a certificate to a person who is not of good moral character, and if granted it may be revoked for a like cause, or for incompetency or habitual intoxication, or for false and fraudulent statements as to graduation.

The following persons are not required to have certificates:

1. Physicians who have been in the practice in this state for five consecutive years, three years of which time shall have been in one locality.

2. Students of medicine, surgery or obstetrics, who have had not less than two courses of lectures in a medical school of good standing, may prescribe under the supervision of a preceptor, or render gratuitous service in case of emergency.

3. Surgeons of the United States Army, Navy and Marine-Hospital Service.

4. Physicians or midwives, who have obtained from the Board of Examiners a certificate permitting them to practice medicine, surgery or obstetrics, without a diploma from a medical school or examination by the Board.

5. Persons who advertise, sell or prescribe natural mineral waters flowing from wells or springs.

6. Registered pharmacists filling prescriptions.

7. Persons selling patent or proprietary medicines.

In 1898 an act was passed authorizing the Board of Medical Examiners to issue certificates to graduates of osteopathic schools, authorizing them to practice osteopathy, at the same time declaring the same not to be the practice of medicine.

One of the district judges of the state, in a well-written and what seems to be a well-considered opinion, has held the act of 1897 unconstitutional, because of the provision which exempts from the operation of the act "physicians . . . who have been in the practice in the state for five consecutive years, three years of which time shall have been in one locality."

The point made against the law is that it is class legislation, or, as the judge says:

The act divides medical practitioners into two classes, those who have practiced five years in the state, three of which shall have been in one locality, and those who have not so practiced. On the latter class a burden of an examination, a fee of \$20, the recording of their certificate and the payment of a fee of fifty cents is imposed, and must first be complied with before they can lawfully practice medicine after the taking effect of the law, no matter what may have been their ability, skill or qualifications. When the law took effect the five-years-man

with three years in one locality was not in any way affected thereby.

The state and federal constitutions invoked in this case do not contemplate that every man shall have the same rights, immunities and privileges as every other man; but they do mean that every man shall have the same rights, immunities and privileges as every other in the same situation.

Some years ago the legislature of this state passed a bill regulating railroad freight rates, and in a decision sustaining such legislation the Supreme Court of the United States said:

It remains only to be considered whether the statute is in conflict with Section 4, Article 1, of the Constitution of Iowa, which provides that "All laws of a general nature shall have a uniform operation" and that "the General Assembly shall not grant to any citizen, or class of citizens, privileges or immunities which upon the same terms shall not equally belong to all citizens."

The statute divides the railroads of the state into classes according to business, and establishes a *maximum* of rates for each of the classes. It operates uniformly on each class, and this is all the constitution requires. The Supreme Court of the State in the case of *McAunich vs. R. R. Co.*, 30 Iowa, 343, in speaking of legislation as to classes, said: "These laws are general and uniform, not because they operate upon every person in the state, for they do not; but because every person who is brought within the relation and circumstances provided for is affected by the law. They are general and uniform in their operation upon all persons in the like situation, and the fact of their being general and uniform is not affected by the number of persons within the scope of their operation." This act does not grant to any railroad company privileges or immunities, which upon the same terms do not equally belong to each other railroad company. Whenever a company comes into any class it has all the privileges and immunities that have been granted by the state to another company in that class. It is very clear that uniform rate of charge for all railroad companies in the state might operate unjustly upon some.

It was proper, therefore, to provide in some way for an adaptation of the rates to the circumstances of the different roads; and the General Assembly, in the exercise of its legislative discretion, has seen fit to do this by a system of classification. Whether this was the best that could have been done is not for us to decide. Our province is only to determine whether it could be done at all, and under any circumstances. If it could, the legislature must decide for itself, subject to no control from us, whether the common good requires that it should be done.

Physicians who hold diplomas from medical schools of good repute, those who do not, and those who have been in the practice a given length of time are arranged in classes in the medical practice acts of most of the states, and such classification has been sustained by the supreme courts of Oregon, Minnesota, Michigan, Indiana, North Carolina, Nevada, and Washington Territory, and the Supreme Court of the United States, and the right to make the same may be regarded as established.

The decision in question seems to be based on two New Hampshire cases, and in these the following is the turning point, as stated by the court:

The present objection is not to the rule of evidence by which the statute requires qualification to practice to be determined. It is not that residence and practice during the specified time in one place is made sufficient evidence of fitness, equivalent to a diploma, rendering an examination unnecessary. It is not that, of those physicians who are declared by the statute or under its provisions are found qualified to practice, some are, and others are not subject to the burden of obtaining a license. Exemption from the burden is made to depend, not upon the integrity, education and medical skill, but upon a continuous dwelling in one place for a certain time. It is an arbitrary discrimination, permitting some and forbidding others to carry on their business, without regard to their competency or to any

material difference in their situation. The test is not merit but unchanged residence.

After stating the above views in his own language, the judge of this state, whose opinion we are considering says:

I think our law makes an arbitrary discrimination, laying a charge or burden on one class of physicians and citizens of the state not imposed upon others, in permitting some and forbidding others to carry on the business without regard to their competency or skill.

The constitutionality of these statutes turns on the question whether the classification of physicians made by this act is a legal and proper one. If physicians who hold diplomas are properly put into one class, those without diplomas in another, and those who have been in the practice in a particular place for a specified time in still a third class, then it follows that a person in either class has no right to complain of the requirements as to the class to which he does not belong. The man without a diploma, who must pay \$20, can not complain, for all of his class pay likewise; neither can he complain because the practicing physician is not examined and pays nothing, for the obvious reason that he does not belong to that class.

Then, the real objection is that the classification is based on the residence of the physician at a particular place for a given length of time, and that such classification is an arbitrary one, i. e., one that has no relation to the proper regulation of the practice of medicine.

In each decision the court has assumed that the classification is an arbitrary one. If this is a correct assumption the courts have arrived at correct conclusions. The United States Supreme Court has well said:

When we consider the nature and the theory of our institutions of government, the principles upon which they are supposed to rest, and review the history of their development, we are constrained to conclude they do not mean to leave room for the play and action of purely personal and arbitrary power.

The fallacy in these decisions is in the assumption that this is an arbitrary classification. I concede, if the act should provide that all red-headed physicians shall be exempt from the duty of getting a certificate, the classification would be an arbitrary one and could not be sustained. The classification must have some relation to the subject classified and to the purpose of the legislation. The existence of that relation is a judicial question, but its importance, it once having been found to exist, is one solely for the legislature to consider.

This legislation is for the purpose of protecting the people from ignorance, incompetency and dishonest practices. A stranger or student coming into a community to practice medicine must file with the recorder of deeds evidence of the fact that he has satisfied the officers of the state that he is worthy of confidence, and qualified to practice medicine. In no other way could the public so readily ascertain these facts or obtain this protection. This reasoning does not apply to a physician who has practiced five years in the state and three years in a particular place. A physician is a conspicuous figure in every community. In a sense he is a public character. Everyone soon knows him by name, sight or reputation. At the end of the required statutory time the people of the community have fixed ideas of his integrity, capacity, and of whether he is a success or a failure. He who does not know can soon learn from his neighbor. Nearly every citizen is capable and willing to express an opinion. The man who could be imposed upon under such circumstances would need a guardian. A certificate filed at the court-house would not answer the purpose. Now

why should such physician be classed with the student or stranger? Is not place of residence very properly made the turning-point in the classification? How can the courts say, as a matter of law, that such classification has no relation to the subject classified and to the purposes of the legislation?

In passing on a case involving this principle, the Supreme Court of North Carolina said:

It was fair to assume that those already in the practice, many of whom had grown gray in the service of humanity and the alleviation of suffering, had already received that public approbation which was a sufficient guaranty of their competency, and should not be needlessly subjected to the humiliation of an examination by the side of beardless boys, who had not yet swung a scalpel or prescribed a purgative, save under supervision; while those already in the practice who had proved incompetent it might be assumed, had been equally stamped with public disapproval, at the cost to the public of much bitter experience.

As supplementing what has already been said, I quote with approval a recent declaration by the Supreme Court of Michigan:

The real test of the right to practice is that he shall be a graduate of any legally authorized medical college in this state or in any one of the United States, or in any other country, and in this there is no discrimination. Now the legislature saw fit, in establishing this test, to exempt from its provisions a certain class of physicians and surgeons. In so doing, it in effect declared that the physicians or surgeons who had actually practiced medicine continuously for at least five years in this state, and who are practicing when this act shall take effect, were as well qualified, in its judgment, to continue the practice of their profession as the student coming fresh from the halls of a college with his diploma was to commence it. The reasons which induced the legislature to insert the exception may have been as varied as the different minds of its members. It certainly had power to insert it, and whether the power was reasonably or unreasonably exercised, or whether it was expedient to enact the law, are questions exclusively within the province of the legislative branch of the state government, and their judgment must necessarily be decisive upon these questions.

It is apparent to me that this classification is not an arbitrary one, but that it was necessary and proper for the legislature to recognize the existence of conditions which called for a classification of the subject for the purposes of appropriate legislation, and that the details of that classification are only for legislative consideration.

It will be observed that physicians and midwives who have obtained from the Board of Examiners certificates permitting them to practice medicine, surgery or obstetrics, without a diploma from a medical school or examination by the Board, are exempted from the operation of the act.

The physicians referred to can not be those who have practiced five years, three years of which time in one locality, for they are exempted by another clause. This exemption is made, it seems to me, through a misconception of previously existing law. The act of 1888, in force when the act of 1897 was passed, provided for the issuance of certificates to graduates of medical schools in good standing and to persons passing the required examination, and also to physicians who had practiced in the state five years, three of which at one place. No authority existed in the Board to issue certificates to physicians or midwives who belonged to neither of the three classes named. The result is that the legislature has created a class of physicians and midwives, to-wit, those holding certificates from the Board at the time of the passage of the act of 1897, which had no existence in fact or in law, for the Board had no authority to issue such certificates.

The presumption is that none were issued and that no such class existed.

It may be urged that the language of the act making the exemption is sufficient authority for the Board to issue such certificates. If such a conclusion is sound it would probably be fatal to the validity of the act, for it would confer on the Board arbitrary power to issue such certificates according to the caprice of its members. Such position, however, is not tenable. The whole act bears evidence of the intention of the legislature to require the Board to act on evidence, the *quantum* of proof in each case being defined by the act. Such a construction would invalidate the act. It is a well-established rule that when a statute is susceptible of two constructions, one of which would make it unconstitutional, the one that sustains the statute will be given. As no one belongs to this class, and no one legally can belong to it, there can be no such thing as rights, privileges or immunities thereunder, and therefore there can be no discrimination in favor of any one by reason of such classification.

Each itinerant physician is required to pay to the state \$250 per annum, and it may be urged that as the payment has no relation to the existence or non-existence of skill in the science of medicine, it is an arbitrary exaction from a class of physicians. But we have already seen that the legislature has made prominent in the act the importance of permanence in location of the physician as an element of safety to the public; evidently on the theory that when a reputation for good or bad is established the people can protect themselves, and that such idea properly arises out of the subject of the practice of medicine. It seems to be the judgment of the legislature that quackery, fraud and deception can best be practiced amongst strangers, and is most likely to be resorted to by itinerant physicians. This I believe to be also in accord with the common judgment of mankind. The legislature might legally, if it saw fit, entirely prohibit the itinerancy of physicians on this theory. This legislation is designed simply to discourage the practice, and is a reasonable exercise of legislative power.

In the act of 1897 there is a discrimination between those who may begin the practice and receive their diplomas after Jan. 1, 1899, and those who began the practice and received their diplomas before that date. The latter class can receive certificates on presenting their diplomas without examinations, or on examinations without diplomas, as provided by the old law, while the former class must have diplomas, pass the examinations and furnish evidence of having attended four full courses of study of not less than twenty weeks each, no two of which shall have been given in any one year.

The classification is based on a date, named in the act, two years subsequent to the passage of the statute. Is this classification arbitrary and illegal, or one appropriate for the subject classified and within legislative power?

The primary thought in this classification is the recognition of progression in the legislation on this subject, and the existence of rights accrued under the old law which should be respected. It is no small undertaking for the average man to qualify himself for the practice of medicine. The statute in force prior to the passage of the act in question was enacted in 1888. It is but reasonable to presume that the curricula of the medical colleges of the state were arranged, and that students had adjusted their courses of study so as to comply with the existing law. This much the state had a right to ex-

pect. It is probable that at the time of the passage of this act students were in all stages of preparation for the practice of medicine, some studying with physicians as preceptors, others attending medical colleges, none of them meeting the requirements of the new, but all of them complying with the requirements of the old, law. By naming a date two years in the future, the new student of medicine could adjust his course of study so as to comply with the law when it should go into effect, and the old student could comply with the provisions of the old law, for the compliance with which he had been educated. It would seem that such a classification is not only based on existing conditions but is manifestly just, fair and right. The validity of such legislation has frequently received judicial sanction, and no condemnation, so far as I have been able to find.

The other objections that might be made to the act are fully covered by what has already been said, and will not be further considered.

OSTEOPATHY.

The validity of the amendment of 1898, respecting osteopathy, is the only remaining proposition to be considered. It is provided in that act that:

Any person holding a diploma from a legally and regularly conducted school of osteopathy of good repute as such, and wherein the course of study comprises a term of at least twenty months, or four terms of five months each, in actual attendance at such school, and shall include instructions in the following branches, to-wit: anatomy, physiology, chemistry, histology, pathology, gynecology, obstetrics and theory and practice of osteopathy, shall, on the presentation of such diploma to the State Board of Medical Examiners and satisfying such Board that they are the legal holders thereof, be granted by such Board a certificate permitting such person to practice osteopathy in the State of Iowa, upon payment to said Board of a fee of \$20, which certificate shall be recorded by the county clerk of the county in which the holder desires to practice, for which he shall receive a fee of one dollar.

It is further declared that the practice of osteopathy is not the practice of medicine within the meaning of the act just considered.

All such statutes depend for their efficiency on the penalty attached for the violation thereof and its exaction by public authority. In vain may the legislature define crimes and entreat the people to be good, unless penalties are attached to enforce observance. Fine and imprisonment are imposed for a violation of the act of 1897; but the act of 1898, for some reason, provides that the provisions of the act of 1897 shall not apply to the practice of osteopathy, and at the same time provides no punishment for one practicing osteopathy without the proper certificate.

There is, however, a provision in the Code of Criminal Procedure, which provides that "when the performance of any act is prohibited by any statute, and no penalty for the violation of such statute is imposed, the doing of such act is a misdemeanor." This act of 1898 does not in terms prohibit the practice of osteopathy without a certificate, and there is some question whether such prohibition can be implied from the language used so as to make the doing of such act a crime; but for the purposes of this paper we will assume that said section is applicable and supplies what would otherwise be a fatal defect, in the act under consideration.

We are now led to inquire: What act is prohibited? What is it that constitutes the offense? For what may a defendant be convicted? The statute says the practice of osteopathy without a certificate; but what is practicing osteopathy? What does the word "osteopathy" mean? I have examined the latest dictionaries, but find no trace

of the word; works of science, but they are silent as the grave; the common law, but there no such word to designate an offense is known. Turning to the August number of the *Cosmopolitan Osteopath* we are informed that "a period of five short years embraces practically all of the history of osteopathy;" and that "the name is derived from *osteon*, bone, and *pathos*, suffering." Neither the word osteopathy nor those from which it is derived throw the least light on the meaning of the statute. If any meaning at all is to be attached, it would probably be that the practice of osteopathy is the practice of bone suffering, which would hardly answer for the definition of a crime.

The word osteopath has neither a scientific nor a popular meaning. Probably most people know that it is the name of a new school of medicine, but of what the treatment consists there does not seem to be a popular conception. Thinking that my own information on the subject might not be a proper test of the popular standard, I inquired of twenty persons, lawyers, merchants, mechanics and day laborers, representative men of their respective occupations, and not one of that number was able to convey a definite conception of the mode of treatment. All understood the name to designate a new school of medicine, some thought drugs were not administered in the treatment of disease, but where to draw the line, or whether a line could be drawn, between such method of treatment and hydrotherapy, electrotherapeutics, suggestive therapeutics, massage, divine healing, faith healing, "Christian Science," oxydonor, oxygen, the various other methods of treatment, including the methods of the regular practitioner when drugs are not administered, no one was able to say.

By the act of 1897 it is provided that any person is practicing medicine "who shall publicly profess to cure or heal," but the act we are considering expressly declares that the practice of osteopathy is not the practice of medicine within the meaning of the former act. What was meant by the use of the word osteopathy after this legislative declaration can only be suspicioned, and I fancy that this legislative conception is as confusing to the osteopathic practitioner as it is to me.

The making of an act a crime is a legislative function. The act constituting the crime must be defined. In the trial of a criminal cause it becomes the judge's duty to define the crime as a matter of law, and it is for the jury to determine whether the defendant committed the act said by the court to constitute the crime. In the absence of a definition by the legislature, probably no two judges would agree as to what the legislature meant by osteopathy. The defendant's guilt would be determined by the surmise of the judge. In one court the defendant might be held guilty, and in another innocent, on the same state of facts.

A recent decision by the Supreme Court of Louisiana is in point:

All crimes in Louisiana are statutory, and there can be no crime which is not defined and denounced by statute. The determination and definition of acts which are punishable as crimes are purely legislative functions, which can not be delegated to or exercised by the judiciary. This statute denounces as a crime, on the part of civil officers, "any misdemeanor in the execution of their respective offices." It does not on its face undertake to define, in any manner what acts are misdemeanors in office, and, unless there is some other law which furnishes such definition, there is no other source to which we can look for it except to the discretion of the judiciary, which, in each case brought before it, will be vested with determining

whether or not the particular acts charged, ranging from the most trivial to the most serious derelictions, from the malicious infractions of duty to the most innocent errors of judgment, shall or shall not be punished as a crime. This would operate a delegation to the judiciary of power purely legislative, in flagrant violation of the constitution.

Our own supreme court has declared that "Criminal statutes are inelastic and can not by construction be made to embrace cases plainly without the letter, though within the reason and policy, of the law." Clearly, no act of any character whatever is within the letter of this statute, and it can not be enlarged by the evident purpose of the legislation. In my judgment the act of 1897 is valid, and that of 1898 is uncertain, and for that reason the courts, in all probability, would hold it void.

MEDICINE AS A BUSINESS PROPOSITION.*

BY G. FRANK LYDSTON, M.D.

Professor of the Surgery of the Genito-Urinary Organs and Sphynology, in the Medical Department of the State University of Illinois.
CHICAGO.

(Concluded from p. 1321.)

READY-MADE DOCTORS AND PROPRIETARY MEDICINE FAKES.

The prosperity of the medical profession is being slowly, but surely, sapped by the manufacturers of quasi-patent medicines and secret preparations. The patent medicine fiend has appeared in a new guise. He now masquerades as a corporation for the manufacture of specifics and panaceas for the relief of ills that must have forever remained uncured were it not for his tender ministrations—his occult knowledge of chemistry, and superior pharmaceutical skill. The good old road to fortune via the patent medicine route is largely obstructed by others playing the game. The fakir, nothing daunted, has secured as cat's paws to pull his chestnuts out of the fire, reputable though foolish physicians. There is a peculiar trend in human nature in the direction of "cure-alls"—remedies that fit all diseases, work speedy cures and afford a royal road to recovery. This same peculiar mental bias exists in doctors. It is refined by education and experience, to be sure, but the doctor has it, and "has it bad," and Mephisto Proprietarius knows it. The doctor's experience often breeds a lack of confidence in his remedies, and his materia medica narrows year by year. Yet his patients clamor for relief, and in despair the doctor receives, with open arms, the fakir who agrees to furnish him with speedy cures.

Behold the result. The pharmacopeia is fast drifting into the valley of dead lumber. It is no longer necessary to know anything of materia medica and therapeutics—the fakir attends to all that for us. We are no longer offended by the gratuitous insult offered us by the proprietary medicine fiend, who knocks at our door and, with the implied insinuation that he furnishes brains for the medical profession, clutters our office tables up with samples, the labels on which tell us all about diseases and the only preparations that will cure them. Pah! How most of them smell! And what a nuisance they are!

But the fakir has done his work well. He has evolved the ready-made doctor—man of all work, aye, slave to the fakir. How gently flows the current of Doctor Readymade's professional life. No more incurable cases. No more midnight oil—for why should he be a slave of the lamp? No more worry. No more care. No more expenditures for books, journals and instruments. All the doctor has to do now-a-days is to read the labels on

the bottles and boxes of samples the fakir brings him. Does the patient complain of stomach disturbance? He is given "Stomachine." Are his kidneys working overtime? "Kidneyol" is the proper caper. Is there a pain lurking somewhere in his economy? Give him one of these pretty little tablets with a hieroglyph on it, which nobody knows the composition of—so the firm that makes them claims. Oh, the practice of medicine is so easy now-a-days. Ready-made diagnosis and treatment—what could be simpler?

The proprietary medicine fakir begins his little song by assuring the physician that his wonderful preparation is for the use of the profession only. He is trying to introduce it "along strictly ethical lines." He has given the preparation a fanciful name and marked it with a special design "for the protection of the physician, who, of course, wants to know that his patient gets just what is ordered." What an imbecile the doctor is. The chief objects of the special name and hieroglyphic design are: 1, to induce the physician to order the preparation frequently, the name being catchy and easy to remember; 2, to let the patient know what is ordered, so that he can prescribe it for himself and friends without the aid of a doctor. Having popularized the preparation in this manner, the proprietary medicine man often advertises his wares directly to the public via the secular press. If the profession protests, the wily medicine man says: "Well, you endorsed it; the profession uses it; hence it is a good preparation and a benefit to humanity. Go to, you are bigoted and narrow-minded."

Now, my brethren, while the foregoing remarks are fresh in your minds, try and recall the facts regarding "Scott's Emulsion," and the "Midy Capsule."

Not all proprietary medicine men take the newspaper route—they don't have to. The cat's paw doctor does his work too well. Witness the "little joker" antipain tablet already mentioned. Probably ten times as much of this preparation is self-prescribed as is prescribed by physicians. It unquestionably contains drugs that should be taken only under medical advice, and yet physicians prescribe it in a manner which leads directly to self-prescribing by the laity. Is it possible that the Pharmacopeia offers no agent of equal or better merit? Has the manufacturer more wisdom than all the ages past—to say nothing of the present age of progress? Or is this an age of medical progress, anyway?

I herewith submit the proposition that the medical cat's paw is pulling the proprietary monkey's chestnuts out of the fire, every time he prescribes a proprietary article "protected" by special design and under a term that he who runs may read. The fakir laughs in his sleeve at the profession, and small wonder. It has come to pass that he owns us, and when his impudent agent demands a hearing at our offices, we are tacitly given to understand that our time is his by right. Perhaps it is, by right of conquest, for the medical profession seems to be thoroughly subjugated. The distributor of drug samples is always working in the business interests of his firm and himself. How would it do to insist on payment for our time from the agents of some of our irresponsible, mushroom fake-medicine factories?

There is another side to the picture. Drug manufacturers—even some of those engaged in the manufacture of quasi-proprietary medicines—have done much for pharmaceutical elegance and convenience. Many of our manufacturers are conscientiously proceeding along ethical lines. We are glad to welcome their representatives and their preparations. But, unfortunately, such manufacturers are a small minority. The physician should

*Lecture delivered at the public meeting of the St. Joseph County Medical Society, South Bend, Ind., Jan. 30, 1900.

be careful how he prescribes the preparations of even reliable firms. Preparations with special and striking names should be prescribed under formula, where possible, and always in such a manner that the patient can not prescribe the preparation for himself offhand.

We have much for which to thank some of our manufacturers, in the way of elegant and reliable preparations—honor to whom honor is due. We should none the less, however, guard our own interests. The manufacturers can not always do so and sometimes will not. There is no objection to secret methods of preparation of medicine so long as the formula is known. The physician should know what he is prescribing. It is an insult to offer him any other class of preparations. When prescribing, I repeat, he should prescribe under a term comprehending the formula of the drug, or under his own cipher. Where the nature of the preparation is such that he can not do this, the doctor had best look elsewhere for a remedy.

OUR CO-LABORER, THE DRUGGIST.

The subject of the medicine fakir naturally leads to the question of our relations with druggists. Much has been said on this topic, but it is difficult to see wherein the status of our relations to our alleged co-worker has been improved thereby. Personally, so long as the drug business is overcrowded, as it is at present, I fail to see any possibility of improvement. Under existing conditions the motto of the druggist must necessarily be, "every man for himself." The pharmacist must live, and there's no way to live and be square with the doctor. Three things that are opposed to our interests the druggist must do or go to the wall: 1. Sell patent medicines. 2. Prescribe over the counter. 3. Charge exorbitantly for the medicines we prescribe. There is nothing in all this that is illegal, but it is opposed to the best interests of the profession. At first sight it appears an evidence of imbecility to send prescriptions to be compounded by a competitor. Yet we send them to the druggist, who is our most active competitor. Not only is he one directly, but he is often the agent of some other doctor or doctors whose merits he glibly contrasts with our demerits, for the edification of the patient. We tell him, time and again, not to repeat our prescriptions, but to no purpose. In some cases we know that he is giving commissions to a set of doctors while his clerks are getting commissions from practice sent to others, yet we stick to him. Now, there's but one solution of the problem. Every doctor who can should dispense his own medicines. The people like it, and the profession will soon learn to like it. The doctor can furnish medicines cheaply and still make a profit. The patient pays a bill for services and medicines much more cheerfully than one for services alone. Such success as homeopathy has attained has been largely along these lines. It is high time the regular took the hint.

Not the least of the good things that would result from the doctor doing his own dispensing would be the familiarity with his working tools thus acquired. Most men enter practice without the least knowledge of the physical qualities of the drugs they expect to use. Many a man has prescribed, over and over again, remedies he never saw, smelt or tasted. The best doctor is he who is most familiar with his curative agents. Another desirable result would be the doctor's renunciation of polypharmacy. He would soon learn that the number of serviceable drugs is by no means legion. Where a number of doctors occupy an office, they should have their own dispensary. When neither plan that I have suggested is feasible, the doctor should endeavor to find

a druggist who, in consideration of having practically a monopoly of the prescriptions of that particular physician, will dispense his prescriptions on cipher and never without an order. It is possible to find such druggists. Self-interest is likely to induce them to treat the doctor fairly, when all other arguments fail. There is a peculiar advantage in this system in the fact that the doctors' favorite formulae can be kept in quantities already prepared, thus saving time, and assuring uniformity in dispensing. Under such an arrangement, too, the druggist is able to be much more reasonable in his prices. He is also likely to keep such special preparations as the doctor may request, thus avoiding the temptation to substitute.

One thing is certain in the relations of doctor and druggist, viz., the time is not far distant when the doctor will either dispense his own drugs, or will boycott every druggist who counter-prescribes or sells patent medicines. The profession will not go blindly on forever, carrying grist to the other fellow's mill.

RELATIONS OF DOCTORS TO CORPORATIONS.

It is a time-honored observation that the doctor is about the cheapest professional commodity in the market. Especially is he cheap in his dealings with corporations. Nowhere is this more evident than in life insurance work. There is not a company in the field today that pays a decent sum for its medical examinations. The doctor is the watch-dog of the company's treasury. He stands between it and great financial loss. He protects it against fraud. A slight error or the least degree of negligence on his part may cost the company thousands and thousands of dollars. The issuance of a policy is a very important business transaction. The doctor stands in the same relation to it as does the lawyer who examines the abstract in a real estate deal. Contrast the fee allowed the medical examiner in a case involving the issuance of a \$100,000 life insurance policy and that received by the lawyer who examines the abstract in a real estate transfer involving \$5000, and my argument is complete. Some companies expect to secure all of an expert examiner's time—and actually get it—for \$2000 to \$3000 a year. It might be well to contrast, also, the commission received by the agent who writes the policy, with the medical examiner's fee.

In the case of our fraternal societies the examiner's fees are pitifully low, so low that a busy man can not do the work save at a great loss of time. There are some extenuating circumstances in the case of the co-operative societies. In the case of both old line and co-operative insurance, however, only the overcrowded and generally poverty-stricken condition of the medical profession can possibly explain the fact that good men are to be had so cheaply.

Railroad and manufacturing corporations have no difficulty in securing doctors to look after their interests at a rate so low as to reflect on the respectability of the profession at large. I know, for example, instances in which doctors are rendering for \$300 a year, services that should bring several thousand dollars at very ordinary fees. In addition to this direct cheapening of professional values, the company or corporation surgeon is expected to go on the stand as expert and prevaricate in the interests of his employers. As a corollary, he is expected to testify against the interests of the poor fellow who, perhaps, as the result of the company's wilful neglect, has only the wreck of a once vigorous manhood with which to oppose the company's immense capital. And this the doctor does in an uncomfortable proportion of cases. When I say he "prevaricates," I hope I am correct. It would be pitiful indeed if the expert

opinions rendered by some corporation doctors were the result of ignorance. The corporation expert does not always prevaricate. The truth may be the best card to play. He had best not let the corporation catch him telling the truth, however, when said truth is prejudicial to its interests. There is an axe, my brethren, an axe that is ever ready.

Speaking of corporation surgeons reminds me of the fact that practice in the neighborhood of our large factories is rather poor picking for everybody. There is plenty of work to be done, and would be considerable income derived therefrom, but the corporation surgeon gets it all, and receives a mere pittance therefor. The corporation claims to employ a surgeon for humanity's sake. This is pure hypocrisy—the doctor is employed for its own protection. I know of cases in which, by the co-operation of the claim agent and the surgeon, an injured employee has been induced to sign away his manifest rights. He is usually denied the right to select his own surgeon. To the non-partisan medical observer, the bitter opposition of the average jurymen to corporations is in no wise remarkable. I suppose it will be argued that there are plenty of honest corporation-doctors. Grant you that, brother, but I can not see how they hold their jobs.

FEES IN GENERAL.

If the profession is to be judged according to its own valuation, the low estimate of the value of medical and surgical services by the public at large is not to be wondered at. Especially striking is the low appraisal of fees in the West. The contrast between the East and West in this regard was recently impressed on me quite forcibly. I met, in the city of New York, a comparatively young practitioner who recently chanced to have under his care a young woman—daughter of a multimillionaire—suffering with typhoid fever. He attended her assiduously, night and day for six months, and brought her through, or came through with her, most gloriously, and probably skilfully. With a courage that seems superhuman to a western doctor, our young friend sent in a bill for \$5000. A check for the amount was promptly returned with a letter of thanks and a "bonus" check of \$50,000. And now, brethren, you will forgive me if my style is a bit "wabbly" from here on. A Chicago millionaire would have "kicked" on the bill, insisted on its being cut down to \$500 and, this being done, would have stood a suit rather than settle at his own figure. Exaggeration? Well, I don't know about that! One of our greatest "merchant princes" was under the care of a specialist friend of mine, and, as his own time was very valuable, demanded that the doctor let him in at his private door, ahead of all the rest of the patients. His bill at \$10 a visit amounted to something over \$300. The "kick" registered by our "prince" might have been heard in Alaska. Result, the bill was cut in two and the doctor has another enemy on the list.

But I can beat this case in my own experience: Another merchant prince, who is well known on State street—we will call him Mr. Bird, because that's almost his name and he is one—came to see me one day in this wise: He had heard that I had recently operated on a friend of his and removed a renal calculus. Would I show him the specimen? He then gradually developed the interesting fact that he had gall-stones and had been advised to submit to operation. What did I think of his case, and what about his operative prospects? Three-quarters of an hour slipped away, and my opinion in general had been obtained, when I suggested a physical examination. Oh, well, you see, it has grown so late that I will

not have time to-day. I'll see you day after to-morrow," etc. That same evening, while riding to a case in consultation with one of my surgeon friends, that gentleman said, "Oh, by the way, Lydston, I'm going to operate on Bird to-morrow for gall-stones." And so it proved. I sent Mr. Bird a bill for consultation and he replied that he owed me "nothing," had "just made a friendly call," etc. I finally threatened suit and he paid the bill grudgingly, and as insolently as he dared at long range. Let me assure the reader that that \$25 was a sweeter morsel than ten times the amount from any other source. Oh, how it must have hurt my friend Bird! I trust he will be a mine of wealth to my surgical confrère—he has "gall" enough to run a stone quarry in his hepatic apparatus for a hundred years to come.

The attitude of the average wealthy Chicagoan on the medical fee question was well shown a few years ago by the rumpus that was raised in the newspapers over a fee of \$2000, charged by one of our leading experts in intubation, for a successful operation on a certain wealthy citizen's child. That numerous physicians arrayed themselves against the operator was by no means the least disgusting feature of the controversy.

Medical fees in Chicago have not yet shaken off the incubus put on them by the dollar fee of the medical "daddies." When Chicago was yet new, the fee question was practically settled by some of our medical pioneers whose influence has never been dispelled. The one dollar consultants were over-modest. We have always been ready to concede that such fees are an undervaluation of the aforesaid consultants' skill. The profession has ever refused to take some men at their own valuation—but it has suffered from the incubus just the same. Philanthropy has been advanced as an explanation of cheap fees. Quoth the experienced and distinguished low-priced man, "What would the poor people do if I made myself less accessible?" I'll tell you what the suffering public would do, most venerable and respected sir. It would go around the corner to that young doctor whose shingle you see swinging to the breeze, and pay more money for better service than you or any living man can give for the fees you charge. In general, the public gets just about what it pays for, save where the matter is one of absolute charity or dead-beatism. How any busy man can take the time for a careful examination and diagnosis of a case without asking a half-way respectable fee for his services is a problem I have never been able to solve.

Aside from the general cheapening of medical services, the doctor himself is often responsible for the direct depreciation of other physicians' fees. This is done in several ways: One method is to misrepresent the financial status of the patient whom he takes to an expert for consultation. It is not long since a physician called me up by telephone and arranged for me to see with him a "poor patient" who could only pay a small fee for consultation. The doctor happened to be late at the consultation, and I occupied the time in questioning the patient. I discovered that he was a wealthy stock raiser from the West, had paid my doctor friend a good fee already, and had arranged to pay him \$200 more for the prospective operation—which I was expected to tell my friend how to do.

It is frequently the case that general practitioners call a consultant without making arrangements for the fee beforehand. It is unpleasant to spend half a day or night in consultation and then have the doctor say, "Now, doctor, these people haven't got much money, so don't charge them a large fee." The consultant there-

upon cuts his fee in two. "Well, doctor, I'll see that you get it in a day or two." But the consultant never gets it. Should he protest, the family physician says, "Don't be in such a hurry, doctor, I haven't got anything out of the case myself, yet." The above is an experience that I have had over and over again. How easy it would be for the physician who calls the consultation to see that the fee is ready when the consultant comes. It is my opinion, furthermore, that unless there is an understanding that the case is one of pure charity, the physician calling the consultation should be held responsible for the fee. The consultant can not always do so, but where possible he should stipulate beforehand that a certain fee be in readiness. The family physician who does not know that such a plan is best for his own interests is stupid.

An intolerable nuisance to the consultant is the doctor who writes a friendly letter asking for "the diagnosis, prognosis and treatment" of some case under his care. Rarely does he enclose a stamp, never a fee. The consultant who answers such letters, save to inform the writer that office rent can not be paid by such consultations, is laughed at for his pains. I have made many enemies by answering in this wise, but I love my enemies and have not injured the financial side of medicine thereby.

A more "pestiferous professional parasite" if possible, than the foregoing, is the doctor who refers a patient from a distance, with a request to send the bill to him. I have sent many such bills first and last—accent on the "last"—but have never yet received a remittance, nor do I expect my reward in Heaven. In the first place I am not so sure about getting there, and if I were, and knew that those doctor debtors were going to be there too, I—well, I'd ask for a change of venue. As for the patients who are accessories to such professional "hold-ups," a fellow wouldn't want to chase around all over hades to collect his fees from them.

As a final proposition on the fee question, the doctor should understand that no fee within the range of the patient's ability to pay is ever too great for medical services. The doctor is never in danger of being over paid. He should "temper the wind to the shorn lamb," but appearances are deceitful, and the doctor had best be in at the shearing, else there will be no wool for him. "Virtue is its own reward" may sound very pretty, but it is not consoling in view of the fact that it gets no other in this life and its reward in the world to come is rather problematic.

EXCESS OF "BUSINESS ZEAL."

While still enrolled in the ethically-regular ranks of a profession whose standard is illumined by the quintessence of mawkish philanthropy, some of the brethren have gone to the other extreme and covertly adopted "business" methods that put Chatham Street to the blush. As for the dealer in second-hand clothing, who lies in wait for the unwary reuben in the purlieus of South Clark Street, he has cause to hang his head for very shame. Time was when the practice of medicine and surgery betokened a certain degree of modesty in heralding one's skill to the world, and waiting for patients was fashionable. It has come to pass that a certain proportion of the profession has divided itself into two parts, composed respectively of operators and "steerers." The operator offers a liberal commission to the doctor who steers cases to him for operation; 50 per cent. is the regular commission now-a-days. The steerer was contented with less, at first. In time he will want

a still further increase. Finally, there will be no pay patients and the operator will be "hoist with his own petard." The steerer's gall is even greater than the operator's moral turpitude and business imbecility. One of my friends showed me a letter to-day from a barbarian of the tribe of "Get there Eli," in which the doctor who proposed sending him a patient said, "The woman will do just about what I tell her. She is business-like, and so am I. I think she will stand for \$200. Now, if you can see any money in that after giving me \$100, I'll send her to you, if not, why I know plenty of others who will take the case on those terms. She is my meat, and will go where I say. I am not charging \$100 for my time, but for steering the case to you. This is my game and I can steer the case where I please," etc.

How is that for a *fin de siècle* medico-epistolary gem? Is it possible that an operator can afford to give up one-half of his fee as a commission? If so, the difference between fees and highway robbery is not perceptible to the average mind. Somebody is necessarily robbed. If the fee is just, the steerer robs the surgeon; if the fee is exorbitant, then the patient is robbed. What would the patient say if he knew of the deal? The commission practice is very poor business—and worse morals. The extent of the nefarious custom in our large cities is simply nauseating. It is possible that the adverse sentiment of the better class of practitioners may eventually serve to put a stop to this degrading practice. If not, there is a sure, albeit a disagreeable, way to check it, viz., by means of the public press. Should this recourse ever be demanded, there is much interesting material at hand. The possibility of unnecessary and unjustifiable operating under the stress of a large fee on the one hand and a large steering commission on the other, would make very interesting food for journalistic reflection. And so, friend steerer and brethren of the bisected fee, have an eye to windward and look out for squalls.

Even lower than the bisection of fees has the occasional doctor sunk. Over on the "great West Side" lives an undertaker friend of mine, who, in deference to his ancient and honorable vocation, we will call Mr. Watery Weeps. My friend Weeps has an eye to business; in faith, he has two eyes to business—both of 'em red; some say from "red eye" homeopathically applied. I do not believe this theory regarding Mr. Weeps' headlights. Their peculiar bicycle-lamp glow, like their excessive humidity, is due to his faithful, sorrowful "proxifying." In the course of my practice it did befall that a certain pulmonopathic vassal of mine—we will designate him as Mr. One-Lung, in so much as he had no other lung—did feloniously, with malice prepense and aforethought and intent to deceive, up and die. Having a corpse on my hands I naturally bethought me of my post-medical friend, Weeps, who undertaketh much in that vicinity. Weeps was prompt, and my late friend of the pulmonary solitaire was soon duly boxed and crated, ready for shipment to his ancestral home in "Injianny," whereupon quoth Weeps, lachrymosing his prettiest the while: "Ahem, Doctor, I am very much obliged to you for the favor you have shown me. I hope to do a large share of your business in the future. I expect a check for this job to-morrow, and will then extend to you the usual courtesies to the medical profession." "Ah," I replied, "and what might that be?" Why, 25 per cent. I call that pretty good, too, considering the hard times, don't you Doctor?" And my friend Weeps still thinks I was bluffing when I declined the

"usual courtesies." "Truth is strange, passing strange—stranger than fiction."

Time does not permit me to do full justice to the doctor whose motto is "get patients, honestly if you can, but—get patients." Sad it is that such birds are by no means rare. True it is, and complimentary to the American doctor, that these creatures are usually importations, whose foreign diplomas, having no standing in their own country, at one time permitted them to practice in any part of the Union, and even now permits them to practice in many parts of the country. The advancing requirements of our colleges and state boards are fast doing away with such fellows.

The man with a strictly business appetite for fame is, however, always with us, and who shall say him nay in his struggle "toward?" But should he not draw the line somewhere?

Such ambitious ones agree with that dear old philosopher, Michel de Montaigne, "That men by various ways arrive at the same end."

Some of these Machiavelli's have literary aspirations. I know of one of them who justifies his literary efforts by printing his portrait as a frontispiece for his reprints, and in turn justifies his portrait—full page—by condensing his subject matter to a page and a half. Conservatism impels him to present only such matter as has been oft and better said before, whilst his portrait is laid on the altar as a burnt offering, a mute and modest appeal to the "star-eyed goddess"—Science, whose unreasoning demand for original matter has wrecked so many fair hopes. And the goddess, seeing the portrait, needs no priestly intercession to call her attention to its originality.

Far away on the arid plains of Arizona stands a little white head-board, commemorative of the late Jack King—short card expert and erstwhile monte sharp. Thereon appears the sentiment, "Life ain't in holdin' a good hand, but in play' a poor hand well." Dost see the application, my brethren? A restless ambition may with unscrupulous hands so spread a teaspoonful of brains over the fair field of workaday life that the sunflowers of worldly success will grow, and grow, and choke the life out of everything beneath.

TACIT RECOGNITION OF MEDICAL FAKIRS.

In the good old days the regular profession ostracised him who consulted without that horrid bugaboo, the homeopath. It has come to pass that the regular lion has laid him down beside the homeopathic lamb. And when they rise again the mutton shall be no more, and the lion shall have waxed fat. The latter-day regular has gone farther, and hobnobbed, as on equal terms, with "osteopaths," "Christian Scientists," "faith healers," and others of their ilk. Not so? Oh, yes it is. It is not long since the Physicians' Club of Chicago invited representatives of these fakes to break bread with it, and formally discuss the merits and demerits of their fool theories as opposed to regular medicine. The affair was given great publicity in the newspapers, and the wise layman, reading thereof, laughed exceedingly merry and said, "What fools these doctors be." And, from a business, politic, and social standpoint, were they really so very clever? The Physicians' Club gave the fakirs standing in the public eye, and by inviting them to a joint discussion gave them professional recognition—a recognition they were not slow to use as a valuable advertisement. If a dinner invitation does not constitute social recognition, what does? I submit that the action of the Physicians' Club did more to further the

interests of the fakirs that infest our city than the fakirs themselves could have done in a year. Still, mistakes will happen, and the worst that can be said of the club is that it made a serious, impolitic, and unbusiness-like blunder. False dignity, I would have none of; 'tis but a mysterious carriage of the body to cover up defects of the mind;" but I fain would see the body medical possessed of too much true dignity to permit formal recognition of medical fakirs and their disciples.

It is much easier to direct attention to faults than it is to suggest remedies therefor. In most of the points that I have endeavored to make, the remedy suggests itself. In general, the remedy lies in an improvement of professional *esprit de corps*. With a betterment of this as a foundation, much can be done to improve the business aspect of medicine in its higher sense. The general disapprobation of the profession will eventually frown down the medical pirate, who considers his duplicity and knavery, "business." The time will come when professional co-operation in the broadest sense will be absolutely necessary if we would survive. A little of the spirit of trades-unionism might not be a bad thing. So far as the strictly financial aspect of legitimate practice is concerned, the sooner we impress the public with the idea that we appreciate our own market value and insist on its appreciation by the public, the better it will be for the profession. Once let it be understood that ours is a business-like and financially-sound profession, and the *hoi polloi* will give us the respect that is our due. If the profession at large would but send monthly statements of accounts, a great deal might be accomplished. The public should have frequent and pointed reminders that there is more than a philanthropic side to our labors. The doctor's wife and children deserve quite as much consideration as the layman's.

There is much in this lecture that may be unwelcome, but surely there is something which will appeal to the fair-minded, square-principled physician. Whatever judgment may be passed on it, however, my object has been to champion the cause of the high-minded, right-thinking, hard-working doctor—the under-dog in the battle of life.

I know that the world, the great big world,

From the peasant up to the king,
Has a different tale from the tale I tell,
And a different song to sing.

But for me—and I care not a single fig
If they say I am wrong or right—
I shall always go in for the weaker dog,
For the under dog in the fight.

I know that the world, the great big world,
Will never a moment stop
To see which dog may be in fault,
But will shout for the dog on top.

But for me, I shall never pause to ask
Which dog may be in the right,
For my heart will beat, while it beats at all,
For the under dog in the fight.

Perchance what I've said were better not said,
Or 'twere better I'd said it incog;
But with heart and with glass filled o'er to the brim,
Here's luck to the under dog.

THE NEW children's hospital at Athens is arranged with twelve separate pavilions, each designed for a different disease. Four are reserved for contagious diseases.

CLINICAL REPORT.

GASTROENTEROSTOMY FOR CARCINOMA OF PYLORUS.

BY J. HENRY BARBAT, M.D.
SAN FRANCISCO.

The following case is reported to show the benefit of making a gastroenterostomy in cases of inoperable carcinoma of the pylorus, where the disease has advanced so far that the patient is starving to death on account of vomiting due to occlusion of the pyloric orifice.

Mrs. F., aged 45 years, the mother of four children, had enjoyed perfect health until two years ago, when she began to vomit after eating and felt slight pains in her stomach. This kept on increasing, and the patient began to lose flesh, until when I saw her, February 28, she weighed but 90 pounds. I found a mass in the region of the pylorus, about as large as a hen's egg, and advised immediate operation, explaining that I might be able to remove the entire area of disease, and if not, I would at least make an opening to allow the food to pass into the intestine, and prevent her from dying of starvation.

Two weeks later the patient came to the Waldeck Sanatorium, and at that time weighed 83 pounds. She vomited everything she took and suffered intense pain in the epigastrium. There was scarcely any bowel movement, as she could not retain sufficient nutriment to produce any. For five days previous to the operation I gave her 8 ounces of peptonized milk every six hours by the rectum, and this gave her stomach a rest and relieved her hunger and thirst. It was necessary to give her hypodermics of morphin every six or eight hours, to relieve pain.

I operated on March 20, making a median incision above the umbilicus; the pyloric end of the stomach was found adherent to the anterior abdominal wall, and also to the liver, making it impossible to remove all the diseased tissue. Even if it had been possible to make a pylorotomy I doubt whether the patient would have survived the shock, as her condition demanded very rapid work. I decided to do a gastroenterostomy and lifted the great omentum so as to reach the posterior wall of the stomach. The transverse mesocolon was torn through and the posterior wall of the stomach pulled through the opening. The jejunum was then cut about four inches below the end of the duodenum, and the distal end joined to the stomach by means of a 1 1/16 inch Murphy button. The proximal end of the jejunum was then joined to the side of the distal portion about four inches below the stomach, with a Murphy button of the same size, and the abdomen closed. Considerable difficulty was experienced in placing the stomach half of the button, on account of the fact that the patient began to vomit as soon as traction was made on the stomach.

For two days the outlook was very dubious, the patient having considerable pain and being extremely weak; however, she did not vomit, and was able to retain all the nourishment which was given her, which consisted of peptonized milk and broths. Rectal feeding had to be stopped on account of the rectum becoming irritable, two days after the operation, and all nourishment after this was by the mouth.

The buttons were passed on the tenth day, one passing twelve hours before the other. The appetite soon became ravenous, and the pain almost completely disappeared, but the patient began to cough, and it caused

her considerable distress. This is a feature which I noticed in several other cases in which gastroenterostomy was done for the relief of inoperable cancer of the stomach, and I believe it to be due to the disturbance of the pneumogastric nerve.

The patient left the hospital on April 14, weighing 93 pounds, and has since been gaining at the rate of one-half a pound a day, until at the present writing, May 1, she weighs 101 pounds. She has not vomited once since the operation and eats everything that she fancies. In order to facilitate digestion, I gave her a mixture containing caroid and hydrochloric acid, as the analysis of the stomach contents showed complete absence of hydrochloric acid, and very little pepsin. By this means she is able to digest large quantities of food without the slightest discomfort, and once more enjoys life.

In the several operations which I have done for the relief of inoperable pyloric obstructions, I found that the patients are more than pleased at the relief they get, and invariably state that they would prefer the entire discomfort of the operation, to one day of the misery which was present before the operation.

There is a marked difference between the cases in which we do the single or double anastomosis, as we are very likely, in those where the jejunum is simply joined to the stomach by means of a lateral anastomosis, to have the bile regurgitating into the stomach and causing vomiting; while, when we make a double anastomosis this unpleasant feature is avoided, because the bile meets the food four or five inches below the stomach as in the normal condition.

This case illustrates very forcibly the advantages of the Murphy button for anastomosis work, on account of the rapidity with which it may be introduced. This patient would undoubtedly have died on the table had I attempted to make two anastomoses by any of the suture methods.

SPECIAL ARTICLE.

RELATIONS OF PHARMACY TO THE MEDICAL PROFESSION.*

VI.

The medical and pharmaceutical status of the medicinal articles heretofore considered may be easily estimated as compared with those remaining for consideration, viz.:

THE PHARMACEUTICAL SPECIALTIES.

Under this title are comprised all pharmaceutical or chemical preparations—not definite compounds—whose composition is well known, either through the name of the article or published formula. There are many articles having a descriptive name which are, however, more or less secret in composition through lack of adequate information on the part of the manufacturers. Such information has, however, been supplied by pharmacists and chemists who have examined these articles and reported their results. Based on such reports formulas have often been constructed, which not infrequently have been incorporated in the United States Pharmacopoeia and in the National Formulary. Many of them have names not sufficiently descriptive, in order that they may be protected as trade-marks or copyrights, and in this lies the chief objection to these classes. They are divided into: 7. Pharmaceutical Specialties—Mixtures, and 8. Pharmaceutical Specialties—Simples.

MIXTURES.

This class may be divided into the following groups: 1. Preparations of official or unofficial formulas, i. e., chlorodyne, Warburg's tincture, etc. 2. Chemical solutions, syrups, elixirs,

* The first of this series of articles appeared in THE JOURNAL of April 21.

glycerites, etc., with proprietary names prefixed and suffixed. 3. Cod-liver oil emulsions or preparations as above. 4. Compound vegetable preparations of eclectic origin, as above, or under trade names. 5. Miscellaneous mixtures under trade names, simulating patent medicines and sold to the laity.

CHLORODYNE.

One of the earliest and by far the most celebrated of this group is the preparation known as "chlorodyne," originated by J. Collis Browne, a British surgeon, and sold as a "patent medicine" in England where yet Browne's widow and diver other persons perennially exhaust the possibilities of affirmative adjectives in assertions of their respective claims to "the only original formula," and in spite of the fact that the preparation has long been recognized in the British Pharmacopeia with a formula vastly improved over the original, which contained treacle and yielded an unsightly and unstable mixture. Having been used successfully in India against cholera, it attained great celebrity some forty or fifty years ago, and various formulas are published for its preparation. Whether or not owing to the lack of information on the part of the examiners or the lack of uniformity, owing to instability of the article itself, these formulas varied so greatly in the proportions of the active ingredients, that its introduction in the Pharmacopeia became a medical necessity. Some twelve years ago a comparative exhibit of a score or more formulas then in vogue in this country and in England was published in the pharmaceutical journals and the startling information conveyed that one formula would yield a preparation ten times stronger in the most active ingredient, viz., morphin sulphate, than some other popular formula; the desirability—nay, necessity—for some official standard in largely used and potent medicines was never more strikingly demonstrated. Uniformity in strength may not be absolutely uniformly attained by all employing the same formula, but it is self-evident that the chances for this desideratum are vastly in favor of the former as against the promiscuous employment of formulas of widely varying strengths and proportions. The following is the formula of the National Formulary:

Mistura chloroformi et cannabis indicæ compositæ—compound mixture of chloroform and cannabis indicæ—(Chloroform anodyne).

R. Chloroformi	125
Etheris	35
Tinct. cannabis indicæ	125
Tinct. capsici	65
Morphiæ sulphatis	2 1/2
Ol. menthæ p.p.	2
Glycerini	125
Aquæ	65
Alcoholis, q. s., ad	1000

Dissolve the oil of peppermint in 500 c.c. of alcohol; add the chloroform, ether and the tinctures; mix and add the morphin, previously dissolved in the water and glycerin; finally add alcohol enough to make 100 c.c. Each fluidram represents .5 gm.—7 1/2 minims—each chloroform and tincture of cannabis; .25 gm.—3 3/4 minims—of tincture of capsicum, and .01 gm.—1/7 gr.—of morphin sulphate. The "chloranodyne" of Parke, Davis & Co. is a similar preparation. The old well-known Hoffman's anodyne or compound spirit of ether is more simple in composition, containing 2.5 per cent. of ethereal oil in ether-alcohol.

WARBURG'S TINCTURE.

Somewhat similar in origin is the so-called Warburg's tincture, originated by one Dr. Warburg, a British surgeon, stationed in India. Warburg found that the antiperiodic effects of quinin were much enhanced through its administration in a mixture of bitter tonics, and formulated a tincture to be used as an adjuvant vehicle. The formula originally included aloes, which was found objectionable owing to its bitterness and to its cathartic effect and was therefore subsequently left out; two formulas being in vogue, one with and another without aloes. The following is the formula of the National Formulary:

Tinctura antiperiodica (sine aloë)—antiperiodic tincture; Warburg's tincture—(without aloes).

R. Rhei et angelicæ sem., āā	36
Inula, crocus et fœniculi, āā	18
Gentianæ, zedoariæ, agariæ blanc, eubebæ, camphoræ, myrrhæ, āā	9
Quinina sulphatis	100
Alcoholis, dil. (U. S. P.), q. s., ad	5000

The coarsely powdered drugs are exhausted with the dilute alcohol, by digestion for twelve hours, and in the liquid obtained by expression, the quinin sulphate is dissolved and dilute alcohol added to make 5000 c.c. of filtered tincture. Each 5 c.c. contains .1 gm.—1.5 gr.—of quinin sulphate. When the tincture with aloes was wanted it may be easily prepared by dissolving 1.75 grams of extract of aloes—the official so-called aqueous extract—in 100 c.c.; or 8 gr. in 1 fluidounce. The original formula directed by Warburg contained confectio Damocrotis as one of the ingredients, which, owing to its complex preparation has been omitted in the present formula. From the fact that the formula included this confection, it is evident that Warburg simply adopted one of the most ancient polypharmaceutical compounds—*elixir ad longam vitam*—to his use, and added to it camphor. Numerous formulas for species—"teas"—for the preparation of this elixir appear in the old-time dispensaries and pharmacopeias, of varying proportions, but substantially as the above with the addition of galanga, the highly extolled—"East India tooth-ache root" of the traveling fakirs. Is there anything new under the sun?

The confectio Damocrotis, a mixture of nearly every potent drug known to the ancients, the ultima Thulé of pharmaceutical knowledge, was superseded by the confection of Andromacchus, the rival body-physician of Nero, who improved the composition by adding to it the flesh of snakes, whence it derived the name of theriac—thyrus-snake. Originally the formula contained 137 ingredients, and after being in use over 1000 years appears in the Pharmacopeia of Valerius Cordus, 1546, with only 55 ingredients. This confection was the most famous medicine ever produced, as late as 1754 its annual preparation in Nuremberg being a holiday, the ingredients being exposed on the public market-square for one week for official inspection, the compounding being conducted under the supervision of the city dignitaries, amid great festivities, and the product being branded with the municipal arms. The formula for theriac of the French Codex to-day contains 57 ingredients, and it survives in the British and some other pharmacopeias as confection of opium, this drug being the most potent ingredient. Theriac is still largely used in this country as an ingredient in the species referred to by Germans and other Europeans as "Schwedisches Bitters," "Hjerne's Testament," etc., for preparing the elixir.

THE HYPOPHOSPHITES SYRUPS.

The second group comprises the larger number of the so-called "elegant" pharmaceuticals which appeared about 1870, and in the form of syrups, elixirs, wines, etc., became exceedingly popular with the medical profession. The earliest of the chemical syrups representing the tonic properties of the phosphorus then coming greatly in vogue were: "Churchill's syrup of hypophosphites," "Easton's syrup" and "Parrish's Chemical Food," the two first-mentioned being of English origin, the latter introduced by the well-known pharmacist, Parrish of Philadelphia.

The principal hypophosphite salt employed in the preparation of this syrup has always been, since first introduced by Dr. Churchill, the calcium hypophosphite and to this fact the difficulties attendant on the production of a satisfactory syrup are chiefly due. The calcium salt is rather sparingly soluble in water and for this reason a small quantity of citric or hypophosphorous acid is used to insure the complete solution of the salt in the water, in which the sugar is subsequently dissolved. The other salts which enter into the preparation, the sodium and potassium hypophosphites, are on the other hand so exceedingly soluble, the potassium salt being deliquescent, as to cause the throwing out of solution the calcium salt present in much the greater proportion, and the syrup consequently often precipitates and becomes unfit for use. When in addition to this contingency there is lack of care in the selection of pure salts—the commercial American makes being far from satisfactory products with but one exception—and the possibil-

ity of using "laundered" sugar, and instead of distilled water an article containing lime and other impurities, the preparation of syrups by hypophosphites is not so simple a proposition as it appears to be.

It is for this reason that several different brands of syrup of hypophosphites have received medical favor and preference over the preparation made according to the official process for *syrupus hypophosphitum* (U. S.), or *syrupus hypophosphitum cum ferro* (U. S.) the latter containing 1 per cent. of ferrous lactate as the most eligible iron compound to combine with the hypophosphites of calcium, sodium and potassium. The claims for superiority of these specialties are based on the purity of the hypophosphite salts employed and care in the preparation of the syrup so as to produce stable, eligible and therapeutically satisfactory preparations.

IRON, QUININ AND STRYCHNIN COMBINATIONS.

Under the name of Easton's syrup, a preparation was introduced in England, which became official in the United States Pharmacopoeia of 1880, and was retained in that of 1890, now official under the title, "*syrupus ferri, quininae et strychninae phosphatum*." It contains about 2 grs. of quinin sulphate, 1½ grs. of ferric phosphate and 1/90 gr. of strychnin in excess of phosphoric acid in each fluidram. The formula of 1880 contained 1/34 gr. of strychnin in 1 fluidram. That of the British Pharmacopoeia contains 1/32 gr. of strychnin in a fluidram, a strength entirely too great for a syrup which may be taken in tablespoonful doses and then produce the most serious results.

The elixirs of iron, quinin and strychnin, phosphates and pyrophosphates respectively are more stable and satisfactory preparations. The National Formulary gives the strength of the first mentioned as being in each fluidram 1 gr. of phosphate of iron, ½ gr. of quinin, and 1/64 gr. of strychnin. The elixir *ferri quininae et strychninae* (N. F.), made with the tincture of citrochlorid of iron, or the so-called "tasteless tincture of iron," contains only 1/100 gr. of strychnin in each fluidram, and is by far the most eligible and stable of these various elixirs.

FELLOWS' SYRUP OF HYPOPHOSPHITES.

A preparation of similar composition, "containing potash, lime, iron, manganese, quinin, strychnin and phosphorus combined in the form of a syrup with a slightly alkaline reaction," under the name of "Fellows' Compound Syrup of Hypophosphites," has been very extensively employed by the medical profession. The exact formula has never been disclosed but recently the manufacturer furnished the information that the syrup represents 1/64 gr. (.001) of strychnin in each fluidram —4 c.c. The preparation has been repeatedly examined, and based on these results, the following has been introduced in the National Formulary:

SYRUPUS HYPOPHOSPHITUM COMPOSITUS.

R. Calcii hypophosphitis.....	35
Potassii et sodii hypophosphitis, aa.....	17 5
Ferri et mangani, aa.....	2 25
Potassii citratis.....	5
Acidi citrici.....	2
Quininae hydrochloratis.....	1 125
Tinet. nucis vomicae (U. S. P.).....	22
Saccharae.....	775
Aque, q. s. ad.....	1000

The iron and manganese salts are triturated with the potassium citrate and citric acid, and dissolved in 60 c.c. of water with gentle heat. To the other salts, previously mixed, add the sugar and the first solution, the tincture of nux vomica, and finally water sufficient to make 1000 c.c. of the syrup. Each fluidram contains 2 grs. of calcium hypophosphite, 1 gr. each of potassium and sodium hypophosphites, 1/8 gr. each of iron and manganese hypophosphites, 1/16 gr. of quinin hydrochlorate, and 1½ minims of tincture of nux vomica. This preparation contains the equivalent of 1/32 gr. (.002) of the alkaloids of nux vomica in each fluidounce and should therefore be at least one-fourth weaker than the syrup of Fellows.

These hypophosphite preparations should give the formulas, that is the quantities of the active ingredients in the ordinary

dose. Since they are known by descriptive names they are not amenable to the objections directed against those preparations designated by more or less arbitrary or fancifully constructed trade names. There is no objection, therefore, from a medical standpoint, to the employment of these preparations whenever equally excellent official preparations can not be obtained.

Therapeutics.

Treatment of Hemorrhoids.

Non-operative or palliative treatment consists primarily in keeping the parts thoroughly cleansed by bathing with warm water and castile soap, and in applying some soothing and astringent lotion during the acute inflammatory stage. The Messrs. Allingham advise for this purpose the following:

- R. Strong subacetate of lead solution.....3i
 - Tincture of opium.....3ss
 - M. Sig. One teaspoonful of the lotion to be mixed with one wineglassful of milk, and applied frequently to the anus.
- Another formula, which has been found very useful, is as follows:

- R. Fluid ext. hamamelis.....3i
- Fluid ext. hydrastis.....3i
- Compound tinct. benzoin, aa.....3ss
- Tinct. belladonna.....3i
- Linseed or olive oil, carbol. (5 p.c.) q. s., ad.....3iij
- M. Sig. Apply often to the parts.

Hot or cold applications are often of service. Chas. B. Ball, F.R.C.S., considers the local application of a mixture of the extract of belladonna and glycerin, smeared over the anus, and followed by a warm stupe, the best palliative treatment for external hemorrhoids. In addition, the bowels should be freely moved, and a light, easily-digested diet, with rest in bed, prescribed. Any of these remedies will, as a rule, cause the inflammation to subside within a few days, but usually a thickened tag of skin is left, which is liable at any time, on the slightest provocation, to become inflamed.

INJECTION TREATMENT.

- R. Acidi carbolici.....3iss
- Acidi salicylici.....3ss
- Sodii boratis.....3i
- Glycerini (sterilized) q. s. ad.....3i
- M. et ft. sol. Sig. Injection for hemorrhoids.

Of this fluid from two to four minims are injected into the base of the hemorrhoid. If other injections are to be made, they are made in from three to five days.

Painless Treatment of Buboec.

Buboec, when suppurating, may be opened painlessly by first injecting beneath the skin a 3 per cent. solution of beta-eucain. After evacuation of a 5 per cent. solution is poured into the wound, and after a few minutes curetting may be performed lightly without pain. One dram of solution may be thus used with safety. To obviate the prick of the hypodermic needle in very sensitive subjects, first spray with ethyl chlorid.

—Dalton; Therapist.

Treatment of Exophthalmic Goiter.

According to Stewart (*St. Louis Med. and Surg. Jour.*, May), the first injunction as to treatment should be rest, the next attention to the circulation. The two remedies that are invaluable are digitalis and strophanthus, given in doses of 5 minims three to six times a day. Medical treatment, however, is usually unsatisfactory. Ergot is recommended by some; belladonna, either the fluid extract or atropin, should be given three or four times a day or until dryness in the throat appears. Spartein has proved of some value, but is not a very useful drug and should be left as a last resort. Another remedy is carbazolate of ammonia in pill form, beginning with a small dose and very gradually increasing it for two or three weeks. Tincture of iodin in 30-minim to 2-dram doses three times daily or iodid of potash has been used. The ice-bag or Leiter's tubes frequently applied over the heart or lower part of the neck will materially reduce the pulse. Electricity has been of considerable value in some cases, in the form of galvanization of the cervical sympathetic and the cardiac region.

1. In granulating sugar ultramarine is often added for the purpose of correcting the yellow color and to give the article a "dead white" appearance, as is practiced in laundrying white goods. The blue, though present in insignificant proportion, is a sharp reagent and causes much trouble in chemical syrups.

Good effects have been reported from quinin, belladonna and ergot and also silver nitrate in 1/8-gr. doses after meals. The anemia should be met with iron and arsenic. The nutrition of the patient should be looked after. Thyroid extract has not been satisfactory, and Stewart thinks surgery gives most promise of good results.

Cystitis in Women.

Dr. A. H. Cordier, of Kansas City, writing on this subject, says:

In the treatment of cystitis, the constitutional as well as the local symptoms should receive most careful attention. During the acute attacks the patient should be encouraged to take large quantities of water. This dilutes the urine, thus making it less irritating to the hypersensitive mucous membrane. All articles of diet, as asparagus etc., that act more or less as irritants to the bladder, should be left from the diet list. The bowels should be moved with a saline cathartic, Epsom salts being the best; the rectum should be kept free from hardened feces, the patient being placed in bed if the case is a severe one. Remedies directed toward the easing of pain should be resorted to. I would avoid opiates as much as possible, but in their place give the bromids, chloral, cannabis indica, tritium repens, etc. I would not disturb the bladder by treating it locally in the very acute cases. If the disease is first seen in its chronic or subacute stage, most cases require, in addition to the constitutional treatment, a careful application of local remedies. This is best carried out by inspection through the cystoscope. If the cystitis is of gonorrhoeal origin I have found nothing that acts better than a saturated watery solution of picric acid applied directly to the inflamed surface. Some cases are much benefited by local application of 10 gr. of silver nitrate thrice weekly or a similar solution of protargol. I have not derived much benefit from boric-acid washes, even though used faithfully in many cases. Very weak solutions of potassium permanganate have acted much better in the chronic cases as an irrigating fluid than boric-acid solutions.

Methylene Blue in Gonorrhoea.

According to the *Med. Record* (THE JOURNAL, ¶ 31, p. 866), O'Neill, of New York, says that methylene blue administered internally will cure gonorrhoea in from four to seven days. To the diplococcus it is especially fatal, while the pyogenic bacteria, that make gonorrhoea a mixed infection, succumb very promptly to this germicide. It is best given in gelatin capsules, in 1-grain doses three or four times a day. After the fourth day the dose may be reduced to twice a day. Given alone it sometimes causes irritation of the neck of the bladder, but when combined with oil of nutmeg there is no trouble of this kind; oil of sandalwood is a valuable adjuvant, because of its diuretic action and also on account of its sedative effect on inflamed mucous membrane. Troublesome gastric symptoms may be avoided with the following formula, which has given uniformly satisfactory results:

R. Methylene blue gr. i
Oil of nutmeg gtt. i
Oil of sandalwood gtt. ii

This is given in a gelatin capsule, but never for longer than ten days without intermission, and while taking it the patient should drink freely of water. In no case has the author found it necessary to continue treatment for more than ten days. The mission of the methylene blue is accomplished when it has destroyed the bacteria of supuration. Positive results from preventive treatment of gonorrhoea are not obtainable, still the author believes with Dr. Flint, whom he quotes, that "it is a reasonable scientific proposition that methylene blue would probably act as a prophylactic against gonorrhoeal infection in impure intercourse."

Treatment of Myocarditis.

Martin Mendelsohn believes that whatever the cause of myocarditis, be it diphtheria or other infectious diseases, alcohol, phosphorus or syphilis, says the *Brit. Med. Jour.*, the clinical symptoms are always those of a weak heart and require the same treatment; in any case they depend on an inability of the heart to meet the demand made upon it. Thus, supposing the demands to be excessive, they may produce symptoms of myocarditis in a heart previously healthy. In slight cases the symptoms occur only when unusual bodily or

mental exertion has been made. In the later stages they are permanent. The physical signs vary, but generally consist in hypertrophy of the left ventricle, with accentuated sounds if compensation is present, or in dilation with weak sounds if it is not. In the treatment all excessive bodily or mental exertion must be avoided, as well as the habitual use of coffee, tea and tobacco. Oertel's treatment, which consists in systematically increasing the power of the heart by exercises, and reducing compulency by restricting the fluid drink, acts well in obese, but otherwise healthy, patients; but, since it is impossible to eat much without drinking, is not suitable for debilitated patients, where, especially at the beginning of the complaints, absolute rest in bed is the chief remedy, and restores compensation. Later, each patient must aim at keeping his heart exercised by bodily and mental work, while avoiding overexertion. Other important factors are life in an even temperature and pure air, regulation of the bowels, and frequent, though small, meals. Acute attacks of vertigo, palpitation, dyspnea, and cyanosis are best treated with ether and caffeine. In chronic cases, drugs must be given with caution, and digitalis should be reserved for those where compensation fails; in others, caffeine, convallaria majalis, adonis vernalis, sodium nitrite or potassium nitrite may be tried. Occasionally ergot acts well by its tonic action on the muscles of the smaller vessels.

Strontium in Exophthalmic Goiter.

The *Riforma Medica*, for March 24, gives the following formula:

R. Strontium bromid 6 parts
Strontium iodid 12 parts
Distilled mint water
Syrup of mint, aa. 20 parts
Distilled water 40 parts
M. Sig. A coffeespoonful three times a day.

Headache in Neurasthenia.

R. Zinc valerianatis
Ferri sulphatis
Ext. rhei
Asafetide, aa. gr. xviii
M. ft. pil. No. xx. Sig. One three times daily.

Painful Menstruation.

R. Codeine gr. ʒi
Chloralis gr. xv
Ammon. bromidi gr. xv
Aque camphoræ ʒi
M. Sig. To be taken while lying down.

—*Gaz. Hebdomadaire de Méd. et de Chir.*

An Intestinal Astringent.

Eugen Doernberger recommends as an intestinal astringent, especially for children, tannopin, which is a condensation product of tannin and urotropin. The dose for children is gr. viiiss three times daily, for adults gr. xv three times a day. The dose must be regulated for the individual case. It is especially applicable to children, since it is tasteless; its greatest disadvantage is the expense. —*Med. Record.*

Treatment of Measles with Red Light.

THE JOURNAL has referred to Chatinière's announcement that red light has an abortive influence on measles (vol. xxxi, p. 1129). In *Presse Méd.* of April 28, he reports nine more cases treated exclusively with this phototherapy; the windows covered with red curtains and the room lighted at night with a photographer's red lantern. In each case the disease was unmistakably aborted. The eruption disappeared in six hours in most instances; fever, laryngeal and bronchial manifestations were promptly attenuated, and patients had recovered and were allowed to go out of doors by the third to fifth day after first manifestations of the disease. The eruption disappeared first on the regions exposed to the light. He suggests that the effect may be due to the reinforcing of the natural powers of the organism by the action of the red light. He has noted marked nervous phenomena in workmen employed in making photographic plates by red light. Some neurologists claim that red is force-producing. It is a custom in the Caucasus to dress the children in red garments in case of eruptive disease, especially measles.

Bathing Treatment in Chronic Kidney Affections.

Dr. Groedel, of Bad Nauheim, says that this treatment is contraindicated: 1. In cases of chronic parenchymatous nephritis, and in cases of secondary contracted kidney in which there is from time to time an increase in the albuminuria, indicating an exacerbation of the parenchymatous affection. 2. In cases of contracted kidney with marked circulatory disturbances, congestion, dyspnea, etc. 3. In cases of contracted kidney accompanied by a high degree of arteriosclerosis, and, finally, in cases in which there is an apoplectic tendency and in which there has been an attack of pulmonary edema. Only those cases of contracted kidney in which the circulatory disturbances are mild are benefited by the treatment.

Treatment of Scarlatinal Nephritis.

In a communication presented at a recent meeting of the New York Academy of Medicine, Kemp (*Medical Record*, April 14, p. 657) advised that in the presence of pulmonary complications due to nephritis in the course of scarlet fever oxygen should be employed from the beginning. As it is a good cardiac stimulant and aids in the elimination of toxins, it should prove of value also in cases unattended with pulmonary complications. Enteroclysis, with the water at a temperature between 110 and 120 F., may be employed for periods of from fifteen minutes to an hour, and as often as three or four times a day. Hypodermoclysis and saline infusions are also useful. Carbonated baths may be recommended for uremic conditions, with the water at a temperature of 98 or 100 F.

Apocynum in Pleurisy.

An observation of pleurisy with a large effusion, "satellite of incipient tuberculosis," is related by F. Combemale, in *Echo Méd.* of April 22, which was cured without surgical intervention and with remarkable promptness by stimulating diuresis with twenty drops of fluid extract of apocynum cannabinum daily. Four liters of urine were evacuated the first day, then 3½, 3 and 2. An indirect, cardiovascular diuretic is required, the conditions being a serofibrinous pleurisy with large effusion just attaining its maximum, a heart responding well to medicinal intervention and the kidneys rapidly and abundantly permeable.

Methylene Blue in Grave Malaria Cachexia.

Cardamatis, of Athens, writes to the *Progrès Médical* that he has found methylene blue very effective in the early stages of severe malarial cachexia in cases rebellious to quinin. He recommends it warmly for its action not only on the malarial plasmodium, but also on the consequences of the infection, through its regulating effect on the functions of the kidneys. A typical observation is described, of a child affected with la grippe, traumatic perisplenitis and dysenteriform diarrhea, leading to revival of a light, malarial infection contracted during a stay of a few days in a malarial region a year before, which terminated in grave malarial cachexia and gangrene. The prompt efficacy of methylene blue combined with tepid hydrotherapy was thoroughly attested in this and in other cases in his experience.

Sodium Cacodylate in Tuberculosis.

M. Letulle has been testing sodium cacodylate on a large scale, and announces that his results have been extremely encouraging. Patients with open tuberculosis have improved more rapidly and the improvement has been more permanent than under any other treatment. He follows Gautier's directions, described in *THE JOURNAL* (vol. xxxiii, p. 99), and reports some typical observations in *Presse Méd.* of April 28.

Treatment of Valve Pneumothorax.

Even when there is a perforation from the lung into the pleural cavity, air does not enter the latter except when forced in by efforts of coughing. Consequently the cough must be prevented, and in a recent communication (*Revue des Hop.*, April 12) A. Beclère advocates subcutaneous injections of morphin for this purpose. He also describes a contrivance for diagnosis and treatment, which has rendered him efficient service: a hypodermic needle connected by a rubber tube with a glass tube bent into an L. The longer end is inserted

in a test-tube filled with water. Capillary puncture of the pleura in an intercostal space with this contrivance not only serves to differentiate valve pneumothorax but also to cure it, allowing the escape of the accumulated air without danger of subcutaneous emphysema.

Sodium Salicylate Upon the Biliary Secretion.

A report taken from the Société de Médecine et de Chirurgie Pratiques, the author's name not being given, contains fourteen conclusions, among which are: That under the influence of the drug a slight diminution in diuresis is noted, and an increase in the coloring matter, uric acid, and acidity of the urine. The biliary secretion is increased, as are also the phosphoric acid and fixed matters. The property of the drug in increasing the activity of the biliary function, and the known property of the bile in retarding products of fermentation in the intestine even when it contains no salicylate of sodium, together with the other properties of the drug make its application of great interest in pathology.

—*Jour. de Méd. de Paris.*

Persistent Hiccough.

- | | |
|-----------------------------|----------|
| R. Strychnine sulphat | gr. 1/40 |
| Camph. monobrom | gr. ½ |
| Hyoscyamine | gr. 1/50 |
- M. Sig. For one dose. Repeat according to indications.

—*Méd. News.*

Medicolegal.

Still Deemed an Intentional Injury.—The Supreme Judicial Court of Maine holds, in *Matson vs. Travellers' Insurance Company*, that, where an accident insurance policy contains a provision that the insurance shall not cover "intentional injuries, inflicted by the insured or any other person, except burglars or robbers," the insured can not recover of the insurer for injuries intentionally inflicted upon him by another, not a robber or burglar, who made an assault upon him, even if the injury sustained was not precisely that intended, provided the act was intentional, was directed against the insured, and some injury to him was intended.

Affidavit of Physician Not Conclusive.—The Supreme Court of Illinois holds, in *Modern Woodmen of America vs. Davis*, that the right of a beneficiary to recover on a benefit certificate can not be conclusively determined from the affidavit of a physician filed by her because the rule of the order requires it to be filed. Nor is she precluded from combating the truth of the affidavit of the physician. Here the certificate in question contained a provision that it should become void if the assured member should become so far intemperate as to prematurely impair his health or to produce delirium tremens, and the affidavit of the physician who attended the assured during his last illness, filed in obedience to a rule of the order issuing the certificate, stated that the immediate cause of his death was acute alcoholism. Yet the court does not consider that this was conclusive of the beneficiary's rights. It says that proofs of death, if in compliance with the requirements of the order, form a legal basis for an action on a certificate issued by the order, even though the proofs contain matter damaging to the case of the beneficiary. The real cause of death remains a question of fact, in the elucidation whereof the beneficiary is not restricted to the testimony of the physician. So it holds here that whether the decedent had indulged in the use of intoxicating liquor so as to permanently impair his health or produce delirium tremens was a question of fact, and the jury having determined it in favor of the beneficiary, the court affirms a judgment entered for her.

When Must Pay for Maltreatment by Physician.—On the appeal of the City of Dallas vs. Meyers, in an action brought by the latter party to recover damages for personal injuries alleged to have been sustained by a fall on a defective sidewalk, it was urged that the charge to the jury permitted a recovery for increased injury resulting from the maltreat-

ment of the attending physician, provided the party suing exercised reasonable care to select a competent physician, and followed such physician's directions as to treatment, and that this was error. But the Court of Civil Appeals of Texas answers that the proposition involved a question of proximate cause. If the injured party, in good faith, and in the exercise of ordinary care, employs a physician to treat his injuries, and his injuries are aggravated through the mistake or negligence of his physician in his treatment, the negligent or mistaken treatment of the physician, the court holds, does not become an intervening cause, breaking the causal connection between the negligence producing the original injury and the ultimate effects of such injury. In such case, it maintains, the injured party may recover damages for the injury he has sustained, including the aggravation resulting from the negligence of his doctor.

Quarantine of Double House.—The Michigan case of *Highland vs. Schulte and Others*, who constituted the board of health, was brought to recover damages by a man, who resided with his family in the east half of a double frame dwelling in Detroit, on account of being quarantined because of a case of smallpox found in the family residing in the west half of the building. There was no passage from one tenement to the other, and the back yards were separated by a high board fence. Nor was there anything to show that the plaintiff or any one in his house had been exposed to the disease, which, however, was epidemic in the city at that time. The order of the health officer, directing that the entire building should be quarantined, was made under a general regulation adopted by the board of health providing that, in all cases where smallpox broke out in one half of a double frame house, the entire house should be quarantined. It was contended, for one thing, that it was beyond the authority of the board to make such a rule. But the Supreme Court of Michigan, which affirms a judgment for the defendants, holds that it was proper for the board of health to make the rule complained of, and delegate to the health officer the examination of conditions and enforcement of the regulation, as from the nature of things, the board could not act collectively on each case that might arise, with the necessary promptness and efficiency. Furthermore, it says that it needs no lengthy discussion to show that the public welfare requires more prompt and stringent measures to prevent the spread of an infectious disease in large cities than is required in rural districts or villages.

Proper Case to Refuse to Order Examination.—One of the grounds of error alleged in the *Illinois Central Railroad Company vs. Clark*, an action originally brought by the latter party to recover damages for personal injuries, was a refusal of the trial judge to require the plaintiff in the lower court to submit to an examination of his foot by physicians in the presence of the jury. It, however, appeared that he was willing to submit to such examination at the hands of a certain named doctor, or perhaps other doctors, but objected to such examination by the railroad company's physicians. Besides, the evidence showed that he was examined by the company's physician soon after the injury occurred, and by another physician who was not unfriendly to the company, if not in fact in its employment. It also appeared that the injured foot was exhibited to the jury. Under these circumstances, the Court of Appeals of Kentucky says that it does not consider that the trial judge was guilty of any abuse of discretion touching the examination asked for, it being largely within his sound discretion whether he would order such an examination, subject to having his decision reviewed or reversed in case of an abuse of that discretion.

Mere General Practitioner Not Eligible.—The California act of March 31, 1897, entitled "An act to establish a state lunacy commission, etc.," which is called in the first section thereof the "insanity law," provides for medical superintendents for what it terms the "state hospitals." As to the qualifications of such superintendents its language is as follows: "A medical superintendent, who shall be a well-educated physician, a graduate of an incorporated medical college, of good

moral character, and who has not less than three years' experience in the care and treatment of the insane." Now this, the Supreme Court of California holds, in *People vs. King*, does not include a mere general practitioner, who, in the course of his practice, occasionally meets and prescribes for a person afflicted with some mental disease, and who is not, and does not pretend to be, a specialist in insanity cases, and who has not made the care and treatment of the insane a special study, nor followed it, for any length of time whatever, as a special vocation. As to whether or not the appointee must have been employed for three years in some asylum or institution, either public or private, used exclusively for the confinement and treatment of insane persons, the court does not consider it necessary to decide here, although, it says, the use of the word "care" as well as "treatment of the insane" very strongly suggests that conclusion. Moreover, an effort was made in this case to prove the insanity law unconstitutional. It was attacked, first, as being special legislation, and not having a uniform operation; and, second, as embracing subjects not expressed in its title. But it is held not unconstitutional on either of these grounds.

Not Considered a "Graduate."—Richard Metcalfe made application to the Michigan State Board of Registration in Medicine for registration as a medical practitioner under act 237 of the Public Acts of 1899. His application was refused. He then made application for a writ of mandamus to compel said board to register his name and grant him a certificate of registration under the provisions of section three of the act, subdivision one of which provided that the applicant should be registered and given a certificate if he should present sufficient proof within six months after the passage of the act of his having already been legally registered under act No. 167 of 1883, as amended in 1887. He produced proof of having been registered in February, 1897, under the earlier act, and insisted that the board was not authorized by the act of 1899 to look behind the fact of previous registration to ascertain whether he was entitled to be registered, although he conceded that the law of 1899 was within the police power of the state, and that the legislature might have vested the board with full power to investigate the right of the applicant to registration. But, before passing upon the case, the Supreme Court of Michigan says that, inasmuch as the provision relied upon required as a prerequisite to registration without examination that the applicant should have been "already legally registered," it was necessary to turn to the earlier act to ascertain whether he was "legally registered." This provided that every graduate of any legally authorized medical college in any one of the United States should be deemed qualified to practice medicine and surgery after registration, and that the latter might be obtained in certain cases by the filing of an affidavit showing certain facts. Thereunder an affidavit was filed by this party which was as follows: "State of Michigan, County of Berrien, ss. Richard Metcalfe being duly sworn deposes and says, that he is a physician and actually engaged in practice in the county above named, and that he has been so engaged for the period of ten years and — months; also, that he is a graduate of Independent Medical College, a medical college located at Chicago, in the State of Illinois; that he attended said college for the period of one day during the examination and graduated therefrom February 4th, A. D. 1897. Deponent's present residence and place of business is St. Joseph in said county, and he belongs to the Physio-Medical School of Medicine. That he practiced under Dr. Hingens for a period of ten years. [Signed] Richard Metcalfe." This was subscribed and sworn to February 5, 1897. Now this leads the Supreme Court of Michigan to state that if it is able to say that a showing of attendance for one day only and the grant of a diploma by a so-called medical college does not constitute the fortunate recipient of such a certificate a graduate within the meaning of the law of 1887, it follows that on the face of the record of Berrien county this applicant was not legally registered. And it declares that it does say it, and that it follows that he was not entitled to the relief prayed.

Societies.

COMING MEETINGS.

AMERICAN MEDICAL ASSOCIATION, Atlantic City, N. J., June 5-8.

American Academy of Medicine, Atlantic City, N. J., June 4.
American Medical Publishers' Association, Atlantic City, N. J., June 4.

American Medical Editors' Association, Atlantic City, N. J., June 4.

Association of American Medical Colleges, Atlantic City, N. J., June 4.

Medical Society of New Jersey, Atlantic City, N. J., June 4.
New Mexico Medical Society, Santa Fe, June 5.

American Association of Acting Assistant-Surgeons, U. S. Army, Atlantic City, N. J., June 6.

Rhode Island Medical Society, Providence, June 7.
Medical Association of Delaware, Rehoboth, June 12.

Massachusetts Medical Society, Boston, June 12-13.
Oregon State Medical Society, Portland, June 26-27.

Colorado State Medical Society, Denver, June 13.
Maine Medical Association, Portland, June 13-15.

South Dakota State Medical Society, Aberdeen, June 14.
Indian Territory Medical Association, Wagoner, June 19-20.

Wisconsin State Medical Society, Milwaukee, June 20.
Third District Branch of the New York State Medical Association, Binghamton, N. Y., June 21.

Second District Branch of the New York State Medical Association, Schenectady, N. Y., June 28.

CONGRESS OF MIDWIVES.—The legislature of Finland has authorized the organization of a congress of midwives, which will meet at Helsingfors in June.

FAYETTE COUNTY MEDICAL SOCIETY.—At the recent meeting of this Society, in Fayette, Ind., May 8, Dr. A. R. Rogers of Oelwein was chosen president.

WORCESTER DISTRICT MEDICAL SOCIETY.—At the annual meeting of this Society, held in Worcester, Mass., May 9, the following officers were elected: president, E. R. Wheeler; secretary, L. C. Miller; treasurer, George O. Ward.

BRISTOL SOUTH DISTRICT MEDICAL SOCIETY.—This Society, at the meeting held in New Bedford, Mass., May 10, elected the following officers: president, W. A. Dolan; vice-president, M. H. Leonard; secretary and treasurer, A. J. Abbe.

HAMPSHIRE MEDICAL SOCIETY.—At the meeting of this Society, held in Northampton, Mass., May 9, the following officers were elected: president, J. A. Houston; vice-president, C. R. Gardener; secretary, J. C. Fahey; treasurer, A. H. Hoadley.

WASHINGTON COUNTY MEDICAL SOCIETY.—The members of this Society met recently in Washington, Pa., and elected the following officers: president, J. B. Irwin; vice-president, R. E. Connor; secretary, J. A. McKean; treasurer, W. R. Thompson.

LAKE COUNTY MEDICAL SOCIETY.—The members of this Society met in Hammond, Ind., May 9, and elected the following officers: president, John C. Pannenberg, Hammond, vice-president, Jas. T. Clark, Hammond; secretary and treasurer, Dr. Oberlin.

ADAMS COUNTY MEDICAL SOCIETY.—This Society met in Quincy, Ill., May 13. The new officers elected were: president, Otis Johnson; first vice-president, W. W. Williams; second vice-president, D. M. Landon; secretary, C. D. Center; treasurer, L. H. A. Nickinson.

ESSEX SOUTH DISTRICT MEDICAL SOCIETY.—The election of officers for this Society, which met in Salem, Mass., May 8, resulted as follows: president, P. L. Sanborn, Marblehead; vice-president, G. A. Stickney, Beverly; secretary, B. F. Sturgis, Salem; treasurer, G. Z. Goodell, Salem.

MIDDLESEX EAST DISTRICT MEDICAL ASSOCIATION.—This Association met in Woburn, Mass., May 9. The officers elected for the ensuing year were: president, J. P. Bixby, Woburn; vice-president, C. E. Chase, Woburn; secretary, E. S. Jack, Melrose; treasurer, Chas. Dutton, Wakefield. It was decided to celebrate the fiftieth anniversary in October.

MORRIS COUNTY MEDICAL SOCIETY.—This Society met in Morristown, N. J., May 8, and elected the following officers for the ensuing year: president, H. W. Rice, Port Oram; vice-president, N. H. Adsit, Succasunna; secretary, Levi Farrar, Middle Valley; treasurer, J. Douglas, Morristown.

ESSEX NORTH DISTRICT MEDICAL SOCIETY.—At the annual meeting of this Society, held recently in Lawrence, Mass., the following officers were elected: president, F. B. Flanders, Lawrence; vice-president, J. F. Croston, Haverhill; secretary and treasurer, M. D. Clark, Haverhill; corresponding secretary, J. A. Fitzhugh, Amesbury.

AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION.—This Association met in Richmond, Va., May 22-25. The annual address was delivered by Dr. J. Allison Hodges, and the following officers were elected for the ensuing year: president, P. M. Wise, New York City; vice-president, R. J. Preston, Marion, Va.; secretary and treasurer, C. B. Burr, Flint, Mich.

ARKANSAS STATE MEDICAL SOCIETY.—This Society closed a three days' session in Fayetteville, Ark., May 17. The following officers were elected: president, W. B. Lawrence, Batesville; first vice-president, L. Kirby, Harrison; second vice-president, M. L. Norwood, Sevier; secretary Frank Vinsonhale, Little Rock; treasurer, R. C. Thompson, Pine Bluff. Hot Springs was selected as the next place of meeting.

WASHINGTON STATE MEDICAL SOCIETY.—The eleventh annual meeting of this Society was held in Spokane, Wash., May 8 and 9. The election of officers resulted as follows: president, P. W. Willis, Seattle; first vice-president, A. E. Burns, Republic; second vice-president A. E. Stult, Colfax; secretary, A. H. Coe, Spokane; treasurer, J. W. Bean, Ellensburg. Eight new members were added and Seattle was chosen as the next place of meeting.

KENTUCKY STATE MEDICAL SOCIETY.—The forty-fifth annual meeting of this Society was held in Georgetown, Ky., May 8-11. The following officers were elected for the ensuing year: president, Jas. H. Letcher, Henderson; first vice-president, Geo. E. Davis, Lawrenceburg; second vice-president, Geo. M. Reddish, Somerset; secretary, Steele Bailey, Stanford; treasurer, C. W. Aiken, Flemingsburg; librarian, Frank Lopsley, Paris. The Society voted to meet next year in Louisville, and chose Louis Frank, of that city, chairman of the committee on arrangements.

IOWA STATE MEDICAL SOCIETY.—The forty-ninth annual meeting of this Society closed a three days' session in Des Moines, May 18. There were 112 new members added, making the entire membership 800, about 450 of whom were in attendance. Davenport was selected as the next meeting-place, and the following officers were elected for the ensuing year: president, R. E. Cundiff, Sioux City; first vice-president, J. M. Ristine, Cedar Rapids; second vice-president, Frank Porterfield, Atlantic; secretary, J. W. Cokenover, Des Moines; assistant secretary, Geo. E. Decker, Davenport; treasurer, Geo. Skinner, Cedar Rapids. In connection with this meeting occurred the second annual meeting of the Social Society of Iowa Medical Women. Papers were read by Nancy M. Hill, M. A. Coveny, Margaret Colby, A. D. King, Jennie McCowen and others. The following officers were elected: president, A. D. King, Dese Moines; vice-president, Mary A. Breen, Lenars; secretary, N. M. Hill, Dubuque; treasurer, Jennie McCowen, Davenport.

AMERICAN MEDICAL TEMPERANCE ASSOCIATION.—The tenth annual meeting of this Association will be held at Atlantic City, June 6, at the Hotel Dennis. This is the fourth largest association of medical men in the world the object of which is to study the alcoholic problem exclusively from the scientific side. The English association, called the British Medical Temperance Association, has a membership of over 600, exclusively medical men. Its president is Prof. Sims Woodhead, of Cambridge. The French society for the same purpose has a membership of 400. Its president is Dr. Motet, of Paris. The German society has for its president Dr. Mendell, of Berlin. It has a membership of over 300. The American society comes next with a membership of 150. Dr. N. S. Davis, Chicago, is its president and has been so from the first meeting held in Washington in 1891. The Swiss society is the last one formed,

with a membership of nearly a hundred. All these societies are composed of medical men who realize the magnitude of the subject and who address themselves without sentiment or theory to the study and discussion of the use of alcohol as a medicine and beverage. The French and English societies publish their transactions and papers in special journals. The American society issues the same in the form of a "Bulletin" published quarterly. The yearly meetings are held at the same time and place as the AMERICAN MEDICAL ASSOCIATION, for the reason that its members are almost exclusively also members of this ASSOCIATION. The annual meeting is for the election of officers, the presentation of reports, with president's address, some papers and discussions. The most of the papers bearing on this subject are presented in the different Sections of the AMERICAN MEDICAL ASSOCIATION. This is considered the most practicable, for the reason that a larger audience can be obtained and the papers will have more influence. The English society adopts this course with the addition of a medical breakfast at the British Medical Association meetings. This latter gives occasion for a free expression of opinion by all the leaders who are in sympathy with the movement. The necessity for the recognition and medical study of this subject becomes more imperative every year, particularly for authoritative studies by men of reputation. This Association should be a very great power in this country in directing public sentiment along these lines. A number of papers are promised at this meeting, and an invitation is extended to every one interested to be present. The session will be at 9 o'clock. Dr. T. D. Crothers, of Hartford, Conn., is secretary.

AMERICAN MEDICAL EDITORS' ASSOCIATION.—The annual meeting of this national association of American medical editors will be held at the Hotel Dennis, Atlantic City, N. J., Monday, June 4, under the presidency of Dr. I. N. Love, St. Louis, Mo. Dr. Dillon Brown, editor of *Pediatrics*, New York City, is secretary, and together with Dr. Philip Marvel, Atlantic City, chairman of the committee of arrangements, has been providing for this meeting, which will be attended by the leading medical editors of the United States, the majority of whom are members of the Association. A short business session will be held at 3 o'clock on the afternoon of June 4, and the regular meeting, for discussion of topics of interest to the members, will be co-incidental with the annual banquet, which will be held at the Hotel Dennis at 7 o'clock in the evening. Topics of interest to medical journalists will be discussed by Drs. W. W. Keen, Philadelphia; J. M. Mathews, Louisville, Ky.; C. F. Taylor, Philadelphia; John V. Shoemaker, Philadelphia; Leartus Connor, Detroit, Mich.; Surgeon-General Walter Wyman, Washington, D. C.; Philip Marvel, Atlantic City, N. J.; Chas. Hamilton Hughes, St. Louis, Mo.; Dillon Brown, New York City; W. C. Wile, Danbury, Conn.; L. S. McMurtry, Louisville, Ky.; Kenneth Milliean, New York City; Thos. Hawkins, Denver, Colo.; Geo. F. Butler, Alma, Mich.; Wm. Osier, Baltimore, Md.; C. A. L. Reed, Cincinnati, Ohio; Windslow Anderson, San Francisco, Cal.; W. W. Potter, Buffalo, N. Y.; Chas. Wheaton, St. Paul, Minn.; Hobart A. Hare, Philadelphia; A. M. Phelps, New York City, and Nicholas Senn, Chicago. Five-minute addresses will be given by each of these gentlemen, who have been specially invited, and these will be followed by impromptu remarks from others present. The medical journalists of the United States are uniformly loyal to the AMERICAN MEDICAL ASSOCIATION, and a few years ago formed their organization under the name of the American Medical Editors' Association, which from the beginning has held its annual meetings the day before the regular convening of the AMERICAN MEDICAL ASSOCIATION. A symposium of rare interest is expected and every medical editor and all who are interested in the literature of the medical profession are cordially invited to be present.

INTERNATIONAL CONGRESS OF THE MEDICAL PRESS.—The medical press of France has organized a congress as already announced, summoning the representatives of the medical press at home and abroad to a general reunion immediately before the opening of the International Medical Congress. Baudouin of Paris, and Posner of Berlin, have been working since 1894 to organize an international association, and it was proposed at

the Rome congress to have a section for the medical press in future international congresses. A provisory international committee was appointed to report at the Moscow congress, but nothing substantial has been accomplished. "The example of the international reunions of the lay press has demonstrated the great benefits to be derived by our profession from a general agreement on a certain number of points in which all are interested. An international association would promote the legitimate influence of medical journalism on the medical public, enhance the value of scientific literature, assist in the organization of periodical congresses and be found useful in many other ways." The chief questions to be discussed at the sessions are the foundation of an international association and the application of the principles of the protection of literary property to the protection of medical literature. Addresses on these subjects by Laborde (*Trib. Méd.*, Paris), Posner (*Berliner Klin. Woch.*), Rubino, De Maurans (*Semaine Méd.*, Paris), and Rochet (lawyer of the French Ass. de la Presse Méd.), are to be distributed to the members before the congress opens. Other questions to be discussed are: "Unification of Technical Terminology for Bibliographic Privileges Allowed the Lay Press;" "Regulation of the Right of Reproduction;" "General Conditions of the Service of Exchanges Between Journals;" "Representation of Medical Journals in Foreign Lands;" "Rôle of the Medical Press in the Organization and Promotion of Congresses, etc." The dates of the congress are July 26 to 29, the membership fee \$5 for titular and \$2 for adherent members. Secretary, Dr. Blondel, rue de Castellane 8, Paris.

Illinois State Medical Society.

Fiftieth Annual Meeting, Springfield, May 15-17, 1900.

(Continued from p. 1335.)

COMPLICATIONS AND SEQUELAE OF SCARLET FEVER.

DR. M. S. MARCY, Peoria, read a paper on this subject, in which he said that the complications of this disease are to be dreaded, owing to a lack of a positive antagonist to the streptococcus. He pointed out the necessity of carefully watching the patient after the acute symptoms have subsided, for fear that complications may set in, and some of them were discussed. He gave the history of a very severe case with all the complications, following a mild attack. According to his observations, they are apt to be worse in children, who inherit weak constitutions from parents who have suffered from syphilis and tuberculosis; and especially those of old fathers.

TENDENCIES OF MODERN MEDICINE.

DR. H. N. MOYER, Chicago, considered this subject in his annual address. In speaking of the medical practice act, he said that physicians are not benefited by it, but the public is, while it is for the protection of the public health that laws are passed; and that the interest physicians feel in legislation is no more and no less than that any class of citizens ought to feel in having good laws passed and in seeing them properly enforced. It is sometimes questioned whether or not physicians should descend into the arena of practical politics in order to secure such legislation as is necessary. If not done in a sense of pique, because their advice is not sought, but simply in an advisory capacity, their influence is great. This kind of legislation is increasing, developing from natural causes, because medicine is rapidly becoming an exact science. One of the tendencies of the near past, in the development of modern medicine, is an increasing confidence in and a reliance on scientific medicine on the part of the public.

Referring to "Christian Science," he said that it does perform cures, but by suggestion, a well-recognized method of treating diseased states, and one employed by physicians in suitable cases. In so far as the method happens to be applicable to a particular case, the results are brilliant, but when "Christian Science" deals with an infectious case, or organic disease, then the consequences may be deplorable. He thinks that the physician need do nothing legally, with the "Christian Scientists." Education is the remedy for "Christian Science," and medicine has nothing to fear from such fads as faith healing, magnetic physicians or miracle mongers.

He further said that the increasing exactness in medical science is exerting a powerful influence on medical education, but by some it is believed that the effect is reversed, and by the influence of medical education the science is being created. The use of methods and instruments of precision, whenever they become at all general, must find their reflex in the medical curriculum. He contrasted the medical college of his student days with that of to-day. Progress has been rapid, and the laity is rapidly recognizing the importance of scientific precision, while the physician who does not use the numerous aids at his command to-day soon finds himself out-classed. The material rewards for special skill in the medical profession have increased, as is witnessed by the salaries paid eminent surgeons in the South African War, and this reflects the judgment of the public as to the value of such medical services. The outlook of the immediate future for the beginner in medicine is not bright. There are too many medical men, but this is true of all lucrative occupations. There is a constant adjustment, and the law of supply and demand must ultimately govern; as the standard of medical attainment is raised, and the cost of getting a medical education is increased, the supply will diminish. The real problem before us is the exclusion of those who are not properly equipped mentally for mastering the deeply intellectual problems of medicine.

The crowning glory of the present century is the control of epidemic disease. The problem of infection in typhoid, tuberculosis and malaria has been mastered. If scientific medicine had nothing but this to its credit, it would take first rank among the beneficent sciences. The next great assault will be against consumption. The value of special climate in the treatment of this is doubtful, but in most cases a cold, dry air is best, and freedom from dust the most important consideration; these conditions can not be found in large towns or cities, and only a small proportion of consumptives can go any considerable distance, but they must be in the country, and we must have the aid of the country practitioner. For years the country doctor has seen many of his patients going to the cities for operations and treatments, content with the thought that perhaps they received better service than he could give them, but if tuberculosis is to be overcome, it must be with his aid.

He referred to medical organization, legislation, education, and the expansion of the public health service, and said that the medical profession is not doing its fair share of government in this country. In Europe medical thought has been of preponderating importance; in France the Chamber of Deputies has more physicians than lawyers; the same is true of the Reichstag of Germany, and the only antagonist whom Bismarck feared and respected was Virchow, who for twenty-five years was one of the leading legislators of Germany; this is true also of Italy, where Baccelli was for years the leader of a great political party, and at the same time a great teacher and master of clinical medicine. The legal profession has too long dominated the scene, and if to attainments in this line is added the glint of soldier straps, the result seems quite irresistible. The combination of soldier-judge, or lawyer-colonel, seems to be as inherently entitled to rule this country as are the dukes and princes in the Old World. Medical men know how poor legal and military training is for the comprehension of sociologic problems, and that no class or profession is so competent to deal with these topics as is their own. In the main, the world is indebted to the medical profession for all of its scientific knowledge in regard to criminals and the defective and dependent classes; yet government, 80 per cent. of whose operations are concerned with these classes, is controlled by lawyers, who have a sprinkling of military experience. Another age will look back on this, and, with the perspective of years, wonder why the intellectual advancement of our times was not represented in government.

ADDRESS IN STATE MEDICINE.

DR. ARTHUR C. COTTON, Chicago, delivered the address of this section, using for his subject, Jeremiah, xxxi, 15: "Thus saith the Lord: A voice was heard in Ramah, lamentation and bitter weeping; Rachel weeping for her children, refused to be comforted for her children, because they were not." The his-

toric aspects of pediatrics were considered and reference made to a book devoted to children, which was written by a lay woman in 1790, and called "The Maternal Physician."

All recognize that the mortality of infancy and childhood is enormous. More than two-fifths of the whole number of deaths in England and Wales during the decade of 1881-1891 occurred in children under 10 years of age. The greater number of these were under 5, and still more under 1 year. Recent studies—by Eross—of sixteen large European cities, including a review of a million and a half of children, have shown that 10 per cent. of infants born alive die during the first four weeks of life. Independent work in New York along the same lines brought very similar results, namely, a proportion of 1 death to every 10.8 births. The lowest average infantile death-rate to any European country is found in Norway, where we may expect to find, of 1000 births, 900 infants still alive at the end of one year. Only in the most favorable portions of other countries—the rural districts—are nine infants out of ten born able to keep up the struggle for life. In the larger cities the mortality during the first year is found to range from 120 to more than 700 in 1000 births.

The relation of the physician to over 90 per cent. of the disorders of infancy and childhood, may be summed up in the one term, "hygiene," and the conscientious practitioner will agree that the measure of his success bears a direct ratio to his application of the principles of this all-important subject. Among the obstacles to be overcome in this, two things particularly stand in the way: 1, there is either a want of information on the part of the physician, or a disinclination to apply his knowledge; 2, there is unwillingness of the mother to be guided in this respect.

The convention of child study, which was recently held in Chicago, revealed that systematic experimental observations on a large number of children of different ages have been instituted in some of the public schools, with the result that exceedingly interesting and valuable data have been obtained by Gilbert of New Haven, Porter of St. Louis, and W. S. Christopher of Chicago. In the latter city, as in some others, a more or less systematic, though limited, medical supervision of the pupils has been inaugurated, which during the past winter has shown positive results in checking the spread of acute contagious diseases, and also benefited in many other ways the pupils thus inspected. As a partial result of these investigations, the conclusion has been reached that our boasted school system may prove a great evil, if not properly guarded. The public school is recognized as a great juvenile board of trade, where exchange of infection and their products may be affected, and contagion disseminated. The question of hygiene and the individual pupil should find a response in every intelligent parental mind. Aside from dangers of contact infection, the question of injury to the individual pupil by the ordinary schoolroom régime is a subject worthy of careful study; and the wrecks, physical and mental, that strew the pathway of life but emphasize the need of more definite knowledge. It is now accepted that many children, generally recognized as able-bodied, can not be subjected to the routine of school life without positive injury to themselves, if not to their associates, and that defective hearing, vision, tactile sense, as well as bemic, secretory and excretory faults unfit many children for the modern school-room. He believes that no child should be admitted to any grade in school without a medical certificate from a competent examiner, and he discussed the propriety of state legislation looking toward such medical supervision of pupils in our public schools.

PATHOLOGY OF DELIVERY.

DR. J. CLARENCE WEBSTER, Chicago, made the address of the section on surgery, with this as his subject. He first considered anomalies of the hard passage, and under this head included all variations from the normal type of bony pelvis, naming as the most frequent contractions met with in practice: the justo-minor or universally contracted pelvis, the flat non-rickety and rickety, the funnel-shaped, and the pelvis altered by various spinal deformities. Of the latter, perhaps the most common are the universally contracted and the flat. Reference was made to the use of forceps, the axis-traction instrument

and not the ordinary long forceps, and to the value of the Walcher posture. The indications for the use of axis-traction forceps were discussed and, in a general way, the conditions in which the instrument should be employed: 1. In delayed labors due to *a*, faults in the powers—1, essential—the uterus; 2, accessory muscles; *b*, faults in the passenger—1, slight enlargement or marked ossification of the fetal head; 2, certain malpositions and malpresentations; *c*, faults in the passages—1, soft parts; 2, hard canal. 2. In dangerous labors due to *a*, maternal complications, viz., heart disease, pneumonia, etc.; *b*, fetal complications, viz., some cases of prolapsus funis, dry labors, etc.

The chief indications for performing version were given as follows: 1. Maternal: *a*. Accidental hemorrhage and placenta previa. *b*. Eclampsia and other conditions where a hurried delivery is considered necessary. *c*. Flat pelvis. 2. Fetal: *a*. Transverse presentations when the conditions are favorable. *b*. Prolapse of the cord in the first stage. *c*. Brow and face cases when the head has not engaged, if it is impossible to change them into vertex cases.

Symphysiotomy is best regarded as an adjuvant to delivery by the axis-traction forceps. It may, therefore, be employed, speaking generally, where forceps delivery in the Walcher position is impossible, and where there is no doubt that the increased pelvic measurements resulting from the operation will allow the head to be extracted. It may be tried: 1. In cases of pelvic contraction. Most authorities mention a limit of 2.6 to 3.2 inches in flat pelvis, and 3.2 to 3.9 inches in justo-minor ones. It is evident that the employment of the axis-traction forceps in the Walcher position must make unnecessary, in a considerable proportion of cases, the cutting operation. 2. Symphysiotomy also has a place in impacted brow and face cases, where delivery can not be safely carried out with axis-traction forceps in the Walcher position. 3. In cases where the head is abnormally ossified or a little enlarged, and delivery can not be effected by the axis-traction forceps and the Walcher position, symphysiotomy is indicated.

The indications for Cesarean section, and also for the Porro-Cesarean section were mentioned. The latter should be employed: 1. Where the patient is particularly anxious not to run the risk of a second pregnancy, owing to the impossibility of delivery through the vagina. 2. Where the uterus or appendages are so diseased as to render probable the necessity for a subsequent operation. 3. Where owing to a prolonged labor, in which other manipulations have been tried, infection of the uterus has occurred.

In speaking of the indications for embryotomy, he said that in view of the modern improvement in the technique of abdominal surgery, whereby the mortality of Cesarean section has been greatly reduced, a physician takes upon himself a grave responsibility where he recommends the destruction of the living child.

APPLICATION OF FORCEPS.

DR. J. E. ALLABEN, Rockford, considered this subject. He said that the forces which are responsible for the origin and evolution of the obstetric forceps may be designated under two general heads: the evolution of the human family to its present stage in civilization; and the individual deviation in structure or function, either in parent or fetus, from a certain type which is designated as normal. The obstetric forceps in the hands of the skillful is a device capable of saving life and curtailing pain; in the hands of the unskillful, it has done great harm. The essential features in a forceps are that they should be aseptic; should have the proper cephalic and pelvic curve; should be rigid enough to prevent slipping, and should be so constructed that traction can be applied as near as possible in the direction of the axes of the pelvic planes. He recognizes three varieties, the long, short and axis-traction, and spoke of two things that should be remembered in inserting the blades—the curve of the child's head, and the curve of the mother's pelvis.

He divides the operations of forceps applications into low, medium, and high. Under low, he recognizes the following divisions with reference to position and presentations: 1, occipito-anterior; 2, occipito-posterior with partial rotation; 3, occipito-

posterior; 4, face presentation; 5, breech presentation. These positions and presentations were taken up and discussed in consecutive order.

TECHNIQUE OF VERSION.

DR. J. F. PERCY, Galesburg, read a paper on this subject. He said that an important preliminary aid to the final success of version is an exact diagnosis of the relation of the fetus *in utero* to the maternal parts. This will require either abdominal palpation, a vaginal examination, or both combined. Version should never be attempted in a pelvis where the conjugate vera is less than 9 c.c. Another very practical aid is examination of the prospective mother by abdominal palpation every two weeks after she has advanced beyond the seventh month of pregnancy. Since version belongs to the domain of surgery, the physician should prepare for it as for a capital operation.

MANAGEMENT OF IMPACTED CASES.

DR. HENRY F. LEWIS, Chicago, discussed this subject. He defined impaction as that condition in which the presenting part is stuck fast in the maternal passages, neither advancing with the pains nor receding in the intervals. The presenting part of the fetus wedged in the pelvic canal renders the soft parts anemic by pressure, which, if continued long enough, causes necrosis. At the same time, the pressure interferes with the circulation of the parts in the canal below so that they become swollen and edematous. The worst feature of the case is that the labor becomes indefinitely prolonged and can not be terminated unless the pains greatly increase in their intensity, or assistance is furnished. He considers impaction as limited in causation to a disproportion between the bony canal and the presenting part; and does not think that dystocia is due to tumors, cicatricies, etc. Of all parts of the fetus the head is most prone to impaction. With a normal position of the vertex, impaction may occur in any portion of the pelvic canal on account of smallness or deformity of that canal, or on account of largeness of the head. Careful examination and mensuration before labor will often reveal the disproportion between head and canal and enable the obstetrician to take measures which will forestall trouble. In impaction of the presenting part of the fetus within the pelvic canal, traction with forceps or otherwise should first be tried, except in cases of monstrosity or in transverse shoulder presentations, in which cases embryulcia is the proper resource. If justifiable force with traction fails to move the fetus, symphysiotomy remains, if the child is living, and a mutilating operation if the child is dead.

MUTILATING OPERATION IN OBSTETRICS.

DR. CHARLES S. BACON, Chicago, discussed this subject. He said that these are generally indicated in cases of obstructed labor in contracted pelvis where the child is dead. Obstruction in the soft parts, for example, incomplete dilatation of the cervix, or stenosis of the vagina or vulva, due perhaps to scar formation, may sometimes furnish the indication. The perforation or decapitation of the living child is becoming less frequent as the result of high forceps operations; Cesarean section and symphysiotomy are improved, yet it is not possible to make a rule condemning the operation in every case. Among the most urgent conditions which call for interference and determination or decision for perforation or decapitation, as the case may be, is the distension of the lower uterine segment. He is confident that this condition is often overlooked by many physicians, and emphasizes its importance. The recognized indications for decapitation are impaction, in a case of neglected cross-presentation, or a dangerous distension of the lower uterine segment. To these indications he added one that, so far as he knows, has not been acknowledged, namely, a serious contamination of the presenting arm.

SYMPHYSIOTOMY.

DR. GEORGE N. KREIBER, Springfield, read a paper on this subject, in which he quoted the indications for this operation as mentioned by Dr. Webster. He also quoted from the paper of Dr. E. A. Ayers, of New York, regarding the subcutaneous operation, as follows: 1. Secure full dilatation of the cervix before beginning the operation, if possible, without risk to the child. 2. Have the urethra and bladder held to the left with a sound. 3. Make the initial incision with a small

scalpel, aiming to cut a path upon the face of the symphysis for a probe-pointed bistoury that is to follow, keeping the scalpel close to the bone and under the clitoris. 4. Substitute a probe-pointed bistoury for the scalpel after introducing the index finger of the left hand into the vagina against the posterior edge of the symphysis up to the top, and bring the tip of the finger and the tip of the bistoury together at the top of the joint, then work the blade downward with the left finger accompanying it, to within one-fourth inch of the subpubic arch. Then take out the bistoury, invert it, and cut from below up to the separated part, thus avoiding injury to the bulbi vestibuli just beneath the joint. 5. On removing the knife, the joint having separated, have an assistant press a pad of bichlorid gauze over the wound and face of the joint, keeping it there until the child is delivered. This will prevent hemorrhage and lessen the liability to infection. He then gave a description of the Ayers hammock bed, and a tabulated statement of seventeen cases of symphysiotomy, three of which he performed.

CESAREAN SECTION AND PORRO'S OPERATION.

DR. CHAS. B. REED, Chicago, discussed this subject. He said that the indications for Cesarean section are usually divided into absolute and relative; absolute when there is no alternative and delivery can not be effected, and relative when there is a choice between this and other procedures. The absolute indications are: 1. Contracted pelvis; flat pelvis with conjugate vera 6.5 cm. and child living; general contracted pelvis, 7 to 7.5 cm. or pelvis with 5.5 cm. conjugate vera and child dead. 2. Presence of large bony growths in pelvis. 3. Extreme atresia of lower genital tract, either congenital or acquired. 4. The occurrence of a grave accident in labor, as rupture of uterus, or sudden maternal death. 5. Carcinomatous degeneration of cervix or vagina.

The relative indications are more difficult to formulate, and usually must be determined according to the requisites of each case. As to the time of operation, it may be performed either before or during labor or after the mother's death. As an operation of election, the most desirable time under any of the absolute indications is at term, or when the labor pains begin.

For the Porro operation the indications were classified thus: 1. All cases where, owing to the general conditions, Cesarean section is indicated and the removal of the uterus is required. 2. When the child is dead, and infection of uterus has taken place. 3. Extensive atresia of vagina, preventing discharge of lochia. 4. Carcinoma of cervix. 5. Atony uteri or uncontrollable hemorrhage from placental site. 6. In cases of ruptured uterus where suture is unsafe.

The Porro operation has been expanded to include all operations which terminate in the supravalvular amputation of uterus. The advantages of this method over the conservative operation lie in the rapidity of the work, but more in the prevention of hemorrhage post-partum and the diminished chance of infection.

The Duhrssen vaginal Cesarean section presents a new phase of the question, and he advocates this operation in: 1. All abnormalities of cervix uteri and lower uterine segment which render dilatation difficult or impossible—carcinoma, myoma, rigidity, stenosis, etc. 2. Danger to the mother, which the rapid emptying of the uterus will relieve, disease of heart, kidneys and lungs. 3. Conditions of danger to the mother which presumably will cause death. The operation has been done 11 times, with 3 deaths.

PERINEAL OPERATION IN THE MALE, AND VAGINAL INCISION IN THE FEMALE, FOR THE RESULTS OF APPENDICITIS.

DR. E. M. SUTTON, Peoria, read a paper on this subject. He does not advocate perineal or vaginal incision for all cases, but in those where the surgeon can determine that it is the shortest route into the fecal abscess, for the following reasons: 1. Abdominal pressure, so necessary to bowel action after operations within the abdomen, is not interfered with as it is when multiple incisions with the Mikulicz drain are employed. 2. Drainage is downhill, and from the most pendant fossa instead of uphill through the abdominal walls, where vomiting may dislodge the tubes or interfere with perfect drainage. 3. The danger of interfering with the more or less successful

attempts of the peritoneum to combat the infection is minimized instead of increased as it is by entering from above.

ANKLE SPRAINS.

DR. EDWARD H. OCHSNER, Chicago, described and demonstrated a method which consists in careful and systematic strapping with rubber adhesive straps. These are cut from one-half to three-quarters of an inch in width, and the proper length. If a small ankle, they should be one-half inch wide; if a large one, they may be three-quarters of an inch, but no wider; on this and on the accuracy with which they are applied depends the success of the method. If the straps are too wide, or if they are applied in a haphazard manner, failure is sure to result. The foot is held at slightly less than a right angle and a trifle everted, the former element in the position is observed because it is easier to walk on a painful ankle if it is held slightly in the calcaneum than if held in the equinus position; the latter element is observed because ankle sprains are usually caused by a sudden inversion of the foot, thus injuring the external ligaments, hence slightly everting the foot, relieves the tension of these ligaments and places them at rest. With the foot in this position, one end of a long strap is applied to the inner surface of the foot near its posterior end, and brought under the heel and up on the outer posterior surfaces of the leg to within a few inches of the knee. At the lower end this falls into the depression just posterior to the external malleolus. A shorter strap is now applied by placing one end to the inner surface of the heel near the sole of the foot, then bringing it around over the tendo-Achillis to the outer surface of the foot, making it cover the first strap at a right angle and passing along parallel to the under border of the sole of the foot, then over the dorsum of the little toe. Another long one is then applied, anterior to the first, overlapping it about one-third of its width; then a short one, and so on alternately until the outer anterior aspect of the ankle is reached. Over all this a hard-rolled bandage is carefully and snugly applied. The patient is directed to lie still with the foot elevated until the warmth of the body has caused the plaster to adhere firmly. In a great majority of instances the patient can walk, with reasonable comfort, after a few hours.

He reported four cases from among the number he has treated, because they illustrated four different classes. The treatment of ankle sprains by this method he has found eminently satisfactory.

CHOLELITHIASIS.

DR. J. W. HAIRGROVE, Jacksonville, read a paper on this subject. He said that the present state of pathology concerning the development of gall-stones indicates that two conditions are requisite for their formation, namely, the presence of obstruction to the free flow of bile from the gall-bladder or the biliary ducts, and the infection of these organs by a variety of attenuated micro-organisms, capable of inducing a subacute inflammation of the mucous membrane of the affected structure.

He discussed the importance of diet as an etiologic factor in the causation of this disease, and narrated three instructive cases, one of which presented the ordinary symptoms of gall-stones.

PRESENT TREATMENT OF SYPHILIS.

DR. WM. ALLEN PUSEY, Chicago, read a paper on this subject. He said that total excision of the chancre, or destruction by thorough cauterization very early, has strong theoretic grounds in its favor, and may be done in suitable cases; but that they are relatively few, for the reason that they do not come to the physician soon enough. If there is to be any hope of aborting the disease *in loco*, it must be done before the contiguous lymphatics are involved.

The treatment of the primary period should be confined to the local lesion, and such general measures as will prepare the patient to best support the onslaught of the disease. In cases of mixed infection the lesions may be treated by various vigorous antiseptic methods. Methods in point were described. The constitutional treatment of syphilis involves the management of the patient's general condition and the effective use of mercury, and to a less important degree the use of the iodids. In regard to how long the constitutional treatment of syphilis shall continue, he said that the tendency among syphilog-

vapers is constantly to increase the period; and bearing in mind that the duration of active secondary syphilis is at least from six months to a year, active specific treatment should continue at least this long. The weight of opinion is for at least two years' thorough treatment. Clinical experience leaves no doubt of the efficacy of inunctions in the treatment of this disease. The organism can be promptly and surely brought under the influence of mercury by inunctions, and as an ally to the administration of mercury by the mouth it is a method of the utmost value. Injections of mercurial salts are preferably made over the gluteal region, and should be made up, the needle being driven in at right angles to the surface up to the base.

HEMORRHAGE OF THE BRAIN.

DR. C. DEWEY CENTER, Quincy, reported a case of multiple, terminal twig hemorrhage of the cortical system of the right side of the brain, followed by transient left hemiplegia, petit mal, and later by generalized convulsions. Operation was resorted to and recovery of the patient followed.

INTESTINAL OBSTRUCTION.

DR. A. GOLDSPOHN, Chicago, reported two cases of intestinal obstruction following vaginal hysterectomy, and one after pelvic abscess, with a secondary operation in each case, and concluded with the following observations:

1. According to Lenclous, ileus is more frequent after vaginal hysterectomy than after other abdominal sections. This is chiefly in all cases in which the abdominal or pelvic cavity is not closed; for in these two or three of the chief causes of peritoneal adhesions are quite generally present, i. e., a raw surface, infection, and a foreign body—the drain.

2. Inasmuch as it is known that the physiologic economy of the abdomen demands that the different portions of the small intestines shall be free to migrate from place to place, any opening of the abdominal or pelvic peritoneal cavity is deplorable if it engages any portion of the small intestine to assist in closing the opening or wound. This is regularly the case in vaginal hysterectomy, as ordinarily performed, and as is necessarily done in all cases of this operation where there are extensive abraded surfaces, or where septic features are present. But in all other cases of this operation where no intraperitoneal cavity is needed, it is a just requirement that the peritoneal cavity be closed by a closure of the wound in the peritonum by coaptation of its edges; and that the use of hemostatic forceps or clamps, as far as it interferes with such closing of the peritonum, should be avoided as far as possible.

3. Secondary operation for the relief of post-operative ileus, to be successful, must be performed before the mechanical obstruction has caused infection and paralysis of the bowel—peritonitis.

4. When this difficulty arises early—within three to four days after an abdominal or pelvic operation, i. e., the time in which post-operative peritonitis can also be expected, it is often difficult to exclude the latter, which also causes similar symptoms.

5. Symptoms and signs which speak mostly for ileus are: Abdominal distension without marked tenderness to touch or gentle pressure; the presence of rhythmic colicky pains; a slow pulse that is not wiry; fecal vomiting; vermicular motion of small intestines, seen or felt through the abdominal wall; increased proportion of indican in the urine.

SENILE ENLARGEMENT OF PROSTATE.

DR. F. KREISSL, Chicago, discussed "The Treatment of Senile Enlargement of the Prostate, with Especial Reference to the Galvano-Cautic Radical Treatment." He divided the surgical procedures into three groups: 1. Methods of cysto-drainage—suprapubic, perineal, or rectal. 2. Methods of indirectly aiming to reduce the size of the prostate, the so-called sexual operations, like vasectomy, angioneurectomy, and castration. 3. Methods directly striking the obstruction at the vesical neck, like prostatotomy, prostatectomy, electro-cauterization, and the galvanocautic incision, or, as it is better known, Bottini's galvanocautic radical treatment of senile enlargement of the prostate.

He reported several instructive and interesting cases, and concluded with the following statement: "From what we know to-day we can safely say that the galvanocautic radical treat-

ment of senile hypertrophy of the prostate is a well-established fact, and is supported by a great many promising and reliable reports of eminent investigators. It is reserved for the near future to collect and conscientiously scrutinize the results of practical experience, from which a permanent edifice will be constructed."

(To be continued.)

Denver and Arapahoe Medical Society.

May 8, 1900.

DISEASES OF THE BLADDER AND THEIR DIAGNOSIS.

DR. W. P. MUXN classified diseases of the bladder from the standpoint of anatomy, physiology, urology and bacteriology. He said that for convenience in clinical study, it is well to investigate every case of disease of the urinary organ systematically and seriatim from each of these standpoints, finally basing diagnosis on the composite picture that results therefrom. He said, also, that it is well to determine first whether the act of urination is unduly frequent, by having the patient state definitely the number of times and the hours at which he urinated during the day and night preceding the inquiry, as well as the quantity voided each time. Frequency may be due to diabetes, diuretics, drinking large quantities of fluid, or use of some special article of food. It may also be associated with diminished total excretion of water and increase of soluble solids.

Urine that is normal in specific gravity and abnormal in anatomic elements demands careful study to determine the source of the trouble. Pus when present in the first part of the urine passed, presenting the well-known *tripperfaden*, owes its origin to the urethra; when present in the last portion, it is evidence that it comes from the bladder; when mixed with the whole urinary excretion, it may come from either bladder, urethra or kidney. "Urgency" often exists without disease of the bladder. In young men it is often due to gonorrhoeal, deep urethritis, septic, typhoid, tubercular or diet infection. In the female, often frequent urination of urethral origin has been attributed to the bladder. This is especially the case in unmarried women. A patient who has been under the care of one of the most eminent surgeons in New York and irrigated almost continuously for about a year without benefit, on examination was found to have a dense cicatrix about one inch in length, that obstructed the passage. Four long, deep incisions were made and dilators introduced daily, and improvement was rapid. The stricture was the result of a contracting tubercular ulcer, as the patient had previously suffered from pulmonary tuberculosis.

There may be utter absence of clinical symptoms pointing to the kidney, yet, as a matter of routine, every difficult case should be subjected to examination by either the urine segregator, the cystoscope or the urethral catheters. As examples of the necessity for such examinations, he cited cases.

Following the consideration of frequency, there should be an inquiry as to the presence or absence of pain, its location, character, frequency and severity, the time of its occurrence and its coincidence with other signs and symptoms. Reflected pain in other parts of the tract often occurs. One of his patients suffers from persistent pain at the fundus of the bladder, which is evidently due to an old deep urethritis, since it disappears as if by magic when a solution of eucain or cocain is instilled into the prostatic urethra.

Every case of hematuria demands early and thorough examination, and physical inspection of the external organs must be a part of the examination.

EVASION OF THE COLORADO MEDICAL STATUTE.

DR. L. D. VAN METER called attention to a few salient points relative to the open evasion of the medical statutes by the very class that such statutes were enacted to prohibit. The interpretation of the statute by Judge J. Ebert, in his decision from the Supreme Court of Colorado in the case of Harding vs. The People, is as follows: "The provisions of the act show beyond any question that the clear intention of the legislature was to require all persons desiring to practice medicine or surgery within this state to apply for and receive a certificate of qualification from the State Board of Medical Examiners."

The following questions naturally arise: How do they es-

cape persecution? How do they evade the law? They do so by putting forth the silly, threadbare plea that they are not practicing medicine or surgery, and use or prescribe no drugs. The statute reads: "Any person shall be regarded as practicing medicine within the meaning of this act who shall profess publicly to be a physician and prescribe for the sick, or shall attach to his name the title of 'M.D.' or 'surgeon' or 'doctor' in a medical sense." Take for example an osteopath, who has the presumption to follow his name with "D.O." and who claims he is not practicing as an "M.D.," "surgeon" or "doctor" in a medical sense, as he is not prescribing drugs; when he openly professes to cure disease by manipulation, and goes into our courts and testifies that osteopaths are graduated doctors of a new school of medicine, how can it be possible that any court would rule they are not "to be regarded as practicing within the meaning of this act?" Is not their use of the word "doctor," using it in a medical sense? Are they not prescribing for the sick when they direct that an inflamed joint be rubbed or manipulated? Or when they, as one of them recently testified under oath, treat a case of disordered stomach after a debauch by locating the pneumogastric nerve in the neck, "densitizing" this by rubbing and manipulation, setting free the pent-up nerve-force in "nature's drugstore—the brain— and thereby curing the malady which he considered so dangerous to life that he deemed it advisable to call in a licentiate of the state board as a consultant. What is the remedy? Dr. Van Meter suggested the starting of criminal proceedings against the osteopaths in order to test the law. For if any one file information, sufficient in the judgment of the district attorney, that any one is violating a state statute, he is bound to enter indictment against such violator without cost or trouble to the informer.

Kings County Medical Association.

May 8, 1900.

H. Arrowsmith, M.D., President.

MERGES INTO THE STATE ASSOCIATION.

Before taking up the scientific program, the president announced that there was very important business before the Association for its consideration, i. e., the question of its union with the New York State Medical Association as a subordinate county association.

DR. J. C. BIERWIRTH, a member of the council of the state association, then described the obstacles that had been surmounted in securing the new charter for the state association. A great effort, he said, had been made toward unification and peace. The proposed coalition would give a state association of about 1200 members. In addition to the many advantages that must accrue from greater unity and strength, it was hoped that in time the members would also receive a mortuary benefit. Dr. Bierwirth then moved the adoption of the following resolution:

RESOLVED, That the Kings County Medical Association affiliate with the New York Medical Association in accordance with the dictum of the new charter.

DR. J. D. RUSHMORE at first objected on the ground that this proposed action seemed to him like an abrogation of local rights and government, but after some further explanations by Dr. Bierwirth and by Dr. Squibb, the resolution was unanimously adopted.

ENTEROPTOSIS.

DR. JOSEPH F. O'CONNELL read a paper on this subject. He said that Glenard, of Lyons, France, had written extensively on this and recognized it clinically as accompanied almost invariably by a specific form of dyspepsia. Anatomically the ptosis generally occurs in the following order—first the stomach, then the intestine, the right kidney, the left kidney, and lastly, though rarely, the liver and spleen. Its etiology embraces a number of factors. The normal curves and pouches of the gut are predisposing factors, as is likewise an abnormal mobility of the tenth rib. Other factors are abnormal attachments, in fact, anything causing diminution of abdominal tension. First among the exciting causes is trauma, and next come oft-repeated pregnancies. The speaker said that Stillor would discount these factors, and place far ahead of them in importance the so-called "costal stigma." This is the

mobility of the tenth rib already alluded to. Meiner, of Vienna, on the contrary, after an exhaustive study of several hundred bodies, makes the statement that this sign is of little or no value. Among the more important objective symptoms are: a flat stomach, sensitiveness to pressure near the tenth rib, a cord-like transverse colon, which crepitates under pressure, and through which the pulsations of the aorta can be distinctly felt, a displacement of sigmoid and cecum, a prolapse of because these hours correspond in general to periods of duodenance of the stomach to milk he has long regarded as of great diagnostic importance, as is also the presence of nervous crises, hysteria, wakefulness and despondency. These symptoms, though vague, may be regarded as links in the vicious chain. Pain and fatigue at 3 p.m. and at 2 a.m. are important because these hours correspond in general to periods of duodenal digestion. The treatment comprises bandaging, the use of laxatives, alkalies, hydrotherapy, exercise, and, in women, the correction of intrapelvic displacements.

DR. JACOB FUNN, in discussing the paper, spoke first of the etiology, with special reference to the so-called "costal stigma." In his cases of enteroptosis, he said, it is not unusual to find at least three floating ribs, and often the ninth seems very loose. Another factor considered was the lack of power of the abdominal muscles. This seems important. He does not believe corsets exert any evil influence, for he has seen many Swedish girls who have never worn them, victims of enteroptosis. More important than any or all of these are severe diseases, particularly typhoid and diphtheria, which by producing long-standing malnutrition in the musculature, awake kindred changes in the ligaments, which may result in a permanent stretching. This condition might be induced artificially by a too rapid obesity cure. The speaker here related a case in point. Certain occupations, particularly those in which people occupy one position for hours at a time, predispose to enteroptosis. Last, but not least, among the etiologic factors mentioned, were oft-repeated pregnancies, and all conditions tending to lessen the firmness of the pelvic floor. As usual, prophylaxis is more important than cure. Particularly after all acute diseases, as well as after pregnancy, is it necessary to examine all the organs, and especially the abdominal muscles. There is a crying need for this care in children, for whom on the discovery of the very first suggestion of enteroptosis the recumbent position for hours during the day should be required. The diagnosis is difficult because of what might be called the normal displacement of organs. For example, the place interchange of cecum and sigmoid is frequently observed with no evil results. In like manner, the sigmoid might often be double, while the great part of the colon might sink to the brim of the pelvis. Inflation, as a diagnostic aid, is very valuable, but touch is better. Dr. Boas has followed a metallic capsule with the X-ray, but such a method is obviously not within the reach of most practitioners. Peristalsis often helps, for these patients are generally extremely emaciated. He is not in favor of catharsis, relying on enemas when necessary. He gives strychnia for the atonic form, and hydrastis for the spastic variety. Bandages, as usually applied, do more harm than good. They must not be allowed to extend above the iliac crests, or above the umbilicus. Diet is of the utmost importance. In the spastic form the food should be fine and non-irritating; in the atonic form, on the other hand, coarse granular foods are to be preferred. The position of the patient while recumbent is important. To favor emptying the stomach the left side should be elevated. In conclusion, the speaker said that too much weight could not be attached to a careful examination of the gastric contents.

New York Academy of Medicine.

May 3, 1900.

HYPERCHLORHYDRIA.

DR. MAX EINHORN read a paper on this subject. He said that, in his experience, more than one-half of the cases of gastric dyspepsia have been examples of hyperchlorhydria or excessive acidity from hydrochloric acid. This was probably owing to the fact that many of his patients were men subjected to the daily strain of active business in a large city. The disease is much less frequently met with in rural districts. A common feature of these cases is a burning or other uncom-

fortable sensation in the region of the stomach, experienced about one hour after meals, or at least after the heartiest meal of the day. The appetite is usually good, and in some instances an unnatural hunger is experienced instead of distress an hour after eating. Another characteristic feature of hyperchlorhydria is that the ingestion of food gives relief. The disease is apparently a functional disorder. Prominent in its causation are worry and mental strain, and hence women who endeavor to keep up with the whirl of society are often victims for the same reason that men at the head of large business interests fall an easy prey to this derangement. Tobacco and alcohol are also prominent etiologic factors. Gastric ulcer is a frequent accompaniment, but can hardly be considered a cause. Where the two conditions coexist, the presence of the ulcer may be suspected by the obstinacy of the case when properly treated, for, as a rule, cases of hyperchlorhydria respond promptly to treatment. He is not a believer in exclusive diets, preferring a happy medium. He usually allows the patients tender meats, not too highly flavored, plenty of milk, water and sugar, but permits them to have only a small quantity of the starchy foods, particularly potatoes. If they are given small meals at short intervals, the disagreeable sensations will quickly disappear. Sugar and fat both diminish the activity. Alkalies, such as bicarbonate of sodium or calcined magnesia, should be given about two hours after meals, and if constipation is present, rhubarb may be added with advantage. Washing out the stomach is not essential. Usually the administration of the bromids is of very great benefit, and sometimes the local internal use of faradism or of a gastric spray of nitrate of silver solution will be found useful.

Cleveland Medical Society.

Dr. O. B. Campbell, President *pro tem*, in the Chair.

SYNOVITIS OF KNEE-JOINT.

Dr. WILLIAM E. WIRT presented a case due to traumatism that had lasted nearly three years. He had been applying hot air, together with rest, fixation and protection, and had also used electricity and massage, the joint improving greatly; the amount of fluid in it very promptly diminishing, so that tapping was unnecessary.

He presented another case in which there had been fracture of the tendo Achillis, following infantile paralysis. Here he secured a satisfactory result by cutting the contracted tendon, extending the joint, and putting it up in plaster-of-Paris.

He also presented a case in which there had been knock-knee on one side and bow-leg on the other. The latter was operated on by simple osteotomy with fracture, though the bone was found to be very hard, as is often the case in rickets. On the other leg, he did a supracondyloid osteotomy and put it up in plaster.

USE OF X-RAY AND ELECTROMAGNET IN LOCATING AND REMOVING FOREIGN BODIES FROM THE VITREOUS HUMOR.

Dr. A. R. BAKER read a paper on this subject, and presented several specimens which had been removed from the vitreous humor with the electromagnet, after being located by radiographs. The photographs showed distinctly the presence of the foreign bodies that had been located by needles placed at right angles in front of and alongside of the eye. In one case, a very small piece of steel had penetrated the cornea, iris and lens, had been located by means of the radiograph, and successfully removed, with the preservation of good, useful vision. The author expressed the opinion that there is danger in using the strong Haab magnet in all cases of suspected foreign bodies in the vitreous for diagnostic purposes. The safer way is first to take a radiograph, then make a counter-opening through the sclerotic and remove with the magnet, and not attempt removal through the original wound.

Dr. S. E. LAUDER said he had used an electromagnet that was operated by the 110-volt current and capable of lifting about twenty pounds. He had been successful in removing a piece of steel through the wound of entrance, and in one case the eye was saved because the steel, having come from the center of a large bar, was sterile. In another, although the foreign body was removed, it infected the eye, which was lost.

He has not been successful in the use of the X-ray, and prefers removing the foreign body through the original opening if the case is seen early enough.

Dr. S. H. LARGE said the difficulty in removal of foreign bodies arises from the facts that they tend to go into the center of the vitreous.

SUPPURATION AFTER ABDOMINAL SECTION.

Dr. HUNTER ROBB read a paper based on an analysis of 114 unselected abdominal sections. His conclusion is that the chief cause of poor results or of death following an operation, is infection. To avoid this he sterilizes the skin of the patient about the field of operation, the hands of the operator and of the assistants, the ligatures, etc. He uses catgut to suture the peritoneum, silver-wire mattress sutures for the fascia, and subcuticular catgut ones for the skin. He then cleanses the incision and field of operation with sterile salt solution, followed by alcohol, after which the skin is gently dried with a sterile towel. Dry sterilized iodoform is then sprinkled over the wound, after which two thicknesses of sterilized gauze are laid over it and these followed by pieces of sterile cotton large enough to cover the abdomen from flank to flank, and from umbilicus to pubes. This dressing is held in place by adhesive strips. In the 114 cases only 8—7.2 per cent.—suppurated, although 29 were pus cases, and drainage was used but once, and in these suppuration was confined to the skin and subcutaneous tissue.

Dr. M. ROSENWASSER said that the essayist had not mentioned that infection of the abdominal wound may occur from the fact that in some cases the staphylococcus pyogenes albus is located beneath the epidermis, so that scrubbing and disinfection can not remove it. If a stitch has been tied a little too tightly, so as to cause compression neurosis, the presence of this organism is sufficient to cause infection, that can not rightly be attributed to any fault of the technique. As showing the difference between the epidermis, which is often inhabited by germs, and the mucous membrane, which is not usually so, he has noted that stitch abscesses are not liable to occur in operations on the pelvis by the vaginal method.

ADENOCYSTOMA OF KIDNEY.

Dr. R. J. WENNER reported a case where he had removed three large uterine fibroids from a woman of 40, whose urine before operation was normal in amount and character, but on the third day after she suddenly became comatose and died. Post-mortem showed no evidence of infection or obstruction, but the kidneys were large and filled with multiple cysts, and little normal secreting tissue remained. After section, Dr. Howard pronounced the disease to be adenocystoma. Parker of Bristol studied 88 cases and found this occurring more frequently in males. Less than half had albuminuria, but the urine was usually of low specific gravity, light colored and rather increased in quantity. Dr. Howard had seen four of these cases in the last two years. In Dr. Wenner's case the kidneys were enlarged, and the cysts, varying in size from a pin's head to a small walnut, were rather regularly distributed throughout the organs. The ureters were patulous and the pelvis normal, the capsules non-adherent, but there were multiple cysts of the liver. He showed a cystic kidney from a case of Dr. C. F. Hoover's, that had been diagnosed antemortem by palpation. He thinks this probably the largest kidney ever observed, and in this specimen, also the ureters were patulous and the pelvis enlarged—not obliterated. He showed also a very rare specimen of adeno-cysto-myo-angio-rhabdo-myo-sarcoma, which was removed from a case operated on by Dr. G. W. Crile—one of the most extraordinary mixed tumors ever reported.

Topeka Academy of Medicine and Surgery.

Topeka, Kan., May 7, 1900.

President Dr. B. D. Eastman.

GOITER.

Dr. S. A. JOHNSON read a paper on this subject. He said that a congestive swelling of the thyroid gland is seen occasionally, from irritation of the sexual organs or during menstruation. Suppurative inflammation is rare but when it occurs is usually

of tubercular origin. In tuberculosis the gland is thickened and enlarged, the overlying skin is discolored and abscesses and sinuses are formed. If the diagnosis can be made sufficiently early thorough surgical treatment may result in a cure, but the entire removal of the gland is hardly permissible.

Tumors of the thyroid are common, and are found more frequently on the right side than on the left, involving at times only a portion, and at other times the entire gland. The hereditary character of goiter is not clearly established. It occurs most frequently in women, though rarely before the tenth year, and will increase in size with each succeeding pregnancy.

The diagnosis is generally easy. The growth is usually chronic, rises and falls in the act of deglutition, is painless, not adherent to the overlying skin, and has no attachments to the inferior maxillary or clavicle. It is not adherent to any parts of the neck, with the exception of the larynx, and is usually covered with prominent veins. It is frequently an impediment to respiration and sometimes to deglutition. Occasionally it grows inward and presses on the trachea, causing absorption of its cartilages.

The cause of goiter has not been discovered, but the disease is peculiar to certain people in certain localities. As a treatment, iodine seems to do the most good, and may be given internally, locally externally, or hypodermically. He reported two very interesting cases, in both of which iodine was used with recovery as the result.

Dr. R. E. McVEY said that he had seen three or four malignant cases which resulted fatally, one death being from pressure; the patient having refused to have an operation.

Dr. O. A. TAYLOR spoke of a mining camp in Missouri, where three-quarters of the cases were in negroes. The tumors were vascular and the pressure on the blood-vessels affected the heart considerably. He said that some authorities claim this is more prevalent in those who carry heavy burdens on the head, and that the negroes from the mining camp were from the South, where they were accustomed to doing this.

Dr. W. H. HALL said that the iodine treatment externally is more successful if an antiseptic is combined with it.

German Congress of Surgery.

Berlin, April 18-21, 1900.

INOPERABLE CARCINOMA.

The proceedings were opened with an urgent appeal by Czerny for the more thorough treatment of inoperable carcinomata, stating that 75 per cent. of all cases that come to the surgeon are inoperable, and according to Dührssen only 10 per cent. of the women with carcinoma of the uterus are cured. He would operate to the farthest possible limit, far into the sound tissue, and resort to palliative measures of all kinds. Ligation of the afferent vessels may prove useful, especially with carcinoma of the tongue. Curetting and searing will surely relieve and may cure. In one observation, a carcinoma of the rectum was rendered mobile by cauterizing with a solution of zinc chloride, permitting extirpation. He reports forty-eight cases of cancer of the uterus not affected by curetting and tamponing, but all cured by cauterizing with a 30 to 50 solution of zinc chloride. He has found that formalin, arsenic and Fowler's solution induce pain and inflammation, and he has had no good results from the numerous general remedies proposed, but would try them as patients expressed a desire therefor.

ABDOMINAL AND RECTAL SURGERY.

The interest of the Congress centered principally in the line of preferable methods and remote results of abdominal and rectal surgery. Kroenlein has collected statistics from eleven German surgical clinics, representing a total of 881 operations for carcinoma of the rectum during the last twenty years. The mortality varied from 12.6 per cent. in one clinic to 26.7 in another; average mortality 19.4. More than 51 per cent. were due to sepsis; 18 to collapse, and over 13 per cent. to pneumonia or embolism. In 15 per cent. the deaths had no connection with the operation. Eighty of the 640 patients followed to date survived three years without recurrence. Resection of the invaded bladder and urethra has always been unsuccessful, and operation should be rejected when neighboring organs are

involved. He always retains as much as possible of the anal sphincter, and has secured normal continence in 30 per cent. of his thirty-nine personal cases; relative continence in 60 per cent., and failed completely in 10 per cent. Rehn urged the necessity of extirpating the portion of the rectum involved, with the fascia, without opening the rectum. In case the rectal aponeurosis is traversed by the neoplasm the prognosis is bad. Reports on the remote results of operations on the biliary passages show that recurrence of calculi is little to be feared, but that disturbances of various kinds were noted in 15 per cent. due to stones left behind, to adhesions, threads or cholecystitis. The indications are to extirpate the gall-bladder and drain the biliary passages but to refrain from operating except for important reasons. Israel reaffirmed the benefits of incision of the convexity in certain cases of chronic nephritis, speaking from an experience with 40 cases. He would also operate for renal and ureteral calculi in case of pyelitic infection, absolute anuria or severe hemorrhage, but would refrain from all intervention on patients who at regular intervals evacuate small round stones. They constantly form again and intervention would be useless. In opening the kidney he would carry the incision down to the pelvis.

TRANSPLANTATION OF TOE.

Successful transplantation of the second toe in place of an amputated finger was reported by Nicoladoni.

EXSTROPHY OF BLADDER.

A patient was exhibited, operated on by Mikulicz for exstrophy of the bladder. A loop of the small intestine was isolated and implanted in the bladder and abdominal wall, completing the operation as usual with two lateral flaps. The patient wears a clamp on the urethra to prevent escape of urine. Trendelenburg has treated this deformity by bringing the two ilia closer together by artificially separating the sacroiliac articulation. He has obtained excellent results by this method in a number of cases, although patients could not retain urine over two hours. He attributes this to the gradual separation of the bones, which he has tried to remedy by making an artificial fracture in the ilium itself. Payr presented a new contrivance for suture of arteries, consisting of a tube made of an absorbable metal—magnesium. The hollow cylinder is placed over one stump of the artery, and the end of the latter turned up and over on the cylinder all around; the other stump is then slipped over it, thus bringing the inner surfaces in contact, and they are held in place with a ligature. The magnesium tube is absorbed in a few days. The contrivance has also been applied to the suture of nerves, and further uses for it are being suggested.

Philadelphia Pathological Society.

Dr. F. A. Packard, President.

PATHOLOGY OF BUBONIC PLAGUE.

Dr. H. F. HARRIS made some remarks on the pathologic alterations in bubonic plague, with exhibition of microscopic preparations of the diseased tissues. The specimens had been given the speaker through the kindness of Dr. W. F. Arnold, who had obtained them in Hongkong. In this condition the lymph glands affected had a greyish-red appearance which often denotes hemorrhage not infrequently occurring in bubonic plague. On section, lymph cells, red corpuscles, and enormous numbers of the plague bacilli could be seen. The mast cells did not appear to be phagocytic. A few plasma and polynuclear cells were also present. The bacilli in the tissues stained best with toluidin blue and eosin.

HYDATID CYST OF LIVER.

Dr. F. P. HENRY reported the history and exhibited a specimen of this condition, from a negro, a native of Virginia. At autopsy two distinct hydatid cysts had been found in the right lobe of the liver, the capsule of which was rather hard and contained gelatinous fluid, together with the hard material which resembled putty. Hooklets of the echinococcus were found.

Dr. F. A. PACKARD said he had seen four cases, two in negroes. In these cases the putty-like material had also been found.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

61 MARKET STREET, - CHICAGO.

SATURDAY, JUNE 2, 1900.

SECRET NOSTRUMS AND THE JOURNAL.

When some two months ago THE JOURNAL announced its intention to subject the matter of proprietary medicines to a thorough investigation, it realized that the task was a difficult one. While sporadic attempts have been made from time to time, by medical associations and by medical journals, but little progress has been made in checking the evils complained of and, in fact, but little light has so far been shed on the subject. It is believed that this has been primarily due to failure in comprehending the vast scope of such inquiry. The field is so large that nothing short of the most thorough consideration of the entire subject, in all its phases, will be adequate to furnish a basis for such conclusions as may be necessary in determining the status of the various medicinal agents and compounds which the enterprise and genius of foreign and domestic manufacturers are constantly evolving and offering to the medical profession.

The necessity for this departure needs neither explanation nor apology. The members of the medical profession have a right to demand that THE JOURNAL should at all times furnish such information as may be necessary to keep them informed on everything that is of practical value and, as far as is practicable, to expose charlatanism, deception and quackery.

In justice to the many reputable firms whose interests are so closely related to medical practitioners and their representative journals, a closer scrutiny should be made of claims for medical preference and patronage, in order to separate, as far as possible, the true from the false. The special articles devoted to this subject have aroused considerable interest, especially among those directly interested in medical manufacturers, and while most of the communications received, relating to these articles, have been rather complimentary, others have evidently emanated from persons who were not fully aware of the intent and purpose of this investigation. In the first place, let it be understood that THE JOURNAL will endeavor to be just to all. It will make haste slowly, for this matter is of too great importance to be settled in a rush or without first arriving at a fair and impartial summary of the situation. While but little has so far been done in our investigations of the subject, there are some propositions which have already been fairly settled. Among these are: 1. Medical preparations, the composition of which is kept secret, should not have medical patronage. 2. Those which are directly advertised to the laity as remedies, or cure-alls for disease, should not have medical patronage. 3. Manufacturers of preparations designed

for external use need not necessarily be required to furnish the exact proportions of the ingredients except in cases in which some of these are active or toxic agents.

It may be said that the advertising pages of THE JOURNAL contain announcements that, according to the above, ought not to be there. This is true as regards some advertisements, but these will be eliminated from our pages on expiration of existing contracts unless they are made to conform to our requirements. It may be interesting to some to know that the policy of refusing to accept advertisements of secret nostrums has already resulted in an annual loss to THE JOURNAL of over \$8000. While a still further financial loss must come, there need be no fear as to THE JOURNAL being able to live on. In any event it will not shrink from the task it has assumed, nor permit any withdrawal of support or patronage of its pages to cause it to swerve from its position that secret medicinal preparations are incompatible with scientific medicine and rational therapeutics.

THE DANGERS OF EXCESSIVE SPECIALIZATION.

In these days of specialization the field of the general practitioner is becoming greatly restricted. In fact, there is some danger that in many instances the so-called general practitioner ultimately may come to perform the functions of a mere business agent of the specialists, and to act as the local distributor for the patients in his community. At the same time, as the value and the need of genuine specialists in medicine are fully recognized and established, there can not be too strong a warning uttered against a tendency noticeable in some quarters to carry specialization to a degree of refinement beyond all reason. The formation by a handful of specialists of special societies and associations—too numerous to mention—may easily be carried far enough to reduce the usefulness of larger societies at the same time as the special fields become so small that the general attention the subjects discussed really merit is not fastened on them. And now, add the establishment of full professorships and special clinics and special hospitals for all the specialties and subspecialties, and we shall be able to understand that it is quite possible, by an excessive specialization, to hinder rather than favor medical progress and development. The introduction of specialties into the curriculum of many of our undergraduate medical schools has surely been an evil rather than a blessing. It is not germane at this time to discuss the various local and special conditions that have led to such a wasteful multiplication of full professorships, in many cases often against the better judgment of the governing bodies. It has been especially baneful for the just balance of the curriculum to admit the special professorships to full and equal dignity with those in medicine, surgery, anatomy, physiology and other departments recognized as of fundamental importance. In this way the time-card in many of even our better colleges, little by little has become so overcrowded with required work

that this condition alone in some cases has led to efforts at readjustment. What with lectures, recitations, dispensary and college clinics apportioned equally among new-fledged special professors, it becomes a fine art to satisfactorily provide room for all on the schedule, to say nothing of the poor students. In fact, is it not a fact that in not a few instances college positions have become the legitimate prey of self-seeking specialists who have sought for a field in which to exploit their specialty rather than a legitimate opportunity to teach medical students? Is this not one of the reasons why students on leaving the medical school are often remarkable for the superficial and smattering character of their knowledge and not at all for thorough acquaintance with the underlying principles of medicine and with the proper methods of continuing the study of medicine in a much larger and broader sense?

It is interesting to note the expensive tendency that special departments in some medical schools may acquire, presumably on account of local conditions and personal peculiarities. Thus the nasal specialist may enter on a career of conquest in a downward direction until he secures the annexation not only of the lungs and the pleura but also the mediastinum and heart; sometimes also the aorta, the barrier interposed by the diaphragm being disregarded. At other times the gynecologist becomes aggressive and stops not until, as far as his school or hospital is concerned, he is sole master of abdominal surgery. Manifestly such unnatural subdivision of medicine and surgery make it impossible to secure the best organization of the work of a medical college and the proper adjustment of the curriculum. It would serve the purpose more directly and better if much of the special instruction in our medical schools could be given under the supervision and control of the departments of medicine and surgery. Medicine and surgery should be taught from a broad standpoint, not first dismembered and parcelled out piecemeal. The large perspective of the whole should be impressed on the student at the same time as he masters the details that are essential. This subject could with advantage be pursued much further. Reprehensible specialization affects the general practitioner in various ways. It tends to diminish the confidence of the public in the "family doctor," and to engender a certain feeling of helplessness in the practitioner himself, when he views the increasing growth of specialties. He comes to feel that in order to hold his own "the general physician must be his own specialist"—an impossibility.

ACCIDENTAL INJURIES TO THE PROSTATE GLAND.

Although the prostate gland may become diseased in consequence of abnormal or excessive sexual indulgence, it is, by reason of its situation and its structure, little exposed to the influence of ordinary traumatism. Disease of the prostate may, however, be for a time wholly unattended with symptoms or subjective manifesta-

tions, and these may make their appearance suddenly, although the morbid process may have been present for some time. Even the normal gland varies considerably in physical characters, such as size, shape, position and consistency. Increased sensitiveness may, however, always be considered a pathologic manifestation. In illustration of the individual susceptibility of the prostate gland to morbid influences, Oberlaender¹ reports four cases in which disease of that gland was induced by falls on the buttocks without direct injury to the perineum. In one case the symptoms present included pain at the anus, a sense of weakness in the sacrum, incapacitation for work, and pain and difficulty in walking. On urethroscopic examination the prostatic urethra was found tender, bleeding readily and constricted. The lateral lobes of the prostate were equally large, irregularly nodular, tensely elastic and painful. Under treatment most of these symptoms disappeared, but the prostate remained enlarged and tender. Eventually a copious amount of pus and blood was one night evacuated through the urethra and the patient at once relieved. A considerable time elapsed, however, before he was freed from all of his symptoms. In the second case there was anal pain on attempts at walking, progressively increasing and especially distressing and painful vesical tenesmus, constant pain in the glans penis, especially in micturition, and finally persistent burning pain. At times blood appeared in the urine, which contained also a few purulent filaments. On rectal examination the prostate appeared enlarged, smooth, softly elastic and tender to the touch, as was also the vesical trigone. The patient had been incapacitated for work for nine months and was in a desperate state. Castration was performed and remarkably rapid improvement followed. After some time, however, the symptoms again grew worse and persisted with varying intensity. In the third case symptoms of severe, purulent, chronic prostatitis developed, the pain on walking and standing being particularly severe. The lateral lobes of the prostate were intensely elastic and extremely painful. Under treatment improvement ensued, but the prostate remained enlarged and painful. In the fourth case supuration took place in the prostate and in both testicles.

It is assumed that in all of these instances the normal integrity of the affected gland was previously impaired. The long persistence of the pain at the anus and the sacrum and the difficulty in micturition point conclusively to injury of the structure of the gland—either contusion or laceration. As the accident was unattended with hematuria and urinary infiltration, the injury could not have involved the mucous membrane of the prostatic urethra, and as there was no immediate difficulty in defecation it is probable that the rectum also escaped. It is thought that definite peculiarities, such as a deficiency in the fat of the buttocks, the situation of the gland close to the anal orifice, relaxation of the

¹ *Centrabl. f. die Krankheiten der Harn- und Sexual-Organen*, B. xi H. 1, 2.

sphincter ani—thus conditions favoring transmission of force directly to the gland—may be important factors in the etiology of the lesion. In addition a latent morbid condition of the gland may be essential. The prognosis of the disorder appears unfavorable, all of the patients in the cases reported having been incapacitated from the pursuit of their respective vocations. The usual medicinal measures proved ineffectual, and some surgical measure, such as resection of the spermatic cord or total extirpation of the prostate gland, would appear indicated.

CONDITION OF URINE IN RELATION TO DISEASE OF THE STOMACH.

The determination of the degree of acidity of the urine furnishes a guide as to the alkalinity of the blood and as to certain relations between variously reacting secretions of the digestive glands and the reaction of this excretion. Examination of the urine for ferments may afford an explanation of the fate of these bodies after the performance of their functions. When the stomach-tube can be used, a study of the gastric juice will yield information with regard to the disturbances in the digestive chemistry in cases of secretory functional disease of the stomach. If the use of the tube be contraindicated, examination of the urine may furnish correct guidance. It is well known that the acidity of the urine diminishes, and finally disappears, after a meal, in consequence of the withdrawal of acid from the blood for the purposes of gastric digestion. Reasoning by analogy it has been suggested that the acidity of the urine must vary in association with diseases of the stomach attended with increased or diminished secretion of gastric juice.

To test the accuracy of these views and to determine the practical utility of their application, Friedberger¹ undertook a study of the urine under various conditions. During a period of hunger there was but slight variation in the degree of acidity. By avoiding irritation of the stomach and excluding gastric digestion, through the practice of rectal feeding, it was found in a case of slight hyperacidity that the introduction of food into the bowel was followed by increased acidity of the urine, and this is attributed to the withdrawal of alkali from the blood for purposes of intestinal digestion. The conclusion is therefore reached that if diminution in the acidity of the urine after the taking of food by the mouth is under ordinary circumstances an index of the acidity of the gastric juice, the increased acidity of the urine after the administration of food by the rectum may be considered an index of the activity of intestinal digestion. Deviations from this relation may be significant in the recognition of diseases of the intestines and its glandular appendages. They would be less trustworthy in connection with diseases of the stomach on account of the disturbing influence of the alkaline intestinal digestive secretion upon the acidity of the urine. However, the reaction of the urine within the first few hours after the

ingestion of food must be largely influenced by the character of the gastric secretion. In two cases of gastric achylia, with an absence of free hydrochloric acid from the gastric juice, and in one case of carcinoma of the esophagus, the maximum diminution in the acidity of the urine appeared earlier and lasted a shorter time than normal after ingestion of food by the mouth. In another case of carcinoma, however, the conditions differed little from the normal. Of two cases of gastric ulceration the reduction in the acidity of the urine following the ingestion of food lasted longer than normal in one and scarcely longer in the other. From these observations it is concluded that when rectal feeding is practiced, the acidity of the urine is increased for some hours thereafter, instead of being diminished, as it is after ingestion of food by the mouth. In the presence of disease of the stomach attended with diminished secretion of hydrochloric acid the maximum reduction in the acidity of the urine after meals occurs earlier than normal; while in the presence of disease with increased secretion the reduction occurs later. These relations are, however, not so constant and not always so pronounced as to be available for diagnostic purposes. Inasmuch as these observations demonstrate that the acidity of the urine does not depend on gastric digestion alone the amount of pepsin in the urine was investigated. Observations in cases of carcinoma, gastric achylia and hyperacidity showed that an interdependence exists between the secretion of pepsin by the stomach and the elimination of pepsin with the urine, in such a way that if but little pepsin be found in the urine it may be concluded that but little has also been secreted by the stomach. In some cases of excessive gastric secretion the amount of pepsin in the urine was distinctly greater than in health, while in others it was scarcely greater, so that in the diagnosis of the former condition no confidence can be placed in the results of examination of the urine for pepsin. The conditions are different, however, in cases of deficient gastric secretion, as here the amount of pepsin eliminated with the urine is diminished. This occurred with such constancy under the conditions named, and was wanting in connection with all other forms of gastric disturbance, that its semeiologic significance must be accepted.

FUNGUS DISEASE OF THE CORNEA.

Leber, Uhthoff, Fuchs, and others have described rare cases of infection of the human cornea with organisms belonging to the moulds. Recently Wicherkiewicz¹ recorded an instance of this kind: A servant girl dropped a piece of potato, covered with dirt, into the eye; three weeks later there had developed a yellowish-white mass on the central portion of the cornea, the marginal vessels being congested, and the anterior chamber containing pus. The process appeared slow and chronic in its course, painless, and the mass was elevated and firm. Examination of a piece of the mass showed that it con-

¹ Deutsches Archiv f. Klin. Med., B. lxx. H. 5 u. 6, p. 567.

¹ Arch. f. Augenheilk., xl.

sisted of a dense network of fungous threads, and cultures gave rise to pure growths of the mould—*penicillium glaucum*. Treatment succeeded in checking the process, but not without permanent corneal opacity, greatly diminishing the vision of the affected eye.

THE ALLEGED ANTIMALARIAL INFLUENCE OF LIME.

The United States Marine-Hospital Bureau republishes, from the *Revue d'Hygiene*, in one of its latest weekly reports, an article on the antimalarial effects of lime, by Grellet. The author notices the fact that in several localities in France malaria has entirely disappeared since lime has come to be generally used for fertilizing purposes, the status as to drainage, stagnant waters, etc., remaining unchanged. Following out the line of inquiry thus suggested, Grellet found that in a number of regions where the soil is rich in lime, malaria is absent, though other conditions that favor it prevail. He suggests that a thorough investigation be made as to the relation between the nature, and especially the constituents, of the soil and the malarial germ. So far as we have noticed, this coincidence of the existence or use of lime in the soil and the absence of malaria has not been remarked by recent writers on the prevention of this pest of mankind, and certainly we have not seen accounts of any experimental researches on the action of lime salts on the plasmodium or its hosts. If there should be, by any possibility, anything in it, the suggestion is worth following up.

DRUG FIENDS AND JURIES.

A medicolegal point of some interest and, though possibly not altogether new, one that will bear repetition, has been made by Dr. C. C. Stockard.¹ It is the question of the fitness of drug habitués for places of trust generally but particularly for jury duty. One such individual told him that were he in such a position, rather than be tied up on a jury where there was no opportunity for his getting his accustomed dose, he would consent to the hanging of one he was sure was an innocent man, and the Doctor believes he was no exception in this. We have never happened to hear of a juror being challenged for cause because he was an opium or alcoholic habitué, but there would seem to be no better ground. In fact, we doubt whether this possibility always or even often occurs to the mind of a lawyer in selecting a jury. In case of the opium habit there must be considered the special mental idiosyncrasies from the habitual use of the drug as well as the effects of deprivation, and the question might arise as to how supplying or not the needs of some unfortunate victim of habit on the jury might affect the validity of the verdict.

SANITARY SUPERVISION OF HAVANA, CUBA.

The report of Major W. C. Gorgas, surgeon U. S. A., chief sanitary officer at Havana, shows for April, 1900, a total of 482 deaths in a population which, according to the official census, numbers 235,000. The principal causes were: tuberculosis, credited with 80 deaths; enteritis, 48; malaria and pernicious malarial fever, 30; meningitis, 22; pneumonia, 18; la grippe, 18; and bronchitis, 17. During the month 137 marriages

were reported and the relatively large number of 1084 births. Attached to this report, in the office of the surgeon-general of the army, is a tabulated statement, by months, of the deaths from all causes and from yellow fever since 1890. In only five months during the past 124 months has the number of deaths from all causes been smaller than in April, 1900. In January and February, 1890, the number was respectively 441 and 463; in February, 1893, 442; and in February and April, 1894, 470 and 467. The average monthly number of deaths in 1897 was 1510, and in 1898, 1770, but in 1899 this average fell to 680. The beneficial effects of a strict sanitary supervision of the city is manifest in the reduced mortality lists since Jan. 1, 1899. It is yet too early in the history of American sanitary methods in Havana to speak of their influence in the suppression of yellow fever, but it may be noted that since Jan. 1, 1890, there have been only three months in which no death has been recorded as caused by yellow fever, and these three months have all occurred since American methods were put in force, February and May, 1899, and April, 1900.

THE ETIOLOGY OF TETANUS.

In view of the uncertainty of our knowledge about the exact etiology of tetanus, especially of the so-called rheumatic and idiopathic forms in which the points of entrance are obscure, to say the least, the conclusions of Thalmann,¹ obtained from an extensive experimental and literary research, may be of interest. Thalmann was not able to produce tetanus in guinea-pigs by introducing tetanus bacilli into the stomach, intestines, or urinary organs, no matter whether diseased or healthy. The conditions in the oral cavity do not seem to differ from those of the skin as regards infection with tetanus. Wounds of the nose present favorable conditions for infection both directly as well as through inspiration. When healthy the respiratory passages are impervious both to toxin and to bacilli, but if catarrhal states exist infection may take place. The introduction of spores into external wounds produces chronic, fatal disease without tetanic manifestations. Exposure to cold has no influence on the course of the disease in cases of external infection. There is some clinical evidence that the infection atrium of "idiopathic" tetanus is to be sought in the nose and in the oral cavity, and Carbone and Perrero found tetanus bacilli in the bronchi of a patient with so-called "rheumatic" tetanus. Because tetanus bacilli lose their virulence when exposed to oxygen, Thalmann recommends that in protracted instances of "rheumatic" tetanus, inhalation of oxygen and expectorants be employed in addition to antitoxin. It is not impossible that tetanus may result also from infection through the tonsils.

THE MEDICAL PROBLEMS OF THE TRANSVAAL WAR.

The success of the medical arrangements for the present war in South Africa has been so complete and so generally commended that we are apt to think they do things altogether better over there than we can here. Our many shortcomings in the medical management of the recent Spanish-American War, as worked up

¹ Virginia Medical Semi-Monthly, April 27.

¹ Zft. f. Hyg. u. Infektionskr., 1900, xxxiii, 387.

more *Americano* by the yellow press, are apt to occur to us in striking contrast. Now comes, however, a correspondent of the *London Times*, who points out that the medical outfitting of a single army corps with its lines of communications, exhausted England's home supply of medical officers, and that the favorable outcome so far has been due not to foresight and due provision for all possible needs, but to a singular good fortune. Thus far the war has not been on any wholesale scale, the engagements have been mostly small and insignificant, as compared with European wars and those in our Civil War, and even among them we must consider such as Elandslaagte, where the wounded lay out all night on the field they had won. If there had been an engagement like that at Gettysburg or Plevna, the medical resources would have been most notably deficient. Were the war conducted in a country like Cuba, or were the troops massed in camps in a climate like that of even Florida or Georgia instead of one notoriously healthy and in peaceable times a health resort, the case would have been also different, and the tax on the medical corps infinitely increased. The sick-roll as well as the casualty list are both shining examples of good luck as well as of good medical management. All these things must be considered when we are inclined to draw unfavorable comparisons between our own experience and that of the British in the present war. The conditions have been entirely different, and nearly altogether in their favor. Besides those already mentioned, we must remember that on a peace footing their army, in all its departments, was many times as large as ours at the outbreak of the war with Spain, and the strain on the machinery correspondingly less. In spite of this, it has been, as we learn from many sources, most severe, and almost disabling, and the defects of the British system are being very seriously discussed, in view of the still greater tasks a war on a large scale, a general European war involving Britain let us say, would exact. Our own experience of unpreparedness has been to some extent repeated in Great Britain; we both need to give attention to the better organization of our army medical departments. Taking everything into account, however, it does not appear that on the whole our army medical corps will suffer from any comparisons.

INCREASE OF CANCER IN PRUSSIA, SAXONY AND BADEN.

An important statistical study of the mortality from cancer in these countries, during recent years, is reported by Maeder¹ from Flügge's hygienic institute in Breslau. In 1894 Finkelnburg published a similar one on the distribution and frequency of cancerous diseases in Prussia, with especial reference to the Rhine provinces, for the years 1881 to 1890 inclusive, and Maeder's work in a measure forms a continuation of Finkelnburg's. The former's figures are for the years 1891-1896. They show conclusively that in Prussia the number of deaths from cancer has steadily increased, while those from tuberculosis, which are used for purposes of comparison, have fallen off. Furthermore, the mortal-

ity from cancer is over twice as great in the cities as in the country. The increased death-rate from cancer per year equals .115 per cent.—.098 per cent. falling on men and .133 per cent. on women—of the total deaths. The increase in cancer per year equals .79 per cent. of 10,000 living—.18 per cent. falling on women, .165 per cent. on men. Both sets show a preponderance of cancer among women. Similar general results were obtained from a study of the statistics of Saxony and Baden, in which the registration of deaths is better controlled and more reliable than in Prussia. It is important to note that certain regions that Finkelnburg's statistics showed to be especially prone to cancer still maintain this unenviable distinction. This is regarded by Maeder as a strong point in favor of the correctness of his results. He points out that his statistics can not be regarded as founded on absolutely correct figures, yet such a thing as error in diagnosis, for instance, would remain about the same from year to year throughout as large a territory as his material covers. He does not believe that the diagnosis of cancer can have become so much more refined from year to year, in city and in country, as to account for the increase shown by the figures. He believes that the mortality statistics are the only ones that can be used for the purpose of securing accurate data as regards the supposed increase in the frequency of cancer, because the information obtainable as to morbidity would be decidedly unreliable. Patients with cancer commonly go from physician to physician, and in the early stages the diagnosis of carcinoma is often uncertain. The cause of the increase in the disease remains obscure. The increase does not appear to be due to a falling off in tuberculosis, because the increase in cancer is too large to be explained thus.

SARCOMA OF THE PERICARDIUM.

The case of primary, diffuse small-celled sarcoma of the pericardium, recently described by Williams and Miller,¹ is certainly a remarkable one. It occurred in a boy, aged 13 years, the first symptoms appearing a few months before death; prominent among them were dulness over the left lung in front, great increase in the force of the heart's beat, a transitory left pleural effusion followed by a progressive enlargement of a solid nature of the entire chest so that a hard tumor could be felt by pressing the fingers in between the ribs, especially in front. Deglutition became exceedingly difficult, and dyspnea was marked. Toward the last breathing was possible only by a leaning forward at an angle of 45 degrees, and to the left, with the head resting on a low table. General dropsy developed. The post-mortem showed an enormous tumor, filling up the entire chest, produced by a diffuse thickening of the parietal pericardium, which was in some places 6 cm. in thickness. The interior of the pericardial cavity was quite smooth; the heart was normal, free from tumor growth, but smaller than usual. The mediastinal and peribronchial lymph-glands were but little enlarged; some small areas of tumor tissue were present in the posterior parts of the lungs, especially in the lower third of the left one. It goes without saying that the lungs

¹ *Zft. f. Hyg. u. Infektionskr.*, 1900, xxxiii, 336.

¹ *N.Y. Med. Jour.*, April 14; *TRB JOURNAL*, April, 23, ¶ 23, p. 1056.

were greatly compressed, and, with the tumor and the heart, weighed over six pounds. The microscopic structure of the tumor was that of a small-celled sarcoma. The enormous, uniform thickening of the pericardium and the slight enlargement of the peribronchial and mediastinal glands, and absence of glandular and other enlargements elsewhere in the body, justify the conclusion of Williams that the growth was primary in the parietal pericardium, developing from its lymphatic layer. Tumors of the pericardium are very rare, the primary less frequent than the secondary. The reported cases show two forms of growth, one occurring in a nodular form, the other as a diffuse, uniform, and enormous thickening of the parietal layer. Williams and Miller's case is a classic example of the diffuse form. The predominating clinical feature in most of the cases of this kind has been severe dyspnea continuing throughout the course of the disease.

TRUMAN W. MILLER, M.D.

BORN, MARCH 2, 1840. DIED, MAY 31, 1900.

Dr. Truman W. Miller was a graduate of Hobart College, Geneva, N. Y., and received his medical education at the College of Physicians and Surgeons of New York City. In 1862 he was appointed medical cadet, U. S. A., and was promoted to acting assistant-surgeon in 1863. In the same year he received his degree of M.D., from the Geneva Medical College. He served in the Army of the Potomac until after the Battle of the Wilderness, when he was transferred to Chicago and assigned to duty as post and examining surgeon, which position he held until the close of the war.

In 1873 he was appointed assistant-surgeon, U. S. Marine-Hospital Service, and in 1877 was promoted to surgeon, which position he held until his resignation in 1886. For six years he was surgeon of the 1st Regiment, Illinois National Guard, and was a member of the Grand Army of the Republic.

During his very active life he served on the staffs of many of Chicago's prominent hospitals, and at the time of his death was president and professor of surgery of the Chicago Polyclinic; consulting surgeon to the St. Joseph, German, and Alexian Brothers' hospitals; surgeon to the Maurice Porter Children's Hospital; surgeon-in-chief to many of the leading lines of railroads, and medical referee and consulting surgeon to a number of life and accident insurance companies.

He was an active member of all the leading national and local medical societies, and vice-president of the Board of Trustees of the AMERICAN MEDICAL ASSOCIATION. After the death of Dr. J. B. Hamilton, he personally conducted the affairs of THE JOURNAL OF THE ASSOCIATION until the appointment of the present editor.

Dr. Miller was eminently a man of action and was not given to writing. He was possessed of a pertinacity of purpose that knew not to fail, and whatever he undertook was carried out if it lay in human possibility. His executive ability was extraordinary: questions were solved with rare judgment and apparently on the spur

of the moment, yet when analyzed it was found that all possibilities had been carefully considered. The Chicago Polyclinic had its origin with him, and to his exertions and wise management are due the sound financial and professional success which that institution enjoys. He was its first and only president, and, up to the time of his death, possessed the absolute confidence of all his colleagues.

One of his noblest traits of character was his great kindness to the young man. Many young men, both within and without the profession, owe their start and success in life to his kind advice, his wise counsel and his generous material aid, and the latter, when needed, was



TRUMAN W. MILLER.

never found wanting. Nor was his generosity limited to young men, for many of the older ones who hold high professional positions owe much to his aid and influence.

To his friends he was always true, to his enemies, just, and where he could not commend he never condemned. He was of a jovial disposition, saw the bright side of life, and was a most enjoyable companion. As his honor was unimpeachable and his integrity of purpose never questioned, his influence was widely felt.

The Doctor was twice married. His second wife and one child survive him, and two married daughters by his

first wife. His habits of life were plain and he was a man of the people. He died full of honor and the love of his fellow men, and his record is clear.

Of the life that is gone let us cherish the good.
 'Tis sufficient, whatever he said,
 Let us think of the heart so noble and grand
 And bury all else with the dead.

Medical News.

ILLINOIS.

A HOME and hospital for deaconesses was dedicated May 24, in Peoria.

St. CLARA'S Hospital, at Lincoln, is to have a new building that will cost \$2000.

A NEW pension examining board has been established at Geneseo. L. A. Ferry, Geneseo; W. A. Grove, Galva, and W. H. Cole, Kewanee, have been appointed members.

Dr. J. H. HEWITT, Galesburg, has returned to the Klondike, where he has been for the past two years. He will practice his profession there.

Chicago.

Dr. J. B. MURPHY made the address at the commencement exercises of the Galesburg Hospital, May 22.

A SPECIAL examination by the Illinois State Board of Health, for physicians only, will be held at the Great Northern Hotel, June 18-20.

Dr. ARTHUR DEAN BEVAN delivered the commencement address before the graduating class of the Illinois Training School for Nurses, May 28.

CARDS ARE out announcing the coming marriage of Dr. L. Harrison Mettler, of this city, to Miss Minnie Warner, of Clinton, Ill., the event to take place June 12.

TWO NEWLY incorporated institutions are the Chicago Physiological School and the Illinois School of Electro-Therapeutics. The latter will offer two-weeks courses for physicians and the former is for the education and development of delicate, neurotic and slightly subnormal children, and is affiliated with Rush Medical College.

MEDICAL SCHOOLS IN GOOD STANDING.

Under the provisions of a resolution adopted July 11, 1899, the Illinois State Board of Health will not consider in good standing any medical college which does not, after January 1, 1900, require of students—excepting graduates of reputable colleges of arts and sciences, or of reputable colleges of dentistry, pharmacy or veterinary medicine, to whom one year's advanced standing may be granted—as a condition of graduation, an attendance on four full courses of lectures of at least six months each in four separate years. In the enforcement of this resolution the Board has refused to admit to examination graduates of 1900 from over forty well-known medical institutions, located in Alabama, Georgia, Kansas, Louisiana, Maryland, Michigan, Missouri, New Hampshire, New York, North Carolina, Tennessee, Texas, Vermont and Virginia.

EXCURSION TO PARIS.

The committee having in charge the excursion to the International Medical Congress, Paris, for the Illinois, Iowa and Missouri state medical societies, has arranged for a special train from Chicago to New York. This will consist of vestibuled Pullman sleepers, leaving on the afternoon of June 26, arriving at Albany, N. Y., the morning of the 28th, in time for breakfast. From Albany one of the Hudson River day-line steamers will be taken for New York, arriving there about 6 p.m. The cost for the entire trip, including railroad fare, sleeper and hotels, will be \$18.50, provided the party numbers one hundred. In order to insure the required number, those wishing to join this party are invited to do so. Information may be obtained from Dr. J. W. Pettit, Ottawa, Ill.; Dr. J. W. Cokenower, Des Moines, Iowa; or Dr. Chas. Wood Fassett, St. Joseph, Mo.

NEW YORK.

At a recent operation in St. John's Hospital, Long Island City, on a man who had shot himself in the breast, it was found

that the bullet had shattered the sternum, and that splinters of this bone had penetrated the lung. The operator, finding that he had made a cut into the pericardium, inserted five sutures and closed the rent, but the incision gave a fine opportunity to those present to observe the action of the heart. The man died five hours later from internal hemorrhages, as proved by the autopsy.

New York City.

SNEAK THIEF ROBS PHYSICIAN.

An office thief recently entered the house of a physician in Harlem while the latter was out, asked to be allowed to wait, and while doing so undertook to appropriate some of the Doctor's instruments. Being interrupted by the physician's wife, the thief choked her and then ran from the house. He was caught and turned over to another man who came running up and said that he was a detective, but the thief and the alleged detective took a direction away from the police station. When the deception was discovered the chase was renewed and the thief finally arrested.

ENDOWMENT NEEDED.

Roosevelt Hospital has made an appeal for \$500,000 to carry on its work. In the twenty years that it has been in existence its scope has greatly increased. Instead of the 59 employees required twenty years ago, the number is now 200. Since 1881, five departments have been added, and the ambulance service is now heavier than ever before, there having been no less than 4041 ambulance calls in the past year.

BETH-ISRAEL HOSPITAL.

The corner-stone of the new building for this hospital was laid with appropriate ceremonies, May 27. Addresses were delivered by Randolph Guggenheimer, Isidor Strays, the Rev. Dr. Schulman, and Dr. A. Jacobi. This institution was founded in 1890, and being situated in the center of an exceedingly thickly populated district, its work has steadily increased, until now the demands made on it are far in excess of the accommodations. The new building, which will accommodate 100 patients, is to have a modern equipment. It will be five stories high, covering a plot of ground 78 by 112 feet.

PENNSYLVANIA.

ON MAY 23, seventeen dealers were arrested in Pittsburg for violating the oleomargarin law.

Dr. JESSE COOPER, New Castle, has gone to Europe to do post-graduate work.

THE FOURTEENTH annual commencement of the Western Pennsylvania Medical College was held May 22, in Pittsburg. Chancellor W. J. Holland conferred the degree of Doctor of Medicine on a class of sixty-five.

Philadelphia.

Dr. JOHN H. PACKARD, who has for the past few months been visiting Naples, Rome and other cities in the interest of the Academy of Fine Arts, has returned home.

THROUGH the will of William E. P. Baker, \$200 has been given to the Germantown Dispensary and Hospital and to the St. Luke's Home and Hospital.

Dr. HENRY W. STELVAGON, of the Jefferson Medical College, who has been elected an honorary member of the National Dermatological Society of Italy, sails soon to attend the International Dermatological Congress to be held in Paris.

THROUGH the will of Charles T. Matthews \$500 has been left to the Howard Hospital; \$300 to the Philadelphia Home for Incurables; \$300 to the Children's Hospital. Also \$500 was given to the Children's Seashore House at Atlantic City, N. J., and \$500 to the Hospital of the Good Shepherd for Children, in Delaware County.

QUARANTINE STATION.

The Reedy Island Quarantine Station of this city is to be further reinforced by the addition of the *Powhattan*, which at one time was used as an auxiliary gunboat of the navy, and was assigned to this station by the United States Marine-Hospital Service. The vessel is 108 feet long, 21 feet beam, with draft of 11 feet. She has a maximum speed of twelve knots an hour, and has recently been overhauled.

UNIVERSITY ALUMNI OFFICERS.

At the last annual meeting of the Philadelphia Alumni

Society of the medical department of the University of Pennsylvania the following officers were elected: president, J. Madison Taylor; honorary vice-president, C. C. Harrison; vice-presidents, Henry Beates, Jr., Thomas H. Fenton, Edward W. Holmes, and J. L. Forwood; recording secretary, W. S. Wadsworth; corresponding secretary, B. F. Stahl; treasurer, Herbert B. Carpenter.

EXAMINATIONS FOR ENTRANCE.

The entrance examination for the medical department of the University of Pennsylvania will be held at the University, June 14-18, and September 21-25. Similar examinations are to be held in twenty-one other cities of the United States, New Brunswick and Prince Edward Island. The other cities in the state where such examinations are to be given are, York, Harrisburg and Pittsburg.

OHIO.

AT THE RECENT examinations of the state medical board 250 received license to practice medicine.

STARLING MEDICAL COLLEGE.

At a recent special meeting of the trustees of Starling Medical College of Columbus, the faculty appointed was as follows: Otto Frankenberg, professor of obstetrics; Louis Kahn, professor of anatomy; Charles B. Moray, lecturer on physiology; W. D. Deuschle, lecturer on nervous diseases; J. M. Phillips, on pathology; J. H. Upham, on diseases of children; John L. Gordon, on physical diagnosis; and John Rauschkolb, lecturer on pharmacy.

ANNUAL REUNION.

The annual banquet of the Society of Internes of the Cincinnati Hospital was given May 19. Speeches were made by Drs. E. W. Walker, A. B. Thrasher, S. E. Allen, D. I. Wolfstein, John Noffert, Rushville, Ind., and Shaler Berry. Louis Schwab was toast-master. The election of officers resulted as follows: president, Robert Stewart; vice-president, M. B. Brady; secretary, A. Freiberg; treasurer, J. C. Oliver, John Noffert, class of 1849 was elected honorary president.

MARYLAND.

DR. GEO. L. BROADRUFF has been elected to the Cumberland City Council.

DR. SAMUEL T. HAFNER has been appointed Frederick County health officer, vice Dr. D. M. Devilbiss.

Baltimore.

DR. WM. H. WELCH has been appointed to deliver the "Shattuck lecture."

DR. WILLIAM OSLER leaves for his summer vacation in Europe, June 16.

DR. WILMER BRINTON has resigned the chair of obstetrics in Baltimore Medical College, and Dr. J. M. H. Rowland has been elected to fill the vacancy. Dr. J. Williams Lord has been elected associate professor of anatomy in the same institution, vice Dr. Rowland.

THE FOLLOWING appointments are announced at the Woman's Medical College: John L. G. Lee, LL.B., professor of medical jurisprudence; Louise Erich, adjunct professor of hygiene; M. Ekstromer, professor of chemistry; Richard H. Thomas, president of the board of trustees.

THE QUARANTINE physician has received strict instructions with regard to the introduction of plague into Baltimore through ships coming from South American ports, especially Rio Janeiro, where the disease appears to be getting a foothold.

APPROPRIATION FOR SMALLPOX EXPENSES.

The health commissioner appealed to the board of estimates for an appropriation to meet the expense connected with the recent outbreak of smallpox and the salary account of the vaccin physicians and health wardens. The sum of \$2112 was appropriated from the contingent fund, which will allow \$50 a month salary to each physician, and \$500 for clothing and bedding destroyed, and maintenance of families during the sickness of patients.

SANITARY CONDITION OF SCHOOLS.

The Good Government Arundel Club has done a commendable work in calling attention to the wretched condition of our public school buildings. The building inspector says that 50 per cent. of the regular school buildings are probably unfit for use,

and not more than 30 per cent. of these can be altered to meet sanitary requirement. The money at his disposal—\$120,000 for all public buildings—will admit only necessary repairs.

NORTH CAROLINA.

BOARD OF EXAMINERS.

At the annual session of the North Carolina State Board of Medical Examiners, fifty-two were licensed to practice medicine. The Board was organized and, as constituted for the next two years, is as follows: E. C. Register, Charlotte, president and examiner in materia medica and therapeutics; J. Howellway, Waynesville, secretary and treasurer and examiner in anatomy; D. T. Taylor, Washington, examiner in surgery; Thomas Anderson, Statesville, examiner in physiology; Albert Anderson, Wilson, obstetrics and gynecology; T. S. McMullen, Hertford, chemistry and microscopy; J. C. Walton, Reidsville, pathology and medical hygiene.

ALABAMA.

THE NAME of the *Alabama Medical and Surgical Age*, published in Birmingham, was changed with the May issue, to *The Alabama Medical Journal*. Dr. John C. Legrand continues as editor and proprietor.

TEXAS.

AT THE ninth annual commencement of the medical department of the University of Texas, held in Galveston, May 13, Dr. W. S. Carter delivered the address, and degrees were conferred on sixteen young men.

NEW HAMPSHIRE.

THE EXAMINATIONS for license to practice medicine will be held at the state house, Concord, June 19 and 20.

INDIANA.

DR. A. C. HOLTZENDORFF, Plymouth, left May 26 for a tour of Europe, and will later attend the International Medical Congress at Paris.

AT THE annual meeting of the Board of Trustees of the Indiana Medical College, John Geis was made professor of toxicology and forensic medicine; Edward D. Clark, surgical pathology; and John Sluss, professor of anatomy.

RHODE ISLAND.

THE NEW bacteriologic laboratory of the Rhode Island Hospital, in Providence, was opened early in May. J. W. Eby, a member of the original staff, made the address.

THROUGH the wills of John Nicholas Brown and Harold Brown, both of Newport, \$1,000,000 has been left in trust for the benefit of the Rhode Island and the Butler Hospitals.

CONNECTICUT.

DR. MOSES C. WHITE, professor of pathology in Yale University, has resigned. The resignation was accepted and he was elected professor emeritus in the medical school's faculty. Dr. Charles Bartlett was advanced to a full professorship, to succeed Dr. White, and Dr. Otto Ramsey, of Johns Hopkins University, was elected a member of the faculty, the chair to be assigned later.

KANSAS.

Topeka.

CHRIST HOSPITAL has arranged to send out a missionary nurse among the poor of the city, gratis on the request of any physician.

DR. W. B. SWAN, of the State Board of Health, in his last report says smallpox in the state is diminishing rapidly, as there are now only 366 cases.

ADDITION TO HOSPITAL.

The Stormont Hospital's board of trustees has awarded the contract for building an addition to the hospital, to cost about \$13,000, and to be completed in five months. It will be three stories high and provided with a fine new operating and sterilizing room and all modern conveniences. The addition will be built with money furnished by Mrs. G. G. Gage, of Topeka.

CALIFORNIA.

SAN FRANCISCO'S REPORT.

Since THE JOURNAL'S last week's report on the plague conditions in San Francisco, an injunction has been granted to prevent the Federal and local health authorities from discriminating against the Chinese in the matter of precautions against the plague. This means that the Chinese can not be forcibly inoculated with antiplague serum and that they can not be prevented from entering or leaving San Francisco by the Federal quarantine officers. A Chicago paper has sent Dr. Geo. F. Shradley, of the *Med Record*, to inquire into the plague scare, and he is quoted as saying (May 28): "So far as I can learn from a conversation held this morning with the president of the health board, there is at present no case of bubonic plague in San Francisco. I have asked to see even one such case, and no one high in authority is able to produce one. There has not been reported, either officially or otherwise, a suspected case since May 15. These are the facts so far as I have been able to obtain them up to the present time. From such a point of view there is every reason for congratulation, not only on account of the great interests at stake from the commercial side of the question, but very much more because of the otherwise possible wholesale sacrifice of precious lives." The cases not previously reported in THE JOURNAL follow:

CASE 3.—A Chinese girl, aged 16, was employed and died in a cigar factory. She was seen on May 11, by the bacteriologist, who found a large bubo on the right side below Poupart's ligament, over which a sticky black plaster had been applied by the Chinese physician. The body was well nourished and plump. The glands were removed and found to be as large as a walnut, very dark on section, the cut surface having a mottled appearance. The interior of the gland was soft and mushy. A smear preparation showed the pest organisms in enormous numbers, and apparently in pure culture. Diagnosis was confirmed by inoculation of guinea-pigs and rats, all dying with typical lesions of the plague.

CASE 4.—Another Chinese girl, aged 17, was a house servant in a Chinese family at No. 730 1/4 Commercial Street. She was taken sick suddenly, with headache, fever, constipation and pain in the abdomen. On the third day she was taken to the Pacific Hospital, Stockton and Chestnut Streets, where she was delirious and the diagnosis of typhoid fever was made. She died in two days, or on the fifth day of the disease. She was seen after death, on May 9, by Drs. Wilson and Kellogg, the latter removing the lymphatic glands from a well-marked bubo on the right side near the saphenous opening. The glands were very large, dark and mottled on section, soft and necrosed in the interior. Microscopic examination showed the plague organism in large numbers. Diagnosis was confirmed by inoculation.

CASE 5.—A male Chinese, aged 53, a laborer and married, died, May 14, at 740 Pacific street. He had been in California ten years. There was a bubo on the left side on the anterior surface of the thigh, below Poupart's ligament; the skin was slightly discolored. The glands were removed by the bacteriologist, Dr. Kellogg, who found the same appearance described above. Microscopic examination showed the bacillus pestis, and the diagnosis was confirmed by inoculation.

[Press dispatches, May 30, announce the finding of another dead Chinaman, the autopsy showing every indication that death was due to plague.—Ed.]

LONDON.

EDINBURGH'S CHAIR OF MEDICINE.

Dr. John Wylie has been appointed to the chair of medicine in the University of Edinburgh, rendered vacant by the death of Sir Thomas Grainger Stewart. Dr. Wylie is 58 years of age. He graduated with honors in 1865, and was awarded a gold medal. He became lecturer on pathology in the Extra-Academical School and later lecturer on medicine; in 1876, assistant physician to the Royal Infirmary, and in 1882, physician. His principal published work is a book on "The Disorders of Speech," which appeared in 1894.

THE MOSQUITO THEORY OF MALARIA.

What has been well termed a "dramatic expedition" is being organized by the Colonial Office to finally prove to the satis-

faction of the public at large that malarial fever is directly attributable to bites of mosquitoes. Dr. Louis Sambon and Dr. G. C. Low, of the School of Tropical Medicine, who have never suffered from malarial fever, have volunteered to live in a specially constructed hut in the Roman Campagna—a district described by Dr. Manson of the Colonial Office as one of the deadliest spots on earth. Dr. Sambon is an ex-surgeon of the Italian army, who has for many years made a special study of tropical diseases in view of a government mission to Abyssinia, which was never carried out, owing to the Italian defeats. He is now lecturer at the London School of Tropical Medicine. The expedition was suggested to the Colonial Office by Dr. Manson, and the idea was at once accepted. The hut in which these two physicians will live is a wooden building with double casements, covered with special zinc, mosquito-proof netting, and there is a special system of double doors and curtains in the entrance porch. As an additional precaution the beds will be surrounded with mosquito nets. In the day the experimenters will pursue their work in the open air. The chances of being bitten by the special kind of mosquito found in the Campagna are very slight.

PROF. VICTOR HORSLEY'S ATTACK ON MODERATE DRINKING.

Prof. Victor Horsley has delivered the second "Lees and Raper Lecture"—a lecture instituted in commemoration of two temperance leaders—at St. James' Hall, before a crowded audience, comprising many of those most prominent in the total abstinence movement. The high scientific position which Prof. Horsley has achieved by his work on the physiology, pathology and surgery of the nervous system places him in an entirely different position from that of most of the medical advocates of total abstinence. Of most it may be said without the slightest reflection on their good faith, that their prominence is obtained by the part they play in advocating total abstinence and not by any scientific reputation on this or any other question. Professor Horsley's address was a bold and uncompromising attack on the principle of moderate drinking. He showed Kraepelin's apparatus for ascertaining the "reaction time" of the brain. Kraepelin had found that after a small dose of alcohol the "reaction time" was at first shortened, but this was very quickly followed by a gradual lengthening, and that various additions, subtractions, etc., when performed after taking alcohol appeared to the operator to be done more rapidly, but examination of the records shows that they really have been performed more slowly. As to the effect of alcohol on voluntary movements he said that even a moderate dose gave rise to tremor. The pressure dynamometer showed a slight increase of power; soon followed by a notable decrease, but under the influence of tea there was no decrease. The cause of the preliminary increase was not known; it was probably due to a paralysis of the brake-action or resistance to movement, and was therefore proof of a paralyzing action from the first. Dr. Aschaffenberg had shown that compositors set up less type after than before taking alcohol.

THE SOUTH AFRICAN WAR.

The unqualified praise of the work of the army medical service in the South African War has been received with great satisfaction by the profession. Owing to the effete caste spirit, which still prevails in the army, the medical staff has always been treated as an inferior body. Even during the present war the lack of respect is illustrated by the fact that a general, speaking at a public dinner, said that he would rather fall into the hands of the Boers than one army surgeon. Only after a protracted and difficult struggle have the military authorities given the same rank and titles to the officers of the medical corps as are enjoyed by combatant officers. Matters reached such a condition that there was a serious dearth of candidates of the best class to fill vacancies. The war has brought home to the public the fact that the strong influence of social position in the making of appointments has produced inefficient leaders and most disastrous results; that while the combatant officers are, in certain instances, under a cloud, the medical officers, who are despised because they enter the army as a profession by which to live, have for this very reason proved efficient. Speaking at a dinner given to Sir William McCormack and Mr. Frederick Treves, on their return from South Africa, Lord Roseberry bore eloquent testimony to the value of the

services rendered by the medical corps, for while so much criticism prevailed as to the military operations, nothing but the most unqualified praise was heard of the medical corps.

THE INFECTIVITY OF TYPHOID FEVER.

At a meeting of the Epidemiological Society, Dr. E. W. Goodall, superintendent of the Eastern Fever Hospital, read a paper on this subject. He remarked that the belief is almost universal that typhoid fever is very rarely communicated directly from the sick to the healthy, but that the fever is, in almost every instance, contracted by the ingestion of water or food contaminated by the alvine discharges of patients. Yet Brettoneau, Trousseau, Budd, Watson, and more recently Collie, maintain its direct infectivity. Of late years there has been a growth of opinion among medical officers of health and of fever hospitals that direct communication from the sick to the healthy is more frequent than was supposed. Numerous instances are recorded of the propagation of the disease among the members of a family or the inmates of a house, and among nurses, ward servants and laundry maids in hospitals. The suggestion that these cases are due to defective drains and unsanitary conditions was refuted by the fact that the hospital cases were confined to the nurses and attendants, other patients remaining exempt. Dr. Goodall believes that direct communication is more easy than was supposed. Petruschky had shown that the urine is highly infective, and in the absence of proper precautions, the infection was frequently conveyed by soiled fingers, and, perhaps, diffused in the dry state, was frequently inhaled in the form of dust. This was particularly liable to occur in the dwellings of the poor, and that it did not occur more often in hospitals was due to the care taken in the removal of the excreta and of soiled linen. Dr. F. F. Carger, superintendent of the Southwestern Fever Hospital, said that there, in nine years, twenty-three of the nurses attending cases of typhoid fever had contracted the disease, and in the same period but one patient has been attacked, although 20 per cent. of the admissions to the typhoid wards were not suffering from that disease. Nurses usually contracted the disease in times of great pressure.

CANADA.

MEASLES is epidemic among the troops at Halifax.

THE SIXTH death from smallpox has been recorded in the quarantine station at Winnipeg.

DR. WESLEY MILLS, professor of physiology at McGill, is at present studying in Leipsic, Germany.

DR. J. D. ARCHIBALD, late house physician to the Hospital for Sick Children, Toronto, has been appointed surgeon-lieutenant in the Royal Medical Corps, Bermuda, and left last week to assume his duties.

SMALLPOX.

DR. MONTIZAMBEFT, director-general of public health at Ottawa, has issued a statement that there are now only about fifty cases of smallpox in all Canada, and all of these with the exception of those at Winnipeg are of an exceptionally mild character. Strict and rigid inspection is being maintained along the borders of the western states, and all arrivals from the United States are being closely watched. It appears to be spreading among the mining camps on the north shore of Lake Superior, and it is causing the department of health in Ontario some uneasiness. Dr. Bryce has been at Port Arthur, where the disease has broken out; and a special physician has been sent up from Toronto. The militia authorities have decided to exempt from annual drill this year all regiments from small-pox-infected districts. Special medical reports are now being received by the department, from military districts in which the disease has appeared, and every precaution will be taken to protect the camps.

THE DOCTOR AND THE INSURANCE COMPANIES.

DR. A. FREELAND, Ottawa, writes to the *Canadian Practitioner* complaining of the treatment accorded the physician in the matter of filling out death certificates. The questions on the insurance blanks, to which he calls attention, are: "Is there any tendency to consumption or other hereditary disease in the family?" "When and for what have you attended deceased prior to last illness? Give the immediate and remote cause of death," etc. While these are questions quite proper to be asked

by the company's examiner before the acceptance of the person's application, it is certainly nothing short of gross impertinence to ask them of the family physician after the death of his patient. Another piece of effrontery complained of is that these self-same companies require the physician to proceed to a notary's office, and take an oath that the information supplied is correct, although no fee is allowed by them for the trouble. There ought to be a fair solution of these disabilities, and the companies should be brought to understand that the doctor is worthy of his labor in this respect.

THE PROVINCIAL BOARD OF HEALTH AND TUBERCULOSIS.

At the recent session of the Ontario Parliament the local board of health has been empowered to put in force the following legislation: 1. That hereafter in which houses and rooms, whether in hotels or otherwise, in which tubercular persons have been, shall be disinfected, and the health authorities shall see to this. 2. That persons must not make false statements as to the existence of such cases. 3. That in government institutions persons suffering from tuberculosis shall be kept from infecting others. 4. That with the above aims in view, health officers shall be urged to require notification of cases of tuberculosis as empowered by the public health act. 5. That the Stratton act—referring to the establishment of sanatoria, and noted in former correspondence to THE JOURNAL—be distributed to health officers, medical men, clergymen, and the public generally, by means of a circular, appealing to them to use their influence to have the municipal authorities avail themselves of its provisions, where necessary in the interests of humanity, and for the saving of life.

LABORATORY WORK IN ONTARIO.

In the report of the Board of Health of Ontario for the year 1899, which has just been sent out, the provincial bacteriologist, Dr. J. J. McKenzie, gives the work of that department for the twelve months. The 1370 specimens examined were as follows: suspected sputum, 629; suspected exudate, 375; suspected typhoid blood, 164; waters for bacteriologic examination, 116; waters for chemical examination, 29; miscellaneous samples, 62; suspected rabies, 5. Of these samples, 1100 were sent in by 300 physicians. Of the 5 suspected cases of rabies, 2 turned out to be the disease. These 2 were from the southern peninsula of Ontario, the district in which practically all our cases of rabies are found. Among the miscellaneous work and investigations was a continuation from last year's work of the study of the character of the bacillus found in grass; and it is pointed out that the discovery of this bacillus in butter is apt to give rise to error in its being mistaken for the tubercle bacillus.

INSPECTION OF MUSKOKA HEALTH RESORTS.

The season having arrived for outings in Muskoka, it may be important to notice the report of Dr. Bryce on this district. After a thorough, personal inspection of the entire Muskoka district, he states that nowhere in the areas inspected is there any danger from the water-supplies, as the provincial board has for some time past been at considerable pains to educate the people of Muskoka up to the necessity of keeping the water-supply free from sewage. He goes on to state that the residents are now taking very great care as regards the disposal of household refuse, in order to prevent effluvia nuisances; and that remarkable progress is being made in modern methods of sewerage disposal in connection with even the smallest resorts of the Muskoka district. The principle recommended for adoption by Dr. Bryce is essentially that of the septic tank, with an overflow to a receiving tank, whence final disposal is made to subsurface tiles; or an artificially made bed in which the principle of final nitrification of the sewage is to be carried out. The larger hotels, accommodating from 100 to 200 guests, may in the future be looked on, with these improvements completed, as object-lessons to many people who go from our towns, of what may thus be done in the disposal of sewage by simple methods, if scientifically and practically applied. Pamphlets descriptive of methods of disposal of house wastes and sewage are issued by the board of health, and are put in the hands of the proprietors of these summer hostleries, so that all may make it their endeavor to keep Muskoka well to the front as a summer resort.

Correspondence.

The Value of the Medical Visit.

ST. LOUIS, Mo., May 28, 1900.

To the Editor:—The value of medical service is estimated by all that is done for the patient. Visits are only incomplete memoranda of time. The value of a visit depends on the time spent in making it, distance and delay at the bedside and what sort of personal service is given in the examinations and in the manipulations of the patient. Hypodermic medications may be required in a locality demanding special anatomic knowledge and some surgical skill. The examination of hidden cavities—the throat, vagina, bladder, rectum, etc.—and the exercise of the *tactus eruditus* may be required. They call for skill as well as outlay, for education, instruments and time. Thoracic and abdominal examinations requiring more or less time are often essential to a correct diagnosis as well as urinary and blood analyses. The taking of blood or sputum for a slide and samples of urine or other excretions is a service that adds to the value of a visit and ought to be estimated and charged for.

Designating a visit without stating what the doctor may be required to do at the visit gives an inadequate idea of medical service. Things may be done at one visit that may save a life, while nothing may be done or required at another one, and that may be a brief call, a few routine directions and continuance of treatment—an ordinary visit. The treatment of a grave case, the visits thereto, or to one not yet well in hand, and those to a case in which death or other critical stage is approaching, necessitate more time and attention than in the ordinary run of self-limited disease. For instance, a visit may be very ordinary or very extraordinary in extent and kind of service rendered, and in result depending on the physician's skill and judgment exercised.

There are many other facts and circumstances not understood by the public, the patient's friends or the courts, embraced in the term "visit," which ought to be made plainer in our fee bills. Services in the crisis of a bad case or dying patient are imperative and we must give them when they are demanded, whether we miss our office hours or attention to other business or less imperative cases, and in such a visit extra time must be elargied for and this should be cheerfully paid. The sacrifice of the office hours is great loss, and damages and sometimes endangers ruin of the doctor's best business. The night visit sacrifices the doctor's comfort, the office hour visit his best income. In the out-of-town visit these facts are considered in the charge, by all doctors. The home visits should always be similarly regarded.

The value of the doctor's visit therefore varies greatly. It may be a loss to him of only so much time or it may be much in money that may be made or much in broken rest and imperiled health. It may be the saving of a life by a timely remedy judiciously applied, the comfort of the patient promoted, or a favorable turn in the patient's disease toward health, through the doctor's delay and sacrifice at the bedside, to watch and skilfully minister to the patient, while patients wait for his coming in his office or leave it and go or send elsewhere for medical service.

Sufferance and sacrifice are "the badge of all our tribe" and will be so till the end of time, but the recipients of our benefactions and our sacrifices or self-denials and our work should understand, through our fee bill, that visits are not all alike in value, that they represent varying degrees of time and expense to us and of labor, skill and experience to the patient.

C. H. HUGHES, M.D.

Colorado and Quarantine Against Consumptives.

To the Editor:—In THE JOURNAL for May 12, page 1156, Dr. Joseph Matteson, of Chicago, in his article entitled "Notification and State Supervision of the Tuberculous," makes the following statement: "It is rumored that the State Board of Health (of Colorado) had under consideration the advisability of quarantine against more consumptives."

Inasmuch as Dr. Matteson has made this public statement, I deem it my duty, as Secretary of the State Board of Health

of Colorado, to request that you make equally public my statement that no such measure has ever been seriously considered by the Colorado State Board of Health. You will see by reference to Circular No. 20 of the State Board of Health, which was issued in February of this year, that instead of considering a quarantine the statement is made that "There is no need to talk of quarantining against consumption. Such a course is both unnecessary and impracticable. Doubtless, many persons with advanced tuberculosis should not be sent here, but for those who can not be benefited by coming, Colorado should have nothing but a warm welcome."

Yours truly,

G. E. TYLER, Secretary.

Alcohol in the Tropics.

FORT RILEY, KAN., May 26, 1900.

To the Editor:—In your editorial in THE JOURNAL, May 19, you mention my article in the *Philadelphia Medical Journal* of April 7, in which I advocated the moderate use of alcohol to combat the exhaustion due to the heat and moisture, and warn against the serious effects of immoderate and bar-room drinking. You mention a volunteer surgeon who has somewhat similar views, i. e., "the use of liquor in any form in the tropics is unnecessary except it be the red wine issued by the Spanish Government to their troops." It is difficult to understand why you can say that these views are directly opposite. You also say: "Judging from the condition and efficiency of the Spanish troops this (red wine) would not seem to have helped them much." It seems to me that it may have helped them very much; for in spite of reduced rations for many weeks, they were so efficient that 500 of them at El Caney successfully fought about 6000 regulars nearly all day long, and a mere bandful whipped General Duffield's brigade of gallant Michigan men. I find that soldiers who have faced the Spanish do not hold your opinion of inefficiency.

You say that the burden of proof is on those who are opposed to generally received opinions. On the contrary, in modern life the burden of proof is on those who still adhere to the old dogmas of the pre-scientific age of religion and medicine. This is just what makes the believers in theological and medical dogmas so hysterical—they can not prove their ridiculous assertions, about "load on the liver," "overworked kidneys," "spring medicine" or "predestination and free-will."

Very truly yours,

CHAS. E. WOODRUFF, M.D.,
Captain and Asst.-Surgeon U. S. Army.

[We suggest to our correspondent that he read the editorial again. Ed.]

Association News.

Order of Business.—The following is the order of business of the general sessions of the AMERICAN MEDICAL ASSOCIATION, at the Atlantic City meeting. The general sessions will be held in the Marine Hall, Young's Pier.

FIRST DAY, TUESDAY, JUNE 5—10:30.

Call to Order—By the President, W. W. KEEN, Philadelphia, Pa.

Opening Prayer—By REV. FREDERICK T. STANLEY.

Addresses of Welcome—By HIS EXCELLENCY, FOSTER M. VORHEES, Governor of New Jersey, and HON. F. P. STOR, Mayor of Atlantic City.

Report of the Committee of Arrangements, by the Chairman, PHILIP MARVEL.

Report of General Business Committee.

Address of the President of the AMERICAN MEDICAL ASSOCIATION, W. W. KEEN, Philadelphia, Pa.

Report of the Treasurer.

Report of the Secretary.

Report of the Committee on Department of Public Health, U. O. B. WINGATE, Milwaukee, Wis.

Report of the Committee on National Legislation, II. L. E. JOHNSON, Washington, D. C.

Report of Special Committee on Revision of Constitution and By-Laws, E. ELIOT HARRIS, Chairman.

Proposed Amendments to the Constitution.

Miscellaneous Business.

Special Announcements.

Reception of Delegates.
Adjournment.

SECOND DAY, WEDNESDAY, JUNE 6—10:30.

Call to Order.
Reading of Minutes.
Report of General Business Committee.
Announcements by Committee of Arrangements.
Oration on Surgery, W. L. RODMAN, Philadelphia, Pa.
Oration on State Medicine, VICTOR C. VAUGHAN, Ann Arbor, Mich.
Report of Board of Trustees.
Report of the Committee on AMERICAN MEDICAL ASSOCIATION MEDAL, GEO. M. GOULD, Philadelphia, Pa.
Report of Committee on Senn Medal, W. L. RODMAN, Philadelphia, Pa.
Report of the Committee on the Reorganization of the Army and Navy Medical Corps, THOMAS H. FENTON, Philadelphia, Pa.
Report on the Committee on the Rush Monument Fund, JAS. C. WILSON, Philadelphia, Pa.
Report of Special Committees.
Miscellaneous Business.
Adjournment.

THIRD DAY, THURSDAY, JUNE 7—10.

Call to Order.
Reading of Minutes.
Report of General Business Committee.
Announcements by Committee of Arrangements.
Oration on Medicine, JOHN A. WITHERSPOON, Nashville, Tenn.
Report of Nominating Committee.
Report of Special Committees.
Miscellaneous Business.
Adjournment.

FOURTH DAY, FRIDAY, JUNE 8—10.

Call to Order.
Reading of Minutes.
Report of General Business Committee.
Announcements by Committee of Arrangements.
Apportionment of Delegates to Other Societies.
Unfinished Business.
Introduction of President-elect.
Adjournment.

Special Transportation Notice.—The Committee on Transportation desires to call especial attention to the paragraph in THE JOURNAL of May 9, page 1277, regarding extension of time limits, etc., and begs to say it is liable to be misleading, inasmuch as the reduced fare return tickets must be secured at Atlantic City and not at any other point. Having secured a return ticket at Atlantic City, the holder may arrange to stop over at Philadelphia, Baltimore or Washington, for example, and make side trips during the time his return ticket is deposited at such stop-over point. Full information in this respect can be secured from representatives of the lines interested. Tickets should be purchased direct to Atlantic City, the purchaser stating that he is attending the medical meeting at that point, securing at the same time a certificate from the local ticket agent, which must be presented to Dr. W. Blair Stewart, at Atlantic City, on June 6, 7 or 8, for his counter-sign, and the stamp of the detailed railroad agent. The certificate so stamped must then be presented within the time limit, at the railroad ticket office in Atlantic City, for the purchase of the return ticket, which will be sold to the bearer on the payment of one-third the regular full fare to the starting-point of the initial ticket. Tickets of this character are usually sold for continuous passage returning without stop-over privileges. Under date of May 23, the trunk lines have granted stop-over privileges in their territory not to exceed the time limit of the ticket, June 23, providing the ticket so purchased be deposited with the representative of the road selling the initial ticket, and securing the stop-over privilege. Tickets will be sold direct to Atlantic City, over the bridge route, by all Pennsylvania lines and connections, including New England territory, and by the Big Four out of St. Louis, via Cincinnati, over the C. & O. Route, and from the South and Southeast by the Southern or Atlantic coast lines. H. L. E. JOHNSON, M.D., Chairman.

Societies in Affiliation.—The following societies are in affiliation with the AMERICAN MEDICAL ASSOCIATION, in addition to those published in THE JOURNAL of April 14.

KENTUCKY: Louisville Clinical Society.

MARYLAND: Baltimore County Medical Society.
MISSOURI: Southeast Missouri District Medical Society.
NEW YORK: Erie County Medical Association.

TENNESSEE: Bradley County Medical Society; Chattanooga Medical Society; Dyer County Medical Society; Gibson County Medical Society; Johnson City Medical Society; Knox County Medical Society; Madison County Medical Society; Marshall County Medical Society; Middle Tennessee Medical Society; Montgomery County Medical Society; Nashville Academy of Medicine; Rutherford County Medical Society; Sumner County Medical Society; Tipton County Medical Society; West Tennessee Medical and Surgical Association.

TEXAS: Colorado County Medical Society; Corsicana District Medical Association; East Texas Medico-Chirurgical Society; Kaufman County Medical Society, Panhandle Medical Association; Practitioners' Society of Dallas.

Deaths and Obituaries.

ELMER W. WOODRUFF, M.D., was born in Reynoldsburg, Ohio, July, 23, 1863, and died in Columbus, Thursday, May 24. He received an academic education, and graduated from Starling Medical College in 1891, then practicing as a partner of his preceptor Dr. J. T. Mills, in Jersey, Licking County, Ohio, for four years. In 1895 he took a post-graduate course in the New York Post-Graduate School, locating in Columbus in September of that year, where he practiced until the time of his death. He was a member of the Columbus Academy of Medicine, Ohio State Medical Society, Mississippi Valley Association, and AMERICAN MEDICAL ASSOCIATION, the latter of which he served last year, in a most efficient manner, as assistant secretary. As a man he was above reproach, a citizen of unusual worth, a physician of rare quality; one whose sense of honor and high ideal in the medical profession is worthy the emulation of all; a man, whom to know, meant to trust, to respect, and to love. The loss to the community is great, the loss to the medical profession one that will be keenly felt. His was a life not well to be spared. Sacrificed by the all too faithful performance of his duty to patients afflicted with that dread disease which proved his undoing—pneumonia—his was a death which had it occurred in the battle of bullets instead of the battle of life civic, would have crowned him hero.

CHAS. H. VOORHEES, M.D., died at his home in New Brunswick, N. J., May 13, aged 76 years. He was graduated from Jefferson Medical College in 1850, and practiced medicine in Spotswood and Plainfield before locating in New Brunswick. During the Civil War he was a medical officer and saw service under Generals McClellan, Grant, Butler and Hooker. He was for many years a member of the staff of the John Wells Memorial Hospital. He was prominent in county and state medical societies and a member of the Ninth International Medical Congress, which met at Washington in September, 1887, and was elected vice-president of the section on military and naval surgery.

FESSENDEN NOTT OTIS, M.D., died in New Orleans, La., May 24, aged 75 years. He was born in Ballston, N. Y.; was graduated from Union College, New York, and finally in 1852 received his diploma from the now extinct New York Medical College. From 1853 till 1860 he was a surgeon on the United States Mail, and subsequently superintending surgeon of the Pacific Mail, Steamship Company. Besides, also, being a surgeon of police, he filled many other responsible positions in hospitals and dispensaries. In 1871 he became a lecturer in the College of Physicians and Surgeons, New York, and in 1874 identified himself in that institution with the chair of genito-urinary diseases.

JOHN SCUDDER, M.D., D.D., died in his 65th year, at Kodai Kanal, India, May 23. He was for 39 years a missionary of the Reformed (Dutch) Church in America, in connection with its Aroet mission, and had become an authority on the people of India. Like his ancestor, an Indian missionary of the same name, who was born in Freehold, N. J., Sept. 3, 1793, and died at the Cape of Good Hope, Jan. 13, 1835, he believed in pros-

elying by ministrations to the sick. He leaves a wife, a son and a daughter—Dr. Ida Scudder, recently a visitor to this country, who has charge of the mission's hospital work.

GRANVILLE KNIGHT, M.D., Malden, Mass., died recently, after an illness of two years. He was born in Limerick Me., in 1836, and in 1850 went to Springfield to study medicine, and in 1861 he received his degree from the medical department of Vermont University, Burlington. He began the practice of his profession at Enfield Mass., but in 1867 moved to Springfield, where he remained until 1888, when he went to Malden.

F. B. MUSSEY, M.D., Cincinnati, Ohio, died May 12, aged 71 years. He was born in Hanover, N. H., and was graduated from Dartmouth College in 1840, and from the Ohio Medical College in 1844. During the Civil War he was a surgeon of the 33d Ohio Vol. Inf.

JOHN MACDONALD, M.D., New York City, died in St. Agnes Hospital, Philadelphia, May 21. He had been in the service of the Red Star Line for a long time and was surgeon of the Steamship *Waesland* for four years.

Miscellany.

Commissions to Acting Assistant Surgeons.—In the House of Representatives, May 15, Mr. Howell introduced the following bill (H. R. 11587), which was referred to the committee on military affairs and ordered to be printed: Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That all acting assistant-surgeons of the United States Army who served as medical officers, agreeably to Army Regulations, either in the Civil War, the various Indian wars, the Spanish-American War, and the Philippine rebellion, and whose services were honorably terminated after one year's service, and those acting assistant-surgeons of the army who are still serving as medical officers, after one year's service, be issued commissions by the Secretary of War as acting assistant-surgeons of the United States Army in a similar manner that the commissions were issued to the acting assistant-surgeons of the United States Navy, the date of their commissions to be the date of their entry into the service of the United States as medical officers and the date when their services as medical officers were or will be honorably terminated to be the date of their discharge from the service of the United States; but any acting assistant-surgeon who has served honorably for a period of less than one year shall be issued a warrant showing the time for which he served and when such service was rendered; *Provided*, That no back pay or allowance be made to any such acting assistant-surgeon by virtue of this act.

Protest Against Antivivisection Bill.—Senator Gallinger, of New Hampshire, the advocate of antivivisection in the United States Senate, has been interviewed by a correspondent of the *Baltimore Sun*, and, according to the published report, expressed the views given in the following letter by Dr. W. W. Keen. One or two of the statements appear to be the reporter's natural inferences from Senator Gallinger's remarks, but the others are quoted as his own words. Dr. Keen's reply is a full and satisfactory reply to the Senator's libelous utterances, and should outweigh them, even with lay readers. The profession owes itself a duty to everywhere personally enlighten the laity, publicly and privately, in regard to these misrepresentations.

To the Editors.—In *The Sun* of April 16, under the title "Scalpel of Death," is an interview with Senator Gallinger, signed by your Washington correspondent, "F. A. K.," the statements of which I should not ordinarily feel called upon to notice. But inasmuch as they are made up a Senator of the United States and the sponsor for two bills on vivisection now before the Senate I deem it a duty to correct the erroneous impression which would be produced by the article were it passed over in silence.

Senator Gallinger has not been a practitioner of medicine for a number of years. I am sure that were he familiar with the progress of medicine, and especially of surgery, within the last twenty years he would not have stated that "the belief was expressed by competent authority (?) that little real benefit had come from all the mass of the more horrible experiments."

Two statements, however, in the interview are so entirely wrong that I wish especially to call attention to them. Senator Gallinger says that American physicians should not "object to the inspection and regulation which the accomplished and able faculty of England accept without question or remonstrance." As a matter of fact, almost the entire profession of Great Britain have protested and remonstrated against their existing act. At the recent hearing on the antivivisection bill before the committee, of which Senator

Gallinger himself was chairman, Professor Welch, of Baltimore, presented offers from Lord Rutherford, Sir Michael Foster, M. F. P. T. Lauder Brunton and Sir T. Grainger Stewart, four of the leading medical men in Great Britain, representing the surgeons, physiologists and physicians, who showed how obstructive to progress the British law is and how deleterious such a law would be if enacted in this country.

The other statement by Senator Gallinger however, is still more indefensible; namely, "Not only in foreign countries, but in the United States, human vivisection has been practiced to a considerable extent on children and women in charitable hospitals, being inoculated with loathsome diseases for the sole purpose of watching them suffer and die." The only evidence as to human vivisection which was alluded to at the hearing was a pamphlet published by the miscalled "American Humane Society," dealing (in many cases) with singular inexactness. In all the instances which were alluded to has been able to cull from the medical literature of the world. Instead of human vivisection being practiced "to a considerable extent," that pamphlet could give only two instances of anything resembling experiments on human beings in this country, one in Massachusetts and one in Maryland. The first was a series of experiments on puncture of the spinal cord; the other on the use of thyroid extract. Even these in my opinion were reprehensible. The others mentioned in the pamphlet alluded to were expressly condemned by Dr. Osier, myself and others at the time of the hearing. Not a single instance of the "inoculation of children or women with loathsome diseases" in the United States was adduced. The whole mission of the interview was to give the public the impression that human vivisection and the inoculation of loathsome diseases is not uncommon in the United States. How far this is from the real truth I have stated.

It is strange that Senator Gallinger has introduced a bill for the "regulation of scientific experiments on human beings in the District of Columbia." Regulation implies certainly approval of such experiments under stated conditions, as is indicated throughout the bill. The medical profession as such utterly repudiates any such experiments on human beings, which would be for the purpose to approve. Moreover, it is difficult to conceive of one's regulating a thing which does not exist. In the District of Columbia not a single instance of human vivisection has occurred, nor do I believe any one will who is the whole object of the interview. The introduction of the bill is evidently for the moral effect which it would produce in making the community believe that there is in existence a practice which needed to be regulated and indirectly to help the antivivisectionists in their cruel campaign against humanity.

I regret very much that Senator Gallinger has made an attack upon the noble profession to which we both belong. To say that "there is an ambition on the part of many operators to make new discoveries with little regard to the percentage of fatalities under the knife," then "the chance is too great for the modern surgeon to take," that "conscience has very little to do with the matter as a general thing" and that patients who enter hospitals should "leave hope behind" are slanders upon the profession, which I most indignantly deny. I know the surgeons of this country well, and a more conscientious body of men I do not know anywhere. They are honest in the statement of their results; they do not hesitate to acknowledge their mistakes, and they can face their patients here and hereafter with as clear a conscience as any set of men in the country. Senator Gallinger must be the most singularly unfortunate in his relations with medical men to have formed so low an opinion of their moral character. Yours very truly,

W. W. KEEN,
President American Medical Association.

Sanitation in Porto Rico.—General Orders, No. 80, Department of Porto Rico, April 12, 1900, is devoted to sanitary matters. A nuisance is defined as any object or condition which is prejudicial to public health. Illustrations are cited: Dead animals in streets or yards, slaughter-house offal or other decomposing matter, an infected house, overflowing and leaking privies and water-closets, manure pits, filthy or insecure tenement houses, filthy markets, groceries, dairies, cellars, yards, alleys or streets, defective drains, filthy stables, foul wells used by the public, open sewers in which the water stands, and ponds or pools of stagnant water. Soap making, bone boiling and some other industries may be designated offensive, but they are not necessarily prejudicial to public health. The order prescribes the method of making complaint of the existence of a nuisance and the action to be taken thereon. Paragraphs 8 to 12 are intended for the regulation of water-closets, privies, sinks and cess-pools. Thus a privy vault must be constructed for every building which is situated on an unsewered street, and each vault must be not less than four feet in diameter and ten feet deep in the clear, lined and floored with a wall of hard brick nine inches in thickness, laid in cement mortar and proved to be water-tight. Plans of proposed sewerage systems must be approved by the Superior Board of Health before construction will be authorized by the governor. Several of the paragraphs relate to street cleaning, for which local boards must make proper provision. Streets must be swept and cleaned three times a week. It is forbidden to throw filth, garbage, dead animals, or solid or liquid waste of any kind into the streets. These must be placed in boxes or other receptacles, which will be emptied by the public scavengers. Each owner, or agent, is held responsible for any violation of these requirements in front of his property. District courts have jurisdiction in cases arising under this order.

Outcome of Suit Against Physician.—Dr. T. Gillebert, of

- Dr. R. D. Long, from Chicago, Ill., to Lorenzo Marquez, Pretoria, S. A.
- Dr. F. M. Lanbach, from Wilkes Barre to Weaversville, Pa.
- Dr. W. D. Lockwood, from South St. Joseph to Sta. D., St. Joseph, Mo.
- Dr. R. E. Lowe, from Kansas City, Mo., to Independence, Kan.
- Dr. W. J. McRoberts, from 417 S. Garrison St., St. Louis, to Jefferson City, Mo.
- Dr. R. E. Mason, from 450 Walker St. to Lamar Hospital, Augusta, Ga.
- Dr. J. L. McCarthy, from 1024 So. 10th St., Omaha, to Gretna, Neb.
- Dr. H. C. Miner, from 630 to 823 Kansas Ave., Topeka, Kan.
- Dr. H. M. Morrow, from 42 Laflin St. to 169 Ashland Boul., Chicago, Ill.
- Dr. S. L. McElroy, from Norcross to Kirklind, Ga.
- Dr. J. F. Nagle, from 47 E. 21st St. to 17 Park Row, New York, N. Y.
- Dr. H. G. Norton, from 1609 4th St., Minneapolis to St. Luke's Hospital, St. Paul, Minn.
- Dr. W. P. Reeves, from Sewanee Med. Col. Whig, to Sewanee, Tenn.
- Dr. A. Rad, from Park Ave and Ohio St. to 136 N. Central Ave., Austin, Ill.
- Dr. A. J. Richter, from 6250 Halsted St., Chicago, Ill., to Bluthenthal Hotel, Pine Bluff, Ark.
- Dr. R. L. Shea, from New York City to Westerly, R. I.
- Dr. G. O. Switzer, from Pentwater to Greenland, Mich.
- Dr. J. Spaulding, from Clinton to Decatur, Ill.
- Dr. H. J. Tillotson, from St. Louis to 701 Main St., Kansas City, Mo.
- Dr. H. E. Thomson, from Westville to Grove, I. T.
- Dr. J. Vermeulen, from Beaver Dam to Fremont, Mich.
- Dr. J. L. Williamson, from Lowell, Ark., to Lacasa, Texas.
- Dr. DeForest Willard, from 1601 Walnut St. to 1818 Chestnut St., Philadelphia, Pa.
- Dr. J. Wallace, from Milton, N. H., to 2773 Washington St., Roxbury, Mass.
- Dr. D. H. Williams, from 3301 to 3149 Forest Ave., Chicago, Ill.
- Dr. C. H. Wheaton, from 95 Evanston Ave. to 42 E. Madison St., Chicago, Ill.
- Dr. W. M. Young, from Itasca to Dallas, Texas.
- 30.—"Care of Premature Babies in Incubators. James D. Voorhees.
- 31.—"Tuberculosis of Female Genital Tract in Children. Martha Wollstein.
- 32.—"Application of Rational Surgical Technique to Removal of Fore-skin. Leonard W. Bacon, Jr.
- Allienist and Neurologist (St. Louis, Mo.), April.**
- 33.—"Analysis of the Sexual Impulse. Havelock Ellis.
- 34.—"Circumscribed Median Nerve Digital Neuritis Sequent to La Grippe. C. H. Hughes.
- 35.—"Outline of Psychiatry in Clinical Lecture. (Concluded.) C. Wernicke.
- 36.—"Diagnosis of Raynaud's Disease. Adolf Calmann.
- 37.—"Research in Comparative Cytology of Nervous System of Vertebrates. Guissepe Levi.
- Bulletin of the Johns Hopkins Hospital (Baltimore, Md.), April.**
- 38.—"Unusual Method of Performing Hysteromyomectomy. Otto G. Ramsay.
- 39.—"Squamous-Celled Carcinomatous Degeneration of Ovarian Dermoid Cyst; also Adenocarcinoma of Ovary, Associated with Ovarian Dermoid Cyst. Lindsay Peters.
- 40.—"Pulmonary Tuberculosis, with Diffuse Pneumonic Consolidation, in a Lion. W. G. MacCallum and A. W. Clement.
- 41.—"Arsenical Pigmentation and Keratosis. Louis P. Hamburger.
- 42.—"Uncontaminated Urine. Howard A. Kelly.
- 43.—"Note on Series of New Vesical Specula. Howard A. Kelly.
- Archives of Otolaryngology (N. Y.), February.**
- 44.—"Series of Cases of Suppurative Disease of Temporal Bone, with Comments. Swan M. Burnett.
- 45.—"Excessive Hemorrhage, Following the Removal of a Myxofibroma from Ear. Clarence R. Dufour.
- 46.—"Facial Paralysis as Complication of Acute Otitis Media. Wm. R. Murray.
- 47.—"Rinnoé and Gellé Tests. Gustav Brühl.
- 48.—"Method for Functional Examination of Diseased Ears. Fr. Bezold.
- 49.—"Case of Cerebral Abscess Following Purulent Inflammation of Middle Ear; Operation; Evacuation of Abscess; Death. Charles H. May.
- 50.—"Fatal Otitic Abscess in Left Temporal Lobe of Brain Causing Word-Blindness. Operation. Autopsy. Herman Knapp.
- Laryngoscope (St. Louis, Mo.), May.**
- 51.—"Etiology of Chronic Atrophic Rhinitis. Francke H. Bosworth.
- 52.—"Some Recent Contributions to Study of Etiology and Pathology of Atrophic Rhinitis. Jonathan Wright.
- 53.—"Importance of Distinguishing Functional Collapse of the Nasal Passes from Atrophic Rhinitis. Clarence C. Rice.
- 54.—"Hygienic and General Treatment of Atrophic Rhinitis. Thomas R. French.
- 55.—"Mechanical Treatment of Atrophic Rhinitis. B. Bryson Delavan.
- 56.—"Atrophic Rhinitis; Its Treatment by Local Medication. Chas. H. Knight.
- 57.—"Report of Case of Hysterical Dyspnea. F. E. Waxham.
- 58.—"Sigmoid Stenosis Thrombosis. James F. M'Kernon.
- Therapeutic Gazette (Detroit, Mich.), April 15.**
- 59.—"Indications for the Use of Alcoholic Stimulants in Typhoid Fever. J. H. Musser.
- 60.—"Intestinal Antiseptics in Typhoid Fever. J. M. Anders.
- 61.—"Diet in Typhoid Fever. Frederick A. Packard.
- 62.—"Concerning the Substitutes for Enucleation of Eyes and Preparation of Stump after Complete Enucleation, with Description of Some of the Methods which have been Advocated and Practiced. G. E. de Schweinitz.
- 63.—"Case of Inoperable Cancer of Vagina Treated with Local Applications of Methyl Blue. H. R. Coston.
- 64.—"Antitoxic and Surgical Treatment of Diphtheritic Laryngitis. Joseph Mullen.
- Doctor's Magazine (Chicago), April and May.**
- 65.—"Bubonic Plague. N. Kunitoma.
- 66.—"Orlando, Florida, Winter Resort. James N. Butt.
- 67.—"Scope of U. S. Pharmacopoeia. George F. Butler.
- 68.—"Arizona as Health Resort. A. W. Craig.
- 69.—"Notes from My Journal. Wm. Rittenhouse.
- 70.—"Ernest Platner: Philosopher and Physician. Frank W. Jay.
- 71.—"Varieties, Symptoms, Diagnosis and Treatment of Neurasthenia. Rosalie M. Ladova.
- 72.—"Doctor's Life in Mexico. Chas. E. Husk.
- 73.—"Chronic Suppurative Otitomyelitis. T. A. Davis.
- Archives of Ophthalmology (N. Y.), March.**
- 74.—"Report of Case of Orbital Cavernoma Removed by Kronlein's Method with Preservation of Eyeball. Arnold H. Knapp.
- 75.—"Iritis, Result of Dental Irritation. B. L. Millikin.
- 76.—"Case of Contusion Injury of Eyeball, Followed by Fulminant Glaucoma: Recovery without Operation. H. L. Myers.
- 77.—"Contribution to Diagnosis, Symptomatology and Statistics of Congenital Color-Blindness. Wilibald A. Nagel.
- 78.—"Glaucoma after Neuro-Retinitis Albuminurica. Contribution to Pathologic Anatomy of Glaucoma. Eugene Wehrli.
- 79.—"I. Extreme Deviation Upward and Outward of Right Eye, with Nystagmus of Left. 2. Transparent Floor of Ulcer on Large Lencoma of Cornea. V. L. Rein.
- 80.—"Palpebral Reaction of Pupil (Galassi). H. Gifford.
- International Medical Magazine (N. Y.), April.**
- 81.—"Intestinal Antiseptics in Typhoid Fever. James M. Anders.
- 82.—"Variety in Diet of Typhoid Fever. Andrew H. Smith.
- 83.—"Treatment of Typhoid Fever. Frank Billings.
- 84.—"Illustrated Clinic in Dermatology. Wm. S. Gottheil.
- 85.—"Treatment of Typhoid Fever. David F. Woods.

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

Boston Medical and Surgical Journal, May 17.

- 1.—"Ideal Ration for an Army in the Tropics. (Continued.) E. L. Munson.
- 2.—"Study of the Nature and Significance of Symptoms in Disorders of the Stomach. Henry F. Hewes.
- 3.—"Case of Pernicious Vomiting of Pregnancy. E. L. Twombly.
- 4.—"Bicornate Uterus, with Twin Pregnancy; Abortion from One Horn. Charles H. Winn.
- 5.—"Case of Pernicious Vomiting of Pregnancy. H. S. Knight.
- 6.—"Question of Supernumerary Fallopian Tubes; With Specimens of Fallopian Tubes with Supernumerary Ovia. Agnes C. Vietor. **Medical Record (N. Y.), May 19.**
- 7.—"When Shall we Operate for Appendicitis? Joseph Wiener, Jr.
- 8.—"1. On a Peculiar Variety of Pathogenic Streptococci. 2. On a Peculiar Property Possessed by (at least some of) the Pathogenic Bacteria: Preliminary Communication. E. Libman.

New York Medical Journal, May 19.

- 9.—"Study of Blood in Cancer of Stomach. Thomas McCrae.
 - 10.—"Cystitis. (Concluded.) Henry H. Morton.
 - 11.—"Etiology of Autumnal Fever in New Orleans. (Continued.) H. A. Veazie.
 - 12.—"Genesis of Antitoxins. Justin D. Lisle.
 - 13.—"Physical Training in School and Home. (Continued.) Henry S. Pettit.
 - 14.—"Trachoma. Norburne B. Jenkins.
- Philadelphia Medical Journal, May 19.**
- 15.—"Common Colds: Their Cause, Prevention and Treatment. D. H. Bergery.
 - 16.—"Intestinal Indigestion and its Consequences. Wm. Henry Porter.
 - 17.—"Gastric Analysis. Albert Philip Franckl.
 - 18.—"Case of Acute Gonorrhoea by Mercurial Irrigations. Ferd. C. Valentine.
 - 19.—"Rupture of Plantaris Muscle. John H. Gibbon.
 - 20.—"Case of Chronic Pneumonia. Malcolm S. Connell.

Medical News (N. Y.), May 19.

- 21.—"Status of Gynecology in 1876 and 1900. Alex. J. C. Kene.
 - 22.—"The Pharmacopoeia of 1900. Horatio C. Wood.
 - 23.—"Treatment of Suppurative Otitis Media in Young Children. George L. Richards.
 - 24.—"Fibroid Tumor of Uterus; Enteropostitis; Retroversion; Ruptured Perineum-Operations; Recovery. Matthew D. Mann.
- Cincinnati Lancet-Clinic, May 19.**
- 25.—"Valedictory Address before the Miami Medical College. Joseph Eichberg.
 - 26.—"Ophthalmic Memoranda. David DeBeck.

Medical Review (St. Louis, Mo.), May 19.

- 27.—"Chairman's Address before the Southern Section of American Laryngological, Rhinological and Otolological Society. J. A. Stucky.
 - 28.—"Epidemic Cerebrospinal Meningitis: A Clinical and Bacteriological Study of Thirty-four Cases. R. B. H. Gradwohl.
- Archives of Pediatrics (N. Y.), May.**
- 29.—"Ambulatory and Hospital Management of Gastrointestinal Derangements of Infancy in Summer Months among the Poor of Large Cities. Henry Koplik.

American Gynecological and Obstetrical Journal (N. Y.), May.

- 86.—Personal Reminiscences Associated with Progress of Gynecology. (Continued.) Thos. Addis Emmet.
- 87.—Removal of Bladder as Preliminary to or Co-Incidental with Hysterectomy for Cancer in Order to Extend the Possibilities of Surgery for Malignant Disease of Pelvis. Franklin H. Martin.
- 88.—Fetal Malformation: Symelus. A. McDiarmid.
- 89.—Intraparturient Hemorrhage Considered in Relation to Ectopic Gestation. J. Clarence Webster.
- 90.—Malformation of Uterus. Frank T. Andrews.

Medical Review of Reviews (N. Y.), April 25.

- 91.—*Soluble Products of Fungus Parasite of Human Cancer and of Nectria Ditiissima (Parasite of Cancer of Trees); Physiologic and Therapeutic Action of Nectriannin. M. Bra and M. Monzoor.
- Cleveland Medical Gazette, May.**
- 92.—*Some of the Causes of Pain in Feet. C. A. Hamann.
 - 93.—*Report of Cases of Syphilis of the Viscera. Chas. F. Hoover.
 - 94.—*Plea for Examination of Male Genitals in Obscure Cases. Ferd. C. Valentini.
 - 95.—Case of Appendicitis in which Appendix was Not Found at Time of Operation or at Post-mortem. Charles B. Parker.

Fort Wayne Medical Journal—Magazine, April.

- 96.—Diagnosis of Smallpox. Carl Proegler.
- Canadian Journal of Medicine and Surgery (Toronto, Can.), May.**
- 97.—*Disease in Korea. O. R. Avison.
 - 98.—Doctor of the Future. Albert D. Watson.
 - 99.—Clinical Notes on Equinim. W. R. D. Blackwood.

St. Louis Medical and Surgical Journal, May.

- 100.—*On Ischemic Paralysis and Contractors of Muscles. Augustus C. Berens.
- 101.—Pathology and Diagnosis of Exophthalmic Goiter. Emory Laphear.
- 102.—Medical Treatment of Exophthalmic Goiter. Floyd Stewart.
- 103.—Treatment of Gonorrhoea in Females. Eugene C. Underwood.
- 104.—Regarding Pre-Columbian Leprosy. Phil H. Polakowsky.

Maryland Medical Journal (Baltimore), May.

- 105.—Cystitis Caused by Bacillus Pyocyaneus. Thomas R. Brown.
- 106.—Study of "Christian Science." Harry T. Marshall.
- 107.—Some Interesting Cases of Mastoiditis. H. O. Reik.
- 108.—Case of Measles, Scarlet Fever, Diphtheria, Otitis Media, Mastoiditis, etc. Herbert Harlan.

American Medical Compend (Toledo, Ohio), May.

- 109.—Address before the Toledo University Club. B. Becker.
- 110.—Examination of Blood in Disease. M. H. Bowman.
- 111.—Microchemistry. Park L. Myers.
- 112.—Acute Anterior Poliomyelitis. H. E. Smead.

Yale Medical Journal (New Haven, Conn.), May.

- 113.—Abortion before the Fourth Month. William S. Stone.
- 114.—*Smallpox in Porto Rico. S. H. Wadhams.
- 115.—*Sprains. S. H. Huntington.

Memphis Medical Monthly, May.

- 116.—Hereditiy. D. E. Nelson.
- 117.—Anatomy and Pathology of Rectal Valves. A. B. Cooke.
- 118.—Salient Points of Appendix Operations. R. E. Fort.
- 119.—Educating the Public in Care of Their Teeth. M. M. Halton.
- 120.—Surgical Case. Bettle Malone.

Virginia Medical Semi-Monthly (Richmond), April 27.

- 121.—True Function of State Medical Examining Board. Allard Meringer.
- 122.—Clinical Report of a Few Select Cases: 1. Gonorrhoeal Pneumonia; 2. Septic Lymphangitis of Thigh from Scratch on Foot; 3. Typhoid Toxemia in Malarial Fever; 4. Gunshot Wound of Abdomen; Recovery; with Remarks. John R. Hicks.
- 123.—Treatment of Constipation by Electricity. Francis B. Bishop.
- 124.—*Some Points of General Interest in Regard to Drug Addictions. C. C. Stockard.
- 125.—Pulmonary Tuberculosis: Its Prevention and Treatment. David R. Fly.
- 126.—Etiology and Diagnosis of Idiopathic Fevers. F. M. Brantly.
- 127.—Duty of Medical Profession and State to Christian Science Healers. P. R. Cortelyou.

AMERICAN.

1. **Army Ration in the Tropics.**—Munson continues his paper on the army ration, showing that in the tropics the needed amount of protein and nitrogen is less than that required in the more temperate climates. A vegetable diet is largely adopted by the tropical residents and it contains much less rich nitrogenous constituents than the vegetable foods indigenous to the temperate zone. It has been noticed that the resident whites in Java adapt their food so as to have a decided reduction of protein as well as fats, which are clearly not required for the support of animal heat to the same extent as in northern regions; an excess of nitrogenous foods is apt to overtax the liver, and it is evident that for the troops serving in the tropics these may be safely and advantageously reduced. It is preferably done at the expense of the meat component, which, besides protein, contains a considerable proportion of fat. It is not desirable to have a complete fall to the nitrogenous level of the tropical native, since the single

nutrient standard for the military service must contain the elements necessary to repair the loss incident to great physical efforts. Therefore, the protein allowed for the soldier in active service must be somewhat greater, and it is probable that the daily allowance of nitrogen can not safely be reduced below 16 grams, represented by 100 grams of protein, even though this amount is in considerable excess of the normal for the corresponding native class of the tropics. (See also abstract in THE JOURNAL of May 26, p. 1364.)

2. **Stomach Disorders.**—Hewes' reports the examination of a large number of cases of stomach disorders, and thinks that there are certain common symptoms which are present in practically all cases, including those in similar and opposite objective findings. This leads to the conclusion that all causes affecting the stomach will produce, as a part of the symptomatology of the function they bring about, certain common symptoms which are manifestations of the nature or habit of the stomach when disturbed, rather than manifestations of special reactions to special causes of disturbance. One of the most prominent of these symptoms is distress in the form of pain, nausea, burning sensations or a sense of weight or fullness, which may be the total symptomatology in many cases. Whether they are attended with hypoacidity or hyperacidity, the extent of this symptom-habit is somewhat hypothetical. In some we may assume that hyperesthesia exists, and in others it may be considered as the manifestation of the organ, working to perform its function under untoward conditions making a sort of stomach strain.

3. **Pernicious Vomiting of Pregnancy.**—Twombly reports a case of fatal vomiting of pregnancy, from which he draws the conclusion that the delay so generally advised is frequently extremely perilous. The indications for emptying the uterus are given by him as: 1. inability to retain any food taken by the month; 2. intolerance of rectal enemas; 3. more or less albuminuria; 4. progressive emaciation; 5. headache constant; 6. frequent and feeble pulse; 7. a certain apathy of the patient.

6. **Supernumerary Fallopian Tubes.**—The question of supernumerary Fallopian tubes is discussed by Victor, who takes as her text a case of supernumerary ostia. She advances as a theory for the origin of these anomalies that they are the reversion to a former avian condition.

7. **Appendicitis.**—Wiener calls attention to the dangers of general peritonitis from appendicitis as shown by the statistics of the Mt. Sinai Hospital for the last five years, and notices cases that are instructive in regard to the management of the latter. He does not believe in any fixed rule as to operation, but thinks it is important that the removal of the appendix should be performed if pain continues after an acute attack. He summarizes as follows: 1. Not every case of appendicitis should be operated on. 2. After a first mild attack, regulate the diet and salines. 3. After a first severe attack remove the appendix. 4. After two or more mild attacks, operate. 5. In an acute attack: a. Do not give opium nor morphin. b. Operate during an attack—1. if a chill manifests itself; 2. if the pain is severe enough to require morphin; 3. if the pulse is very small, rapid or irregular; 4. if there is persistent vomiting; 5. if there is persistent rigidity of the abdominal wall; 6. if an abscess can be felt; 7. if the general condition makes it imperative; 8. if in doubt. He says that it is a mistake to think that every case of appendicitis comes under these headings, though a great majority will be found to do so; and if every patient was operated on early the mortality would be reduced. This can be also be done by exercising care and discrimination in deciding when to operate.

8. **Peculiar Variety of Pathogenic Streptococci.**—Libman describes a form of streptococcus which differs from others in the fact that when grown on glucose-agar, the whole agar became whitened, although the growth was confined to the surface. The same happened with lactose-agar, but not with saccharose-agar. By growing the organism on the glucose-agar, to which some hydrocele fluid had been added, the medium became absolutely white. Anaerobically a similar result could be obtained with serum medium only. The whitening of the media seems to depend on the production of an acid—lactic or one closely allied—which precipitates the albumin of the media. The organism is pathogenic for mice, producing

gastro-enteric inflammation. While working on this organism, he tried to find out whether or not other bacteria would produce the same phenomena and to his surprise found that a large number of the pathogenic bacteria can precipitate albumin in the presence of glucose: that in a general way, the results seem to depend on the amount of acid produced, as pneumococci, alone, among those tested, did not have this property. Many bacteria also precipitate egg-albumin, and most of them, serum-albumin in the presence of .1 per cent. of glucose—the amount present in the normal blood. The saprophytes thus far tested, not including the proteus group, do not seem to have this quality. The growth of most of the bacteria used in the experiments, including pneumococci, on a medium consisting of glucose-agar to which some serum had been added, was far in excess of these growths on any other. These facts are important in regard to infections, especially in diabetes.

9. **Cancer of the Stomach.**—Osler and McCrae have examined the condition of the blood in 62 or more cases of cancer of the stomach and found that a blood count below 1,000,000 red blood-corpuscles is strongly in favor of pernicious anemia. While nucleated red blood-corpuscles are present in all very severe anemias, megaloblasts rarely occur in cancer of the stomach. Neither an increase in the leucocytes nor special variations in the form appear to be of any moment in the diagnosis of this condition and the presence or absence of digestion leucocytes is too uncertain to be of much assistance.

11. **Estivo-Autumnal Fever.**—Veazie discusses the origin, symptomatology and diagnosis of this form of malaria, which he thinks is frequently confounded with yellow fever. Differences in the symptoms exist, but they are unreliable, and only give presumptive evidence when this form of malaria assumes malignant features. The principal differences are that pain in the limbs is confined more to the knees and calves of the legs, that the expression of the face is that of pain and dullness instead of excited and anxious, as in yellow fever, and that the pupils are normal instead of contracted. The tongue is usually covered with a yellowish coating, while in yellow fever it is sometimes not coated at all. In autumnal fever the liver and spleen are tender, there is loss of appetite, and the bowels are sometimes loose; all of which symptoms are unlikely to be seen in yellow fever. Black vomit is common to both and the only reliable and safe course to pursue in the diagnosis is to find the parasite and give a few doses of quinin; then if it is absorbed, the temperature will fall almost to normal and the patient feel well.

12. **Antitoxins.**—The origin of antitoxins is treated by Lisle, who rejects the theory that they are derived from toxins. This theory receives its final blow from Madsen's investigations; he found diphtheria antitoxin in a perfectly healthy horse which had never been inoculated. It must therefore be a product of the animal body, but how produced is a mystery.

13. **Physical Training in School and at Home.**—The importance of physical education is discussed by Pettit, who points out that the systematic training in the gymnasiums is adapted particularly to naturally weak, puny individuals, who are not able to enter into the games of their playmates. He describes a method of taking measurements, as a guide to treatment and a means of furnishing statistics as to the ideal man; he does not believe, however, in using it systematically, on account of the time it takes, and because the physical director can tell by observation where a person is lacking.

15. **Common Colds.**—From a study of the subject, Bergy believes that common colds are caused by infection of the mucous membrane of the upper respiratory tract by pathogenic bacteria, which in neglected cases may invade the system and lead to serious results; and that consequently these diseases should never be regarded as trivial. So far no specific bacteria have been isolated; the ordinary pus germs and those producing pneumonia are specially mentioned as probably the most common. The etiologic factors of these diseases are such as endanger the health of every person coming in contact with the sufferer, and these disorders should be regarded as infectious, even though they become chronic. Recognizing this fact, he thinks that it is important to prevent, as far as possible, the association of the well with those having colds, especially among children in public schools.

16. **Intestinal Indigestion.**—Porter describes the oxidation processes in the system, explaining the production of hemoglobin and lecithin in the physiologic economy. He also calls attention to the fact that the presence of certain kinds of bacterial life is probably essential to normal digestion and reports the experiments of Schottelius, in opposition to those of Nuttall and Thierfelder, as demonstrating this, but to determine what kinds are the essential ones would require a very extensive study. It is fortunate that Nature has allowed a wide margin of indulgence in the food products taken, because otherwise it would be impossible to secure anything like a fair standard of health. The chief causes of intestinal indigestion are of two kinds: 1, the presence of abnormal micro-organisms and putrefactive changes produced by their presence; 2, taking more food than can be properly managed and that of faulty composition. To this may be added, as secondary causes, the environments, exercise, mental state, nervous condition, climatic influence, etc. Under ordinary circumstances, however, the normal micro-organisms and the digestive secretions will naturally counteract the pathologic ones. A well-regulated mixed diet is one that contains a due proportion of all the essential elements of both the animal and vegetable kingdoms. No one of these, however, is perfectly adjusted; milk comes the nearest to being the universal food, but it has its defects as such. Vegetables require a large bulk to secure the absorption of a proper amount of proteid substances, and their advantage is in containing a high percentage of nucleo-albumin as compared with the animal foods. The liberal use of fruits may excite abnormal fermentation, as many of them are eaten before ripe, and in their raw state are often laden with micro-organisms, and in a state of partial decomposition. The meat diet is defective in the glucose compounds, but when used in its true sense, including all animal products, furnishes everything in the required proportion except the nucleo-albumin. A vegetable diet, when used accurately, excludes the use of any animal product, even in cooking, and this makes it almost impossible to get a properly proportioned combination. (See also abstract in THE JOURNAL of May 26, ¶ 6, p. 1362.)

17. **Gastric Analysis.**—Francin's paper gives the details of the methods of gastric analysis.

18. **Gunorrhea.**—Valentine reports a case treated by mercural irrigation in which the gonococci disappeared definitely on the second day, and, after the fifth irrigation the discharge was reduced from a free yellow flow to a pinhead drop, by one irrigation of 5 per cent. mercural. The urine became clear after the first irrigation, while the burning produced by the mercural continued for three days after each irrigation, and occurred to a slight degree after several subsequent ones, and was associated in most instances with frequent imperious urination. He believes that we can not succeed in doing what quacks claim they can, cure a case in three or even eight days, but that this is an advance on previous methods.

19. **Rupture of the Plantaris Muscle.**—The case reported is that of a man who, while playing tennis, was suddenly seized with a pain in the calf of the left leg, followed by weakness, pain and great difficulty in walking. The case typically illustrates the symptoms of rupture of the plantaris muscle—sudden pain above the middle of the calf, where the muscle joins its tendon, inability to walk except with parts held stiff and toes everted, swelling, and greater pain and ecchymosis later. The treatment is immediate rest and moderate compression, with massage and an elastic bandage later; it is not necessary to put the leg up in a plaster dressing, unless some of the larger muscles are injured.

—22. This paper has appeared elsewhere: See THE JOURNAL of May 19, title 14, p. 1248.

23. **Suppurative Otitis Media in Young Children.**—The frequency of suppuration of the middle ear in young children is noted by Richards, and his method of treating the condition detailed. If the suppuration has lasted for some time and the discharge is foul and the caries well marked, he syringes with warm, sterile water, or with a solution of 1 to 5000 bichlorid until all the debris is removed, when the canal is dried and the ear inspected. If there is much destruction of the tympanic membrane, he applies peroxid of hydrogen on a cotton pledget,

and after again drying, a saturated solution of boric acid in from 40 to 90 per cent. of alcohol—in young children seldom over 50 per cent. He next dusts the whole surface lightly with powdered boric acid, or some such drying powder, and then stops the ear with a narrow, small wick of iodoform, or other antiseptic gauze, taking care that it reaches the bottom of the canal. If the process is more acute and the perforation small, neither the peroxid of hydrogen, the boric-acid alcohol, nor the powder is used, but simply a thorough cleansing through an opening into the drum membrane that is large enough to secure drainage, with the insertion of gauze wick or cotton pledgets that are frequently changed; if the opening is not large enough, he incises at the posterior inferior quadrant of the drum membrane. This completes the office treatment; and for the home treatment, which is equally important, he instructs the mother or attendant in regard to the anatomy, and fully explains how to use the cotton pledget, which is to be inserted at a depth that will reach the bottom of the canal without doing injury, and clean it; this to be continued until the tip of the pledget is no longer moist. Then she is to take as much of the powder ordered as will go on the tip of a small penknife, and blow it into the ear through a bit of tubing. If the suppuration is a good-sized one and considerable caries is present he frequently has boric-acid alcohol drops used at home also. Finally he instructs how to insert a small narrow pledget tip in the ear and leave it there, changing it from one to three times daily, then he sees the child again in from three to seven days. This method he finds decidedly successful.

26. **Ophthalmic Memoranda.**—DeBeek describes cases of orbital abscess in la grippe, uræmic blindness during pregnancy, rheumatic effusion into the vitreous, rheumatic iritis, retrobulbar neuritis after a burn, a peculiar case of fracture of the orbital floor and also a case of ring scotoma.

28. See abstract in THE JOURNAL of Dec. 23, 1899, p. 1616.

29. **Management of Summer Complaint in Infants.**—Koplik believes that in a great majority of gastro-intestinal diseases, infection is the keynote, and that too little attention has been given to the examination in this regard. Its prognostic value is very great, if we know that streptococci are absent. He thinks that much good is done by carrying patients to the doctor, for the sick child is better on the street than in its home, as it gets better air; and that much attention should be given to the food. In his clinic he goes so far as to furnish water in bottles of 6 oz. capacity, necessary for the preparation of simple albumin water when the child can not take milk. He believes that hospitals are not so favorable for these cases as camping out or cottage treatment, because of the disadvantages of crowding a large number of children together in a ward or sanitarium, especially if a case of any contagious disease is discovered.

30. **Incubators.**—Voorhees discusses the care of premature infants in incubators, the best form of which he thinks is that of M. Lion, which can be disinfected rapidly and is well ventilated. He thinks the infant should be kept in the incubator until it has reached the development of full term, or longer if necessary. Its napkins should be changed from three to four times a day, only often enough for cleanliness. The feeding should be carefully adapted to the child, being gradually increased until it is every hour taking from 6 grams to an ounce of a sugar solution, with breast milk added. One great danger of the incubator is infection, as it is a breeder or germ carrier and should be regularly disinfected. The paper gives the statistics of 106 incubator infants, 77 of whom survived the fourth day. Not counting those who died in a few hours, they were able to save 66 per cent. of 6½ months children, 71 per cent. of the 7 months, 89 per cent. of the 7½ and 91 per cent. of the 8 months.

33. **Sexual Impulse.**—Ellis, after noticing the various theories, concludes that we are now in a better position to estimate and define the contents of this impulse. He says that there are, as Moll has indicated, two constituents, but instead of being unrelated or nearly so, they are so intimately connected as to form two distinct stages in the same process: A first stage, in which images, desires and ideals grow up within the mind, while the organism generally is charged with energy and the sexual apparatus congested with blood; and a sec-

ond stage in which the sexual apparatus is discharged amid profound sexual excitement, followed by deep organic relief. The first process creates, or at all events intensifies, the tension which the second relieves. It seems best to call the first impulse in the process the instinct of tumescence, and the second the instinct of detumescence. The first, taking on usually a more active form in the male, has the double object of bringing the male himself into the condition in which discharge becomes imperative, and at the same time arousing in the female a similar ardent state of emotional excitement and sexual turbulence. The second instinct has the object, directly, of discharging the tension thus produced, and indirectly of effecting the act by which the race is propagated.

44. **Suppurating Diseases of Temporal Bone.**—Burnett reports a number of cases of mastoiditis, Bezold's abscess, general necrosis of the temporal bone, etc., in whites and negroes. Some years ago he reported on the rarity of dry catarrh and suppuration among the negroes, though the latter is frequent among the children; they are almost without exception badly nourished and scrofulous, though not always tuberculous.

47. **Rinne and Gellé Tests.**—Brühl discusses the value of these tests; the former, which is well-known, consists in the observation of the phenomenon that the sound of the tuning-fork can be heard, if held in front of the ear, even after it can no longer be heard when placed on the upper incisor teeth. The Gellé test consists in putting the sounding tuning-fork on one of the cranial bones, while the external auditory canal is compressed; if the intensity of the sound becomes diminished, the stapes is movable, but if the sound is unchanged, it is immobile. The conclusions which Brühl draws are: If the Rinne test is positive, then the Gellé is also unexceptionally positive, and the impaired hearing is due to nervous affections. If the Rinne test is absolutely or totally negative or up to C, the Gellé test is unexceptionally negative, and the impaired hearing is due to stapes ankylosis. If the Rinne test is negative below or up to the C limit, and positive above it, then the Gellé test decides whether or not a stapes ankylosis exists.

51.—See abstract in THE JOURNAL of April 14, p. 935.

52.—Ibid.

53.—Ibid.

54.—Ibid.

55.—Ibid.

56.—Ibid.

59. **Alcoholic Stimulants in Typhoid.**—The use of stimulants in typhoid is indicated by three conditions; toxæmia, exhaustion and the accidents of perforation, hemorrhage, etc. In the ataxic form, alcoholic stimulants should not be used, but in the dynamic form, especially in what is called the "typhoid state," they may be of value. They should be used with moderation, as it is better to give too little rather than too much, but the best guide is the renal secretion; if it increases by stimulation, such treatment is necessary. In typhoid septicæmia alcohol may be given more liberally, and similarly in exhaustion. Perforation requires the same stimulation needed in surgical shock from other causes, but it should be proceeded with gradually. In hemorrhage, gentle and persistent, not free, stimulation, with opium added to the alcoholic is best. In convalescence stimulants are often useful.

60.—See abstract below, ¶ 81.

61. **Diet in Typhoid.**—Packard reviews the recent literature on the more liberal diet of typhoid fever and notices especially the paper of Bushuyev. He holds that while we may doubt the ability of the patient with the fever to assimilate many of the articles allowed by him, we have facts enough to warrant, if not compel, greater liberality than has formerly been allowed.

62. **Enucleation of Eye.**—De Schweinitz reviews the different methods used and the substitutes for enucleation, that of Ernest Hall, the evisceration of Huizinga, Mules' operation, also Frost's, etc., and in conclusion holds that the operation of enucleation in many instances can not be banished from ophthalmology; and that while some of these methods furnish better cosmetic results when they are successful, there is reason to believe that with improvement in the artificial eyes and the technique in preparation of the stump, an equal im-

provement may be expected, after so-called simple enucleation.

75. **Iritis from Dental Irritation.**—Milliken reports a case of iritis apparently directly connected with decayed teeth, and relieved by their treatment. He thinks there is no question as to the causal relation of the dental disorder to the iritis.

77. **Congenital Color-Blindness.**—Nagel gives an elaborate discussion of certain facts in regard to tests for color-blindness that are based on his own experience, as he is green-blind. He believes that the green test should be retained as the first one, and in a general test of a large number of persons should be considered the decisive one in diagnosing whether or not the color sense is normal, and that the purple test can not be neglected, since it is most convenient for distinguishing red from green-blind. In tests individually or in a small number, it is best to also use other ones. He notices the various methods that have been advised; those of Daas, Stilling, Pflueger's contrast method and the new pseudo-isochromatic color charts devised by himself, consisting of rings of dots arranged with confusion colors, etc. He also describes an apparatus for testing by means of colored glasses, that is convenient in testing large numbers of persons. He says that it is unjust to consider as color-blind all those who make mistakes with the worsted tests and to refuse them employment in the marine and railway service; and that Holmgren's test is not a reliable one for determining the ability of a person to recognize colored flags or lights. In his opinion tests for this purpose should deal with the color sense of the fovea alone, or the immediately adjacent central portion of the retina. His own test for this purpose is done with a blackened disc, 10 cm. in diameter, with a ring of perforations 1 mm. in diameter, covered with bits of glass of various colors and illuminated by a burner behind. This is viewed from a distance of 1 or 1.5 m., and as the different colors are shown the person is required to name them. In a series of cases in which the tests diagnosed as determined by Holmgren's method did not agree with that of his color apparatus and charts, this method of luminous points always confirmed his diagnosis.

80. **Palpebral Reaction.**—Gifford remarks on the pupillary reaction described by him in 1895 and later discovered by Westphal and Piltz, the latter of whom credits it to Wundt. According to Gifford, this is incorrect and due to a misunderstanding of Wundt's language. However, in regard to the claim of Mingazzini for Galassi as the prior discoverer, he admits that Galassi described it, not only before he did, but before he had even observed it. The point of importance in which Galassi did not anticipate him is that, although it is a reaction from the facial, it does not depend on a reaction of all the fibers of the orbicularis, but chiefly or entirely on the action of those which move the lids or perhaps the upper lid alone.

81. **Intestinal Antisepsis in Typhoid.**—While typhoid fever is no more primarily an intestinal disease than is small-pox a cutaneous one, Anders concedes that in the majority of cases the principal seat of infection is in the intestinal tract, hence the *rationale* of a certain amount of intestinal antisepsis in its treatment. The principal indication for the use of antiseptics is the meteorism due to decomposition in the *prima via*. The normal antiseptic fluids are not present in due proportion and he thinks that the possibility of over-feeding may have something to do with the condition. Assuming milk to be the principal diet, he advises the use of HCl in small doses after each feeding, with a view to supplementing defective gastric secretion, and in robust patients, the use of calomel during the first few days of fever. For a number of years he has been in the habit of giving intestinal antiseptics throughout typhoid, except in the light cases, as they render the dejecta less offensive; and while we can not hope to destroy the infection, as it has generally reached the circulation and adjacent organs, it is probable that the intestinal disorder is in a measure dependent on the disorder of the function which is the indirect effect of typhoid infection; and a rational indication is to neutralize or eliminate the toxic substances from the intestinal canal. The free use of water is one valuable method. In some cases he gives a mild laxative in diarrheal typhoid fever to carry off the decomposing food residue. The bowel antiseptic which he has used for many years is salol, the

average dose 3 gr. every three hours; where marked distension of the bowel is present white turpentine is preferred, in doses of 3 to 5 gr. every three or four hours. For the constipation sometimes present, he has found a soap-suds enema every second day the best remedy, and in a few cases has practiced intestinal irrigation, but this is not to be thought of when the principal lesions are in the small intestines with moderate tympanites. Often, however, the ulcerative process is largely confined to the colon, and there is marked tympanites due to distension and active diarrhea sometimes dysenteric, then irrigation judiciously and cautiously carried out sweeps from the bowel decomposing material and toxic products. The solution employed must be warmed and gently introduced at a low pressure. He prefers a solution of salicylic acid not exceeding .5 per cent., or mercuric acid not over 1 in 6000. In bad cases the irrigations should be practiced every four hours, but ordinarily three times a day will do.

82. **Diet in Typhoid.**—Smith thinks that a greater variety of food in small quantities is better than a larger quantity of a single article. The aim should be to give the minimum food that will sustain the patient, not the maximum amount that he will take, and the diet which has stood the test of considerable experience includes—with milk—broths, soft-boiled eggs, junket, custard, the soft part of raw oysters, milk toast, scraped chicken, scraped beef, chicken and rice boiled to a jelly, sago, tapioca, corn-starch, and animal jellies. From these an agreeable variety can be arranged and any article that disagrees eliminated: any rise in temperature should lead to careful scrutiny, including the diet. Without distension it is more likely to be caused by fecal absorption and requires a cathartic, but if repeated and accompanied by sweating, it may indicate infection through ulceration. When milk is used persistently it can be better adapted to some patients by lessening the percentage of casein, which is accomplished by letting the milk stand in a cool place for five or six hours and then pouring off the upper half or two-thirds and filling up the bulk with water. This is useful when specks of undigested curd appear in the movements. If there should be acid or rancid risings from the stomach, showing the presence of too much fat, a portion of the cream should be skimmed off. At any time the monotony of the diet can be relieved by adding coffee, which is a valuable heart stimulant, to the milk.

83. **Treatment of Typhoid.**—Billings insists on the general management including disinfection, a good nurse to look after the diet and carry out the physician's directions, and medication, which is not so essential except in the use of proper drugs to meet the emergencies that may arise. He believes that it is good practice to begin with a cathartic, and that the fever is best treated with water by the Brand method. For constipation, he used enemata every two days but should have no hesitancy in using simple saline laxatives. He considers strychnia good for heart weakness, the bromids for delirium, and $\frac{1}{4}$ gr. of morphin hypodermically in case of hemorrhage from the bowels repeated every three or four hours if needed, and normal salt solution with chlorid of calcium. He says that ergot is of no use, and that if perforation should occur the patient should be turned over to the surgeon.

91. **Cancer.**—Bra and Mongour have isolated and studied the *Nectria ditissima* or parasite of true cancer, and have obtained an extract from it which they call nectrianin that appears in the form of a yellowish or brownish liquid and causes by its injection various phenomena in man and in animals. If the animal is healthy, repeated doses—5 c.c. each—several times a week produce no special effects, but if cancerous tumors exist, the temperature is raised in two or three hours from 1 to 3 degrees. If the dose is increased, this fever is accompanied by chills, cardiac palpitation, acceleration of pulse, headache and thirst, and terminates at the end of some hours by polyuria and profound sleep. It seems to have vaccinal properties, as animals thus inoculated and afterward infected with cultures have never produced experimental tumors; the results have simply been abscesses. The therapeutic action of the drug has been studied by Mongour on cancerous patients, through hypodermic injections, which produced decided relief of symptoms, though no decided amelioration of the general health, or increase of weight. In spite of the slight toxicity of

the drug employed—it requires from 30 to 35 grams per kilo of rabbit to kill—they never used more than 4 c.c., injected daily. They conclude that it has the effect of producing improvement and relieving the aggravating symptoms, and that it may therefore be an efficacious treatment. However, to be effective it requires continuance, and has not so far led to anything like a cure or arrest of the disease.

92.—See abstract in *THE JOURNAL* of March 24, p. 750.

93. **Syphilis of the Viscera.**—Hoover reports 6 cases of visceral syphilis, the diagnosis of which was confirmed under antisyphilitic treatment. The first he regards as syphilis of the aorta, the second as that of the pulmonary artery because of the hemoptysis and evidences of disease of the myocardium, and the third apparently pulmonary syphilis, while the others were syphilis of the liver and spleen.

94. **Examination of Male Genitals.**—The neglect of examination of the male genitals is in striking contrast with the course usually adopted with females in obscure disorders, and Valentine suggests its importance. He mentions the rheumatic pains about the hip-joint, connected with trouble in the seminal vesicles, and says that many cases of suicide are probably connected with thins class of disorders. The urethroscopie should be more commonly employed, as it is now within the possibilities of the general practitioner.

97. **Diseases of Korea.**—According to Avison, the Koreans are unwholesome in their methods of life and not especially careful in regard to cleanliness. Sanitation is almost unknown, and the drinking water almost inevitably defiled. The staple crop is rice of the lowland variety, and malaria goes with it and is the cause of many other diseases. Outside of malaria typhoid and relapsing fevers are the most frequent; tuberculosis plays great havoc, every form having been found, but it certainly does not come from the use of milk. Venereal diseases are prevalent, leprosy has gained a foothold in the southern part, and also a peculiar disease somewhat suggestive of tuberculosis, but in which he has not been able to find the tubercle bacilli. Beri-beri is mostly confined to the Japanese residents; smallpox is common, but vaccination is coming into favor; scarlet fever and diphtheria are not prevalent, but measles and whooping-cough are. Cholera is occasionally epidemic, while dysentery is one of the chief plagues of the country and not unfrequently followed by hepatic abscess. Cataract is common, also much blindness, due to the prevalence of smallpox. The Korean medicine is the Chinese medicine and has its general demerits.

100. **Ischemic Paralysis of Muscles.**—Bernays calls especial attention to the paralysis of the muscles, due to the damage produced by cutting off the circulation by tight bandaging, etc., and quotes from Leser, Volkmann and others in regard to it. He thinks the recognition of the condition will prevent this in the future, and that the recent attention which has been called to this subject by Leser and others is timely and important.

114. **Smallpox in Porto Rico.**—Wadhams reports the methods and results of vaccination in Porto Rico. This has already been done by Groff, but Wadhams gives more details, and states among other facts that, while the tuberculin reaction was obtained in a number of animals used for preparing the virus, not one was found to be tuberculous.

115. **Sprains.**—Huntington believes that in all, except slight sprains, there is some injury to the capsule of the joint that ranges from the giving way of a few fibers, to perhaps a laceration of great extent and hemorrhage into its cavity; and that the swelling so prominent in all serious sprains is probably due to such extravasation, as the muscles rarely escape injury, and the tendons and their sheaths are often also involved. He believes that permanent injury is often due to this rather than to the trouble in the joint itself. Since it is impossible to demonstrate how far patients are injured in sprains, he thinks that the secondary effects may be more serious than is commonly supposed. The old idea that diseases of the spine, hip, etc., start in sprains is perhaps more true than is now thought. Sometimes dislocation and fractures of bones have been mistaken for sprains, and while the fracture of a styloid process or malleolus is only a complication, it should not be overlooked.

When in doubt as to the existence of injury, one should give an anesthetic if necessary and thoroughly examine the parts. While Nature usually mends these injuries, in some cases a low vitality and constitutional defects may cause them to produce serious results. The old method of fomenting and applying liniments, is very unsatisfactory. As long as the blood continues to flow into the joint the trouble is increasing, and our first object should be to check hemorrhage of the torn vessels; this is best done by applying a firm even pressure by strapping with strips of adhesive plaster that immediately brings most gratifying results. If the conformation of the sprained joint forbids the use of plaster strips, bandages of muslin, not rubber, may be used, carefully padding all hollows so that the pressure is exerted on the soft parts and not on the bony prominences. He believes in hot water applications as a precedent to this dressing, that splints are rarely required, and that passive motion should be begun early and applied only in the natural directions, as there is then no danger of stretching, or displacing the parts. Electricity, massage and stimulating liniments may be used later if necessary, after the active symptoms have subsided. If motion seems permanently impaired from adhesions, the best plan is to give an anesthetic and break them down, so as to have a fresh sprain, and by care avoid the development of further trouble.

117.—See abstract in *THE JOURNAL* of May 12, ¶ 11, p. 1184.

124.—This paper is editorially considered in this week's *JOURNAL*.

FOREIGN.

British Medical Journal, May 12.

Plague in the Lower Animals. FRANK G. CLEMON.—A large number of animals, including not only the vertebrates but some of the lower forms, have been proved liable to infection by plague. Among the mammals, monkeys have been observed on at least three separate occasions to have sickened and died under natural conditions, and each time the germ has been discovered bacteriologically. Under artificial conditions, they have shown themselves very susceptible, but there is not much proof that they aid in spreading the disease to any considerable extent. The chief agents in this direction are the rodents, especially the rats, which suffer in every epidemic. Their symptoms vary as in man, and occur under their natural conditions of life or can be produced artificially. They may become infected from the soil, which under certain circumstances may contain the virus of plague, and there is a possibility of their obtaining the germ from infected grain, while it is also probable that they may contract the disease from other animals, though there is no positive proof of this. Rats are so ubiquitous and omnivorous that the chances of their infection are manifold. There is good reason to believe that plague can be spread from rat to rat by means of insects, especially fleas, and it must be admitted that they can and do suffer from plague under natural conditions, and that they are capable of diffusing infection and transmitting it to man; but the extent to which they are responsible for the general diffusion of the disease is uncertain. Their habits of traveling in public conveyances, ships, etc., make it a matter of special importance to guard against them. There is not much evidence that mice suffer to any great extent under natural conditions. Squirrels have been known to have it, though instances of their contracting the disease are rare, and the part they take in its spread must be very small. Other animals that are liable to suffer are the marmots. These are thought to have spread the disease in east Mongolia. Guinea-pigs and rabbits are susceptible in the laboratory, but are not known to have contracted the disease under natural conditions.

Researches Into Nature and Action of Snake Venom. ROBERT H. ELLIOT.—The writer has experimented with snake venom, which does not seem to be effective when taken by the mouth, but is found to be very quickly absorbed when introduced directly into the tissues. He drew out a portion of the small gut through an abdominal incision, establishing an artificial anus, and after the parts had healed, the cobra venom, dissolved in milk, was injected into the lower disconnected portion of the gut, the hepatic, pancreatic and biliary secretions being cut off from this section. The animal died.

and the result shows that the venom could be absorbed through the intestines, though not so rapidly as by way of the subcutaneous tissue. Professor Fraser has shown that the bile is to some extent a protective against the venom, but Elliot's experiments show that this is not alone thus active; he followed up Fraser's suggestion that pancreatic juice may also neutralize it and found that trypsin is capable of reducing very materially the lethal properties of cobra venom, when kept at a temperature of 100 F. The above-shown properties of trypsin explain why the venom fails to kill when swallowed, even after the protective influence of bile has been excluded, though it would certainly kill if given in large enough quantities when the bile and pancreatic secretions are excluded from the area of the intestines which has to deal with the venom. The above experiments were made on rabbits, but he found that he could not produce symptoms of poisoning by injecting a large dose in the rectum of a dog. He also found that in rabbits injection into the peritoneum killed much more rapidly than that into the subcutaneous tissue, and that feeding animals on venom produced a certain immunity to it when injected subcutaneously and he surmises that when taken by the mouth it passed in some form, probably an altered one, into the general circulation. It is, he thinks, more than likely that the mongoose owes its immunity to the habit of eating the heads of serpents that it kills.

The Lancet, May 12.

Ptosis of Liver and "Floating Lobe." FREDERICK TREVES.—The author defines floating liver and points out the distinction between general ptosis and the "floating lobe," in which a portion of the right liver becomes projected downward in the form of a large tongue-like appendage. He describes the anatomy of suspension of the liver, the manner of its downfall, and the deformity which follows. The liver becomes more flattened out, the anterior or inferior border of the right side seems to be drawn downward and, with the gland adjacent to it, much thinned. In many cases a nearly transverse groove is found across the anterior surface of the elongated part of the right lobe. It may sometimes be a real constriction almost causing amputation. As to the cause, there is little that is precise in our knowledge. The symptoms are the physical signs of tumor, various nervous disturbances, dyspepsia, discomfort in the abdomen, dragging from the back, sometimes vertigo and perhaps jaundice, as claimed by Faure. He gives the method of examination in detail. The "floating lobe" is not always easily diagnosed; in most cases this is only ascertained in the post-mortem, and it is sometimes mistaken for movable kidney. The medical management of liver ptosis consists merely in the treatment of symptoms. Belts may be of value. The operative treatment consists in various methods of suturing. Treves does not favor either amputation or suturing of the "floating lobe." The indication for its treatment does not go beyond that of the treatment of distended gall-bladder, with which this deformity is often associated. In complete ptosis much may be done by carefully applied and substantial support, and something more elaborate than a belt may be necessary. A ponderous organ like the liver can not be sufficiently supported by a few isolated sutures of silk or catgut, and operation is needed only in extreme cases.

Diagnosis and Prognosis in One Hundred Cases of Double Optic Neuritis with Headache. R. T. WILLIAMSON AND EDWARD ROBERTS.—The authors call attention to the class of cases in which double optic neuritis occurs, sometimes with vomiting and other symptoms, but which afterward clear up without any apparent cause. Sometimes the general symptoms disappear and leave blindness. He suggests the probability of a tumor becoming latent, or sometimes distention of the ventricles of the brain as a cause for this condition. In cases of double optic neuritis we should watch the urine and cardiovascular system for nephritis, look out for lead poisoning, chlorosis, etc., and the ear should be examined for otitis. If all these can be excluded, the probable diagnosis of brain tumor is justifiable, but it may sometimes, as in cases mentioned, not be supported by the outcome.

The Practitioner (London), May.

Distinguishing Features of Rheumatoid Arthritis, Gout

and Rheumatism. ARTHUR P. LUFF.—The differential diagnosis of arthritis and rheumatism is discussed by Luff. He thinks that many cases of chronic rheumatism of the joints are not such, but are rheumatoid arthritis or gout. Rheumatism itself does not necessarily manifest itself as a joint disorder and he thinks the treatment with salicylate of soda is a good diagnostic point. If it has succeeded, the case is rheumatism, if not, one of the other forms should be suspected. The distinction between rheumatism and gout is somewhat difficult, but the following are the distinguishing characteristics. Rheumatoid arthritis is most commonly found in females, gout in males. The former occurs mostly among the poor and ill-nourished, and especially under conditions of depressed health, prolonged anxiety and exposure. Gout occurs among the well nourished and well-to-do. Arthritis is improved by good diet, the reverse is the case with gout. Gout usually begins in the feet, the other generally in one of the joints, usually the thumb. In arthritis there is no obvious swelling at first and no marked redness and little pain. The insidious nature of the attack is one of its worst features. Gout begins suddenly, with serious pain, redness and swelling. There is a lack of symmetry. Gout no doubt is due to the accumulation of uric acid, but as regards arthritis there is a great difference of opinion. The author combats the nervous theory and believes that it is an infectious disease. He quotes the findings of Bamatyne, Wohlmann, Schneider and others in support of this view. It is not common to have gout and rheumatoid arthritis associated. Rheumatism certainly predisposes to rheumatoid arthritis.

Some Clinical Varieties of Osteo Arthritis. ARCHIBALD E. GARROD.—Multiple rheumatoid arthritis falls into three main clinical categories. In young patients the disease often tends to advance with great rapidity so that in a few months it may cause widespread deformity. In older patients its progress is more gradual, and, though many articulations may be implicated, the appearance of the joint differs from that of the young and the destruction is somewhat different. There are usually definite bony enlargements: the carpometacarpal joints of the thumb are especially liable to be affected, and not infrequently are the first of the hard joints to suffer. The more acute cases which occur in younger patients may be divided into two forms—the fusiform and the crippling. In the former, the fusiform enlargement appears to be chiefly due to swelling of the capsules with synovial effusion. The terminal joints of the finger usually escape and the brunt of the disease is borne by the metacarpophalangeal and first row of interphalangeal joints. The vertebral column is usually early involved, stiffness of the neck is common, as also is stiffness of the temporomaxillary joints, though it is seldom serious, but it is often of diagnostic importance. In the larger joints there is a similar swelling, and the knees, wrists, and ankles are rapidly involved, muscular wasting adds to the deformity. The third form or crippling variety is usually met with in early adult life, muscular wasting is rapid and conspicuous swelling of the joints is not so marked but sharp osteophytic growths are usually felt on the ends of the bones. Some joints become permanently flexed, while all are rendered almost completely immobile. How far these clinical varieties indicate pathologic distinctions is hard to answer, and there is much to be learned in regard to them. As regards treatment, the nodular cases and crippling variety show little tendency to be helped. In the fusiform variety some good can be done if treatment is steadily persisted in. The drugs given should be tonic rather than depressant in their action, and the diet should be limited only by the patient's digestive powers. Mineral baths are mentioned as occasionally of value.

Varied Forms of Rheumatoid Arthritis, with Illustrative Cases. WM. ARMSTRONG.—The points worthy of consideration, according to Armstrong, are given as follows: "1. The more clearly these cases approach the gouty or rheumatic type the more favorable is the prognosis. 2. The more the neural factor comes into evidence, the more refractory they are to treatment. 3. It is necessary to look for every possible source of reflex irritation. 4. Whatever reflex irritation is present, the condition of the central spinal nervous system

should not be lost sight of. 5. However strong the patient may appear to be, supporting rather than lowering treatment should be adopted. 6. In arthritis the dietary should consist of more butcher's meat, less starch, and no sugar; this is especially necessary where gastric atony or duodenal fermentation are present or where the excretion of uric acid is decidedly below the normal. 7. This form of dietary requires careful watching, and exact application to the individual. 8. Electric baths are valuable in the majority of cases; the 'sinusoidal' if much neuritis be present, if it is necessary to quicken metabolism, or to stimulate excretion; the 'constant,' if a soothing effect upon the joints is required. 9. There is the greatest difference between electricity given in the baths and in the dry; in the former case the patient is wrapped in what is practically an electrode of water and the whole nervous system is quickly brought under influence."

Osteo-Arthritis, or Rheumatoid Arthritis, Its Pathology and Treatment. GILBERT A. BANNATYNE.—The condition distinguished under the head of arthritis deformans, etc., presents itself in three well-marked types: 1, an acute poly-articular disease; 2, a chronic articular one of primary and secondary forms; and 3, a monarticular disease. The first of these occurs in the young, accompanied with fever which finally subsides and there is a thickening of the synovial membrane and muscular atrophy. The bones may be softened, but with no outgrowths or lipping. In the chronic form we have the hardening and thickening of the joints with cartilaginous outgrowths and deposits. In the third group, which generally occurs in men as a result of injury, there is an affection of one or two joints, with bony absorption and destruction of the cartilages, limited motion, and generally slow progressive local degeneration. The theories are discussed and the author favors that of toxic infection from bacilli for the first form. The bacterial theory is the only one which he thinks will rationally explain it. The second he is inclined to look on as of bacterial origin with loss of virulence as compared with the acute form. In the third form he would say there is a pure degeneration of the joint structure. As regards treatment we can do little directly to neutralize toxins, but proper attention to diet, clothing, exercise, baths, massage, etc., will be of value. As for drugs, guaiacol, salicylates, etc., are of value. Methyl salicylate and guaiacol painted on the joints seem to give good results.

Bulletin de la Soc. Med. (Paris), May 3.

Effect of Persisting Nasopharyngeal Lesions After La Grippe. M. FAURE.—The lesions so common in the nasopharynx after la grippe may induce rheumatic manifestations persisting for months, but vanishing at once as soon as the lesion is cured. Faure has treated twenty patients with this syndrome, relieving the general symptoms with antistreptococcal serum, which seems to rapidly suppress the virulence of the streptococcus toxins and hence the general symptoms, but has little effect on the local process. This he treats with resorcin in oil and inhalations of mentholized alcohol. These small, ignored infections in the nasal fossæ or their annexes may be the cause of many rheumatic, neurasthenic or neuropathic accidents to which some other etiology has been ascribed.

Presse Medicale (Paris), May 2, 5 and 6.

Incipient Coxalgia. P. DESFOSSES.—Whenever a child complains of pain in the hip or knee, or limps intermittently, evidences of coxalgia should be sought. If less than 1 year old, when lifted by the axillæ the legs of a normal child will kick around, but if one of the joints is affected that limb will hang straight and still or in slight flexion. When undressed and lying flat on his back, the limbs of a normal child are extended straight, but a limb with incipient coxalgia is always flexed, the knee raised, and if the limb is pressed down straight, the trunk will curve upward in pronounced lordosis, allowing the passage of the hand between the lumbar region and the bed. If the sound leg is flexed on the pelvis, a normal child allows the other limb to remain extended straight, but the coxalgic invariably flexes the affected limb, elevating the knee. Palpation will also show atrophy of the muscles. Pains can also be induced by pressure on the

base of the triangle of Scarpa, and also in this same spot by pressure at a distance, tapping on the trochanter, the heel or the front of the knee. Attempt at abduction of the thigh is also painful. For treatment, Desfosses recommends a large plaster cast, immobilizing the extremity in a good position, but allowing the child to be up and about on crutches, the foot raised above the ground by a high extension shoe on the sound foot. He puts on a tricot vest, the legs in the sleeves, and for a child of 7, winds eight plastered bands 5 meters in length and 6 cm. wide, from ankle to axilla, around the entire affected extremity and the trunk. Pure air, sunshine and good food, "including cod-liver oil," will complete the cure and promptly arrest an incipient lesion.

The Permanent Urethral Sound. F. GUYON.—The permanent sound is a therapeutic measure of the utmost importance. In febrile urinary infection and in prostatic or urethral hemorrhages it promptly and positively arrests the accidents. The reappearance of temperature indicates infectious localizations elsewhere and is thus an important guide to the surgeon. Guyon adds that the benefit derived is permanent, even after the sound is discarded except for occasional use.

Mitral Dwarfs. A. GILBERT AND F. RATHERY.—A special clinical type is described, characterized by pronounced mitral stenosis without functional symptoms, and multiple dystrophic disturbances. They propose for it the name of "mitral nanism," as the small size of the subjects is the most striking characteristic. In three typical observations the height varied from 4 ft. 5, to 4 ft. 11 inches, in great contrast to the size of the parents. This dwarfishness is accompanied by a specific facies: round-shouldered, wrinkled, the subjects appear much older than their age, or fresh, vivacious, perennially young. They are loquacious, speaking rapidly and stammering, with subnormal intelligence and queer, original, inconsequent ideas. All are easily frightened and great cowards; some apathetic and lazy. In certain cases cardiac epilepsy has been noted, also hysteria or chlorosis. The writers emphasize this mitral hysteria and mitral chlorosis. Albuminuria is occasionally observed and gastric disturbances are frequent, but there is little disturbance in the genital sphere. Various malformations are noted: the lobe of the ear is "glued down;" the axis of the nose one-sided; the sternum may be deformed; one shoulder less developed than the other; supplementary fingers, congenital amputations, prognathism and general hypoplasia. The mitral lesion remains latent and does not make trouble even with pregnancy and repeated attacks of acute articular rheumatism. This absolute lack of cardiac disturbances in these small-sized persons with an unmistakable mitral stenosis is interesting to compare with the serious and tenacious cardiac accidents that sometimes occur in large-framed persons with commencing senile involution without the slightest trace of a valvular affection to be discovered. The writers are making a special study of this condition for a future report. The freedom from cardiac accidents is most complete in cases of pure mitral stenosis and complete "nanism." If the latter is less pronounced, and insufficiency complicates the stenosis, then functional symptoms become apparent. Hemiplegia may be the first manifestation of the lesion, with or without aphasia, both usually incomplete and transient, but liable to recur.

Semaine Medicale (Paris), May 5 and 9.

Arteriovenous Aneurysm of Aorta. RENDU.—An engraver 47 years old, quietly at work, in his usual good health, was suddenly seized with intense pain in the precordial region and an almost immediate development of an extensive edema of the neck and face, of a bluish tint, with threatening asphyxia. This condition improved but slightly during the week; collateral circulation then became established and varices appeared. The symptoms indicated an aneurysm complicated by obliteration of the vena cava by a thrombus or escape of the arterial blood into the latter vein through some fissure. The autopsy confirmed the latter supposition: a perforation the size of a bean was found at the base of the large aneurysmal sac, communicating with the inferior vena cava by its anterior wall. There were no clots in the vein nor in the venous trunks debouching in it.

Action of Iodoform on Normal Tissues. V. CORNIL and COUDRAY.—Injection of iodoform oil in the peritoneum of dogs and rabbits induced inflammation similar to that produced by traumatism or any aseptic irritating agent. There was first a tendency to necrosis, followed by invasion of leucocytes, and a phase of nutritional superactivity and formation of endothelial and plasma cells. Its therapeutic effect is evidently due to the liberation of nascent iodine by the action of fats or of the microbes or their toxins. In spite of the deluge of new antiseptics, iodine still holds the first rank. Mikulicz recommends painting the field of operation with tincture of iodine before an operation and sterilizing the finger nails by dipping them also in the tincture. Rydygier advises wiping the hands with iodoformed gauze dipped in sublimate solution, as the final step in their asepsis. K. Brunner, in his large work on the treatment of wounds, published in 1898, stated that a saturated solution of iodine in 50 per cent. alcohol is the best disinfectant known. Coudray treats deep fistulae very successfully by introducing iodoform in suspension in ethyl chlorid, which boils at 10 C. Slightly heating the "ipsileu" containing the mixture, it emerges in the form of a gas, carrying the iodoform with it and depositing the latter in an even layer throughout the entire cavity—a most effective method of local application in all wounds and cavities.

Deutsche Medicinische Wochenschrift (Leipsic), May 10.

Diagnosis of Gastric Hyperacidity. L. SCHUELER.—The condition known as "masked hyperacidity" is not so difficult to diagnose as generally supposed, if with a characteristic clinical picture the stomach-contents possess a certain number of properties which we are accustomed to attribute to a hyperacid gastric juice, even in the absence of considerable amounts of free hydrochloric acid and total acidity. The three chief elements in the diagnosis are the specific behavior of starch digestion, the comparatively large amount of the contents and the low specific gravity, after an Ewald test-meal. The digestion of starch continues in the stomach by the action of the saliva ferment for a certain length of time—the "stadium amyolyticum"—in normal conditions, but with abnormally rapid and large secretion of acid, this stage is materially shortened, and amidulin will be found to excess in the stomach-contents, with a corresponding absence of dextrorotatory substances. The quantity of the contents varies normally from 75 to 305 c.c., average 180, but the average in forty hyperacid patients examined at Senator's clinic was 210 c.c. A specific gravity below 1010 scarcely ever occurs except with hyperacidity, hypersecretion or gas fermentation. Above 1020 suggests hypoauidity. The freezing-point varies from .33 to .58 in normal conditions, but with hyperacidity .27 and .25 have been noted. Seventeen observations are tabulated, all with normal amounts of total acidity, and yet with unmistakable clinical evidences of hyperacidity. We quote the findings in one case an hour after the test-meal: amount of stomach-contents, 315 c.c.; specific gravity of filtered contents, 1010; total acidity, .36; free hydrochloric acid, 22 degrees; Trommer's test positive; polarization, 1 per cent. dextrorotatory substances; blue-violet reaction to iodine; lowering of freezing-point .27.

Acute Dilatation of Heart and Cor Mobile. A. HOFMANN.—The liability to error in diagnosing dilatation of the heart, from an abnormally high diaphragm and more especially from a movable heart, is emphasized in this article.

Epileptic Seizures and Uric Acid. CARO.—A young man in good health, except for occasional epileptic seizures, was examined to determine the connection between the seizures and the elimination of uric acid. The curves show that the amount of uric acid in the urine fell progressively from .104 per cent. to .059 in seven days, and then abruptly rose again. Two severe seizures occurred the day it reached its lowest point. The amount of urine varied in an almost parallel curve during the sixteen days of the test.

Muenchener Medicinische Wochenschrift, April 24, May 1 and 8.

Hystereuryasis. DECKART.—Kuestner makes frequent use of the colpurynter in cases requiring artificial delivery, but he inserts the bag in the uterus and therefore insists on calling

it hystereurynter. This communication from his clinic tabulates the detail of forty-two cases in which he has applied it during the last six years. He especially recommends it for placenta previa. In his nineteen cases twelve of the seventeen living children were born alive, losing only 30 per cent., while the latest published statistics with Braxton-Hicks version show a mortality of 52 to 56 per cent. The results were most gratifying in every case as far as the mother was concerned, except one patient in extreme anemia, who died in half an hour after commencement of delivery. The membranes must be penetrated to allow the bag to enter and press the projecting flap of the placenta against the wall of the uterus. If the entire placenta projects, it has to be bored through with the finger or a blunt instrument to admit the bag. This entails the possibility of injury to the fetus, but this remote contingency should not be allowed to counterbalance the manifest advantages of the procedure, which is an invaluable means of inducing vigorous contractions of the uterus at any time during delivery. The physiologic mechanism of the birth-act is imitated as far as possible. The amount of boiled water introduced should correspond to the size of the head of the fetus; about 600 c.c. representing a circumference of 32 cm. Withdrawing a portion of the fluid sometimes accomplishes better results than the full amount. The average interval before the expulsion of the bag was 3½ hours. The hystereurynter should be kept clean and ready for use in a 1/1000 solution of sublimate, which does not seem to injure the bag, although the danger of bursting must be borne in mind. It has occurred in the writer's experience three times.

Ethyl Chlorid Narcosis. G. LÖTHEISEN.—"Visitors to our Innsbruck clinic have all been amazed at the rapid onset of anesthesia, the faultless course of the narcosis and the early complete awakening, with our method of ethyl chlorid narcosis." There has been one death known in the 2550 narcoses on record with it (Kocher), but in the extensive experience of the writer no inconveniences nor dangers have ever been observed, even with protracted narcosis in cases of lung and heart troubles. The subcutaneous injection of heroinum muriaticum is sometimes combined with the kelene narcosis in case of alcoholics. He uses the Breuer mask and restricts the amount to 1 to 2 gm. a minute, administering it very gradually from a small-mouthed vial, and if the patient becomes restless, waiting until no ethyl chlorid can be smelled at the expiration valve. If agitation continues he removes the mask at once and rubs the face with a cold wet cloth.

Fatty Necrosis with Affections of the Pancreas. M. B. SCHMIDT.—The autopsy of a man dying fifty-eight hours after having had the trunk crushed between two cars presented unmistakable evidence that the juice had been forced out of the pancreas and induced fatty necrosis of the adjacent tissues, an experience as convincing as a laboratory experiment, in explaining the etiology of fatty necrosis with affections of the pancreas.

Treatment of Anthrax. A. STRUBELL.—The writer confirms the great benefits derived in gangrenous anthrax from local injections of a 3 per cent. solution of carbolic acid, increasing from 12 to 24 c.c. a day, combined with hot cataplasms, 63 C., renewed every ten minutes night and day. The virulent germs found in the gangrenous focus at first were all destroyed by this treatment in six hours, and no further cultures could be derived. No carboloria was noted, nor other inconvenience.

Improved Inhaler. K. KLEIN.—The advantage of inhaling filtered, warmed, and possibly medicated air is obtained with the little respirator devised by the writer, which is also adapted for the use of persons who breathe through the mouth at night, and for workmen in industrial establishments. It is made entirely of aluminum wire and netting, and is thus extremely light and flexible, fitting like a cup over the mouth and nose, and fastened, like spectacles, by wires over the ears.

Asses' Milk for Infants. H. V. RANKE.—Asses' milk is a suitable, easily digested and most nourishing food for infants during the first few months, says v. Ranke, from his own experience and that of many other well-known practitioners. The relative proportions of the ingredients is a most

important factor in infant feeding, and in this respect asses' very closely resembles human milk.

Wiener Klinische Wochenschrift, April 15, 22, 20 and May 6.

Different Positions of Jaw as Aid to Surgeon. M. WASERMANN.—The accessibility of the retromaxillary fossa is very much increased when the lower jaw is wide open and consequently the surgeon will find it a great assistance, in all operations in this region, to have the lower jaw held down as low as possible, thus pivoting forward the upper end. The writer usually incises down to the bone first, and then has the jaw opened to the farthest point and held by an assistant, to complete the operation with increased facility of access. The lower jaw can also be pushed considerably to one side, the mouth closed, and this will be found an aid to Salzer's resection of the trigeminus. By pushing it laterally and forward, Sonnenburg's resection of the alveolar nerves can be more easily accomplished.

Blood-Pressure with Digitalis. E. V. CZYHLARZ.—Tests of the action of digitalis, with Gaertner's tonometer, showed that the usual amount of *inf. fol. digitalis* administered to patients with heart troubles failed to increase the blood-pressure in persons with normal circulation. After establishing this fact, Czyhlarz further demonstrated that in normal individuals the amount of urine did not vary, while in cases of uncompensated heart troubles it is much increased. Czyhlarz ascribes this lack of diuretics to the corresponding lack of increase in the blood-pressure.

Movements of Intrathoracic Tumors in Swallowing. G. HOLZKNECHT.—Upward movement of an aneurysm as the patient swallows, indicates firm adhesion to the trachea and consequent danger of perforation into the latter and death from hemoptysis. The tumor in the case reported was ascribed to the innominate artery.

Diagnosis of Ischias. E. SUCHARIPA.—There seems to be a certain interrelation between the sciatic and lower abdominal regions, as sufficiently strong stimulus applied to the great sciatic is transmitted, probably by way of the spinal cord, to the cutaneous nerves of the lower abdomen and thigh. This interrelated system can probably be excited in other ways as, for instance, by the influence of irritation of the corresponding segment of the spinal cord proceeding from some internal organ or region of the body, aside from the above-mentioned route. Compression of the sciatic would induce violent radiating pains in the thigh, if this assumption is correct, even with a sound sciatic. In case of affection of some internal organ, connected like the sciatic, with the same segment of the spinal cord, abnormal excitability of the organ on account of its lesion might co-operate so that even slight compression of the sciatic from the periphery might produce a response in the nature of a violent paroxysm of pain in the thigh. It is sometimes very difficult to decide between intercostal neuralgia and lumbago. But if, on rectal examination, the lumbosacral plexus is found especially sensitive with radiating pains into the thigh, we have reason to assume from the data cited above that it is a case of intercostal neuralgia and not of lumbago.

Dysmenorrhæa Membranacea. KOLLMANN.—It seems evident, from the research described, that dysmenorrhæa membranacea has no connection with pregnancy and abortion and does not occasion sterility, while it may heal spontaneously. Besides establishing these facts, Kollmann announces that the dysmenorrhæic membranes have nothing to do with inflammation of the uterine mucous membrane; that the fibrin membranes should be considered true dysmenorrhæic membranes; that they are easily confounded with blood clots or the products of a croupous inflammation, but that in reality they are the product of a necrosis induced by hemorrhage and exudation into the tissues.

Gazzetta degli Ospedali (Milan), April 15, 20, 22 and May 7.

Prophylaxis of Malaria with Insect Repellers. C. FERMI. A series of four hundred tests with various insect-repelling substances sprinkled on the clothes or smeared on the skin, resulted in the discouraging conclusion that no substance is yet known which will positively repel gnats and mosquitoes for one to two hours. The immunity enjoyed by certain per-

sons, however, encourages the hope that some substance will yet be found which will answer the purpose, and Fermi is continuing the research on which he has been engaged since 1898.

Urogenital Tuberculosis. C. POSNER.—At the request of the organizers of the Antituberculosis Congress, Posner reviewed the present status of our knowledge in regard to the route of infection of urogenital tuberculosis. His study is based on 2300 autopsies in Virchow's institute. He noted tuberculosis in 380 and renal tuberculosis in 115, i. e., in 5 per cent. of all the subjects and in more than 30 per cent. of the tuberculous. The kidney was affected in 89 out of 331 cases of pulmonary tuberculosis. In the 380 tuberculous subjects, 5 were less than 4 years old. The bladder had been invaded 12 times in the 115 cases in which renal tuberculosis was noted: the genital organs 8 times in men, and 9 in women. In the latter there was always concomitant tuberculous peritonitis. In the rare cases in which we are unable to discern a primary focus elsewhere during life, it may exist, notwithstanding, and the urogenital infection occur though the blood or lymphatic system as usual. This view is confirmed by the manifest connection between tuberculous orchitis and some preceding local irritation, traumatic or gonorrhœal. There is a possibility that tuberculous infection may be propagated through sexual relations, as traces of tubercle bacilli have been found in the sperma of tuberculous patients with sound genital organs. When there are symptoms of genital tuberculosis, abstinence from sexual relations is necessary as a matter of course. The bacillus may possibly penetrate into the blood without leaving traces of its passage. [Posner was offered the chair of urinary affections, newly created at Rome, but declined. Ed.]

Tuberculosis Antitoxins in Serum. RONCAGLIOLLO.—Numerous tests on persons in health or with various diseases showed that the human serum in health possesses means of defense against the toxins of tuberculosis, averaging 1000 to 4000 antitoxin units. This antitoxic power attains its highest intensity in persons addicted to the use of alcohol, reaching 10,000 units in one subject, a man of 52, with chronic alcoholism and hemorrhagic pachymeningitis. This fact seems to substantiate the popular belief in the efficacy of alcohol in the cure of tuberculosis and infectious diseases in general. Serum of dogs, rabbits, guinea-pigs, fowls, etc., has no antitoxic power, but that of cows, goats, etc., possesses it in a varying degree. Further research established that this antitoxic power in man diminishes with defective nourishment and debility; also that injection of even a large amount of Maragliano's antitoxin at one time did not alter the amount of antitoxin in the blood to an appreciable degree. But repeated injections of a small amount—1 to 2 c.c.—raised the antitoxic power in a month or two to 10,000 antitoxin units per cubic centimeter, far more than the number of units actually introduced into the organism by the serotherapy.

Action of Tuberculosis Toxins on Lung Tissue. F. BADANO.—Endopulmonary injections of soluble toxins without bacilli, produced in the dog a catarrhal bronchopulmonary process tending to spontaneous and complete recovery. In the rabbit, on the other hand, similar injections entailed cellular infiltration and formation of nodules with all the characteristics of young tubercles except giant cells. The process progressed to necrosis and complete caseous transformation of the zone of lung tissue involved.

Enzymes in Animal Kingdom. FERMI.—A proteolytic enzyme was found constantly by Fermi in the intestines of mammals, reptiles and fishes, also in the larvae of insects, but full-grown insects, which feed by sucking, and parasitic worms, which probably obtain their nourishment by endosmosis of predigested substances, did not contain any proteolytic enzyme.

Early Diagnosis of Tuberculosis. PETRUSCHKY.—In inoculating animals to differentiate a dubious case of tuberculosis, mixed infection can usually be prevented by treating the material with a 1 per cent. solution of phenic acid, which kills the diplococcus lanceolatus, etc., but has no effect on the tubercle bacillus. To send material by mail, Petruschky recommends a metal box lined with filter-paper moistened

with the same solution. The box is wrapped in parchment paper and enclosed in a wooden box, when it can be sent safely to bacteriologic headquarters for examination. He dwells on the fact that Cornet, Brieger, Neufeld and B. Fraenkel are all advocates of the harmlessness and efficacy of the tuberculin test, but all agree that it should never be made while there is fever. Petruschky recommends it not only for the test but also for treatment, proclaiming that the early differentiation possible with this test, and immediate treatment with the tuberculin, is the most perfect and least expensive means at our command in the struggle against tuberculosis.

Cure of Malarial Hypertrophied Spleen. A. MORI.—Parona has reported four cases in which the spleen was restored to normal size in three and very much reduced in the fourth by the systematic hypodermic injection of a gram of a solution of iodine and potassium iodide in glycerin, with a small amount of guaiacol added. Mariano has reported three cases thus cured, and Mori now announces that he has obtained most excellent results with these injections in sixteen cases, combined with general antimalarial treatment. Twenty injections were sufficient to reduce the spleen to nearly normal size in acute cases, and sixty in the chronic.

Prophylaxis of Tuberculosis on Railroads. G. SANARELLI.—“The railroads must take measures to guarantee the public against the dangers of infectious diseases and especially against contagion from tuberculosis in the cars. Compulsory disinfection of the cars set apart for the conveyance of contagious diseases should therefore be imposed. Notices forbidding expectoration on the floor should be posted not only in depots but also in all the passenger cars. The waiting rooms and the majority of the compartments in the passenger and sleeping cars should be provided with cuspidors partly filled with antiseptic fluid, and smoking allowed. In other compartments, without cuspidors, spitting and smoking should be alike prohibited under penalty. The railroad companies should be invited to adopt an efficient system of ventilation. The floor coverings should be linoleum or rubber, or, if of wood, should be smooth and impermeable. The materials used for draperies and upholstery should be impermeable and capable of being sponged off. Cars should be so arranged that they can be thoroughly cleaned every day.” [The Italian railroads are now testing a couple of cars constructed to conform in every particular to these requirements. Ed.]

Predisposition to Tuberculosis. DE GIOVANNI.—Twenty-five years have passed since De Giovanni began his study of this subject and he has elaborated a formula permitting the early recognition of the candidates for tuberculosis as he calls them. This recognition is one of the most valuable prophylactic measures at the command of the physician, and wise counsel and appropriate measures at the different stages of development may transform a candidate otherwise inevitably doomed, into a robust and useful member of society. The organism should be examined from two separate points of view: 1, the evolution of the human race from lower types, seeking the points in the physique, where there is defective organization, which thus constitute a special morbid tendency; 2, the morphology of the physical structure, the morphologic correlation between the different organs, seeking the defective development of certain organs and especially of the circulatory system, which has a tendency to exaggerate the primary anomaly. Unequal development of the circulatory system is the principal element in this predisposition. The heart is smaller than normal in the majority of candidates, and there is always disproportion between the development of the ventricles; the left one is invariably smaller than normal, both relatively and absolutely, and the right, larger. The individual morphologic variety depends on the various proportions of other anatomic and physiologic moments, such as the comparative thickness of the walls, size of the cavities and the energy of the nervous system. In consequence of this abnormal development, the left heart inadequately fulfills its function, with consequent greater hydraulic pressure in the vessels entering it, also in the lungs and finally in the right heart, which proportionately increases in size. The importance of these hydraulic facts to the lungs becomes evi-

dent as we study their mechanism from the start, when the functional relations of extraterrestrial life are being established, and trace their influence on the respiratory function and the lymphatic circulation during growth. The arteries are always small in persons predisposed to pulmonary phthisis, and their defective development is intimately connected with the defective development of the heart and thorax. The veins are more numerous and larger or more conspicuous by their bluish color, especially in the regions over the visceral cavities in which the morbid predisposition is located, usually the thorax. He also includes the predominance of the lymphatic system as an element in the predisposition, as is generally recognized.

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PAPERS READ AT THE ANNUAL MEETING.
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NEWS.
Our readers are requested to send us items of news of a medical nature, also marked copies of local newspapers containing matters of interest to members of the medical profession. We shall be glad to know the name of the sender in every instance.

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Articles are accepted for publication with the understanding that they are contributed solely to this journal, unless a definite understanding be had to the contrary.

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THE PRESIDENT'S ADDRESS.

DELIVERED AT THE FIFTY-FIRST ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT ATLANTIC CITY, N. J. JUNE 5-8, 1900.

BY W. W. KEEN, M.D., LL.D.
PHILADELPHIA.

Two duties seem to me to devolve on the President of the AMERICAN MEDICAL ASSOCIATION in his annual address: 1, to consider the condition of the ASSOCIATION, with any suggestions that may be made for improvement, and 2, to take up some subject of professional interest which may be properly considered before the chief representative medical body of the United States.

In pursuance of the former, it is a great pleasure to me to congratulate the ASSOCIATION on its marked prosperity. The AMERICAN MEDICAL ASSOCIATION now numbers about 9000 members. A large number, truly, but when we consider that there are over 100,000 regular physicians in the United States, it is strange and anomalous that this ASSOCIATION should comprise less than one in ten of these physicians. I call your attention to this important matter in order that every member of the ASSOCIATION during the coming year shall try at least to induce another fellow physician to join the ASSOCIATION and thus double its influence for good. THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

One of the most important functions of the ASSOCIATION is the publication of THE JOURNAL. Here, again, I have only words of encouragement. The number of subscribers to THE JOURNAL is about 15,000—a number, undoubtedly, in excess of that of any other medical journal in the United States, and I suspect only surpassed by the *British Medical Journal*, which publishes over 21,000 copies weekly. But it is not only on the number of subscribers that the ASSOCIATION is to be congratulated, but especially on the quality of the papers published in THE JOURNAL. It is, however, not only idle words of vague praise that we should bestow on the trustees and the able editor of THE JOURNAL, but we should recognize that never before in the history of THE JOURNAL has it been so well conducted, its pages so filled with admirable original articles and its influence for everything that makes for the best in medicine so potent as at present.

THE RUSH MONUMENT FUND.

Dr. Albert C. Gihon resigned at the last meeting as the Chairman of the Rush Monument Committee. It seemed to me that his successor should be a physician rather than a surgeon, and from Dr. Rush's native city. Accordingly, I appointed Dr. James C. Wilson to the vacancy.

The Committee reports actually in hand a little over \$11,000. This sum is too large to go backward, and it is not enough to go forward. In the hands of various state organizations, and possibly others, there are several thousands of dollars, I believe, which have been pledged to this fund. I recommend that action be taken, looking to the early completion of the fund. All the more is this suitable, when we remember that there will be erected in the city of Washington this year, or early next, a costly monument to Hahnemann, for which Congress has given a site.

THE ANTIVIVISECTION BILL.

Early in the session of the present Congress, there was introduced into the Senate, bill No. 34, commonly called the "antivivisection bill." The immense detriment that this would work both to man and animals was so evident that I deemed it my duty as your President to take the most active steps to prevent its becoming a law. I sent out letters to the president and secretary of every state medical society in the country, to prominent members of the profession in every state, to a large number of influential men in the profession all over the country, and to college presidents, and others who could direct public opinion, and by all means in my power strove to arouse a public sentiment against the bill. I wish to bear public testimony to the enthusiasm and the unanimity with which my appeals were received. The profession in every part of the country responded nobly and exercised a wide and, I believe, an enduring influence on senators and representatives in establishing and confirming their judgment as to the inhumanity of any such bill.

In response to a communication addressed to the chairman of the Senate Committee on the District of Columbia, a hearing was granted in Washington before the subcommittee having charge of the bill, at which both the friends and the opponents of the measure were present and presented their arguments. Among those who spoke against the bill were Drs. William H. Welch,¹ Henry P. Bowditch, H. A. Hare, William Osler, Mary Putnam Jacobi, George M. Kober, Howard A. Kelly, D. E. Salmon, Brig.-Gen. George M. Sternberg, surgeon-general U. S. A., Bishop Lawrence, of Massachusetts, and myself. Certainly a more able array of speakers could hardly have been obtained, and I wish in your name, and in the name of humanity, to thank them for their self-sacrificing help.

Although in two prior Congresses the Committee on the District of Columbia had unanimously reported in favor of the bill, I am happy to say to you that the present committee has so far changed its views that I have reason to believe that the bill will either slumber in committee or be reported negatively. While it is to be hoped that this is the end of the present bill, it is by

1. THE JOURNAL May 19 and 26.

no means certain that it is the end of the agitation of those who are so blind to the progress of medicine and, therefore, to the dictates of humanity, but, I have no doubt that the effort will be renewed at some future time. If this should take place, I commend to the then President of the AMERICAN MEDICAL ASSOCIATION the duty of opposing the bill with all the vigor which he can use.

Among the important contributions to antivivisection literature evoked by this discussion, none is more valuable than the letter addressed to the Chairman of the Committee on the District of Columbia, in opposition to the bill, by President Eliot, of Harvard College, which I venture to read to you:

HARVARD UNIVERSITY.

CAMBRIDGE, March 19, 1900.

Dear Sir:—I observe that a new bill on the subject of vivisection has been introduced into the Senate, bill No. 34. This bill is a slight improvement on its predecessor, but is still very objectionable. I beg leave to state very briefly the objection to all such legislation.

1. To interfere with or retard the progress of medical discovery is an inhuman thing. Within fifteen years medical research has made rapid progress, almost exclusively through the use of the lower animals, and what such research has done for the diagnosis and treatment of diphtheria it can probably do in time for tuberculosis, erysipelas, cerebrospinal meningitis, and cancer, to name only four horrible scourges of mankind which are known to be of germ origin.

2. The human race makes use of animals without the smallest compunction as articles of food and as laborers. It kills them, confines them, gilds them, and interferes in all manner of ways with their natural lives. The liberty we take with the animal creation in using utterly insignificant numbers of them for scientific researches is infinitesimal compared with the other liberties we take with animals, and it is that use of animals from which the human race has most to hope.

3. The few medical investigators can not properly be supervised or inspected or controlled by any of the ordinary processes of Government supervision. Neither can they properly be licensed, because there is no competent supervising or licensing body. The Government may properly license a plumber, because it can provide the proper examination boards for plumbers; it can properly license young men to practice medicine, because it can provide the proper examination for that profession, and these boards can testify to the fitness of candidates, but the Government can not provide any board of officials competent to testify to the fitness of the medical investigator.

4. The advocates of antivivisection laws consider themselves more humane and merciful than the opponents of such laws. To my thinking these unthinking advocates are really cruel to their own race. How many cats or guinea-pigs would you or I sacrifice to save the life of our child or to win a chance of saving the life of our child? The diphtheria-antitoxin has already saved the lives of many thousands of human beings, yet it is produced through a moderate amount of inconvenience and suffering inflicted on horses and through the sacrifice of a moderate number of guinea-pigs. Who are the merciful people—the few physicians who superintend the making of the antitoxin and make sure of its quality or the people who cry out against the infliction of any suffering on animals on behalf of mankind?

It is, of course, possible to legislate against an improper use of vivisection. For instance, it should not be allowed in secondary schools or before college classes for purposes of demonstration only; but any attempt to interfere with the necessary processes of medical investigation is, in my judgment, in the highest degree inexpedient, and is fundamentally inhuman.

Very truly yours,

C. W. ELIOT.

HON. JAMES McMILLAN.

Coming from such a high source, I can not but feel that it will carry conviction, both by the force of its statements and the lucidity of its logic. I call your especial attention to the ground taken by President Eliot, that it is the antivivisectionists who are inhumane and cruel to the last degree, because they would condemn both man and animals to suffering and death by impeding the progress of medical science.

MEMBERS OF THE AMERICAN MEDICAL ASSOCIATION.

By its constitution, the members of the ASSOCIATION consist: 1, of delegates; 2, of members by invitation; 3, of permanent members, and 4, of members by application. I wish to call your attention to the desirability of limiting the members by invitation to foreign delegates, eminent foreigners whom the Sections may desire to invite to read papers and take part in the discussion, to members of the medical staff of the United States Army, Navy and Marine-Hospital Service, and to the occasional visiting physicians from our possessions outside of the limits of the United States proper. It has been the custom in most of the Sections to invite medical men of distinction who are not members of the ASSOCIATION to read papers before the Sections. Some of these gentlemen have been even openly hostile to the ASSOCIATION, and yet year after year have had the courtesies of the ASSOCIATION extended to them. They have availed themselves of these privileges and advantages and yet not only privately, but sometimes publicly, have expressed their hostility to the ASSOCIATION.

It seems to me that the time has now come when this practice should cease. Membership in the ASSOCIATION is open to every American, and any one who does not choose to avail himself of the privileges and advantages of membership by joining the ASSOCIATION should be debarred from them.

During the present year I have sent a courteous circular letter to each person so invited by the various Sections, but not a member of the ASSOCIATION, enclosing a form of application and inviting him to become a member of the ASSOCIATION. I am glad to say that a very large number have availed themselves of the opportunity of doing so. The Constitution prescribes that the members by invitation shall be invited by "the meeting after an introduction from and being vouched for by at least three of the members present or three of the absent permanent members;" and in the order of business, the third order is the "reception of members by invitation." No such formality, it seems to me, is desirable. The extending of such an invitation to distinguished foreigners and others that I have suggested may well be left in the hands of the Sections, with the exception, it might be, occasionally of persons of unusual distinction.

SECTION ON PATHOLOGY AND THE PATHOLOGIC EXHIBIT.

One of the important features of the AMERICAN MEDICAL ASSOCIATION is to promote the scientific side of medicine. It has seemed to me that the ASSOCIATION was not fulfilling its duty to scientific medicine in one particular. There is scarcely a more important branch of modern medicine than pathology and bacteriology, and yet no Section for the consideration of these subjects is provided. Although it was not authorized by the ASSOCIATION, I had such confidence in your intelligent and hearty co-operation that I ventured to ask a number of gentlemen to act as a provisional or unofficial committee to organize a Section on Pathology and Bacteriology, under the chairmanship of Dr. Ludwig

Hektoen, of Chicago. These gentlemen have ably performed their task and they have presented a most attractive program. You will be asked officially to authorize the formation of such a Section, and I can not doubt what your action will be.

In connection with this, I also appointed a provisional or unofficial committee on a pathologic exhibit, in charge of a committee, of which Dr. Joseph Stokes, Moorestown, N. J., is the chairman. Dr. Frank B. Wynn, Indianapolis, Ind., has acted as secretary of both committees. I but ask you to visit the adjoining exhibit to be convinced of how faithfully and intelligently this committee has performed its task. They communicated with a large number of medical schools, museums, and individuals and have met with a most hearty response from all sides. They did not deem it wise that the exhibit should be either by states or by institutions, lest there should be aroused a rivalry, which would in some sense smack of egotism and lead to future disaster; but asked all to subordinate their individual and institutional interests to the broad general interests of science.

THE ANNUAL EXHIBIT.

The management of the annual exhibit is a matter of considerable importance to the ASSOCIATION. The exhibit is an important financial aid to the local committee which has charge of the meeting of the Association.

So far as I know there are no rules governing the charges, the classes of exhibits, or other regulations by which this committee may be guided. Each new committee is a law unto itself. It has seemed to me that if there could be a permanent committee on the annual exhibit, this would be of great advantage, especially if the committee were made up, in part at least, of those who had had experience with former exhibits. It would seem to be desirable that each year the chairman or some other member of the committee on the last exhibit should be added to the committee to replace one of the earlier members, who would retire. I recommend, therefore, that such a committee, to have charge of the exhibit at the annual meeting, be appointed this year, this committee to have power to add to its numbers and nominate a chairman who shall reside in the place at which the succeeding meeting is to be held, and as many other local members of the committee as may be deemed necessary to carry on the work. The general committee could formulate general rules governing the exhibit and the local committee could carry out the details.

THE SECTIONS.

The work of the Sections has been, heretofore, in many respects admirably done. The tendency to correlate the papers which are presented under certain specific heads, and to select one or more important topics for consideration, inviting a few distinguished speakers to open the debate, which is then thrown open to all, has been marked in the last few years. The advantages of such a course are so obvious that I trust the chairmen, secretaries and executive committees of the various Sections will hereafter strive for even more important debates and more important results than have been thus far achieved. Room should certainly be reserved for a certain number of volunteer papers, but to allow the major part of the time of the Sections to be taken up by a mass of heterogeneous papers on unrelated topics would be a great misfortune.

The policy of THE JOURNAL, also, in connection with

the various papers read before the Sections is an important one. Papers vary greatly in their merit and importance, and it would seem to me that to the trustees and the editor of THE JOURNAL should be confided the entire responsibility of selecting the more important papers for publication in full, and of presenting the less important in longer or shorter abstracts. The example of the *British Medical Journal* may well guide us in this matter.

I ventured to correspond with the chairmen and secretaries of the various Sections as to the hour of the Section dinners. Very frequently this has been fixed at nine o'clock, an hour which was too late for the usual dinner and too early for a second one. Moreover, when the dinners are fixed at so late an hour, if they are to be followed by after-dinner speeches the hour at which the Sections can break up and seek a much-needed rest is so late that it interferes seriously with the work of the succeeding day. Almost without exception, the officers of the Sections preferred the usual dinner hour, about seven o'clock, both for material and intellectual reasons. It is often difficult to arrange this matter with the hotels at which the dinners are usually given, but the ASSOCIATION, I think, might insist, as but a single evening is occupied by these dinners, that for the one occasion the hotels who profit so largely by the meeting should accommodate the ASSOCIATION in this matter.

THE COMMITTEE ON THE THIRTEENTH INTERNATIONAL MEDICAL CONGRESS.

Early last autumn Prof. William Osler, who had been requested to organize the American Committee on the coming International Congress, invited the President of the AMERICAN MEDICAL ASSOCIATION, and the Presidents of the various associations of medical specialists to form a committee to assist in organizing the International Medical Congress which is to assemble on August 2, in Paris. This Committee, and especially its chairman and secretary, have done the work exceptionally well. Of course, there is need of money for printing, postage, and clerk hire. At a recent meeting in Washington, the various societies, represented by their chairmen, were invited to contribute \$25 each toward the expenses. I recommend that an appropriation of \$50 be made from the funds of the AMERICAN MEDICAL ASSOCIATION toward the expenses of this committee.

ENDOWMENT OF MEDICAL SCHOOLS.

Turning, now, from the affairs of the ASSOCIATION, I wish to say a few words in reference to a subject of paramount importance which I am sure will appeal to the sympathies of all present, namely: the need for endowments for medical schools.

The tide of charity in the United States has reached a remarkable height. The *Chicago Tribune* publishes an annual list showing that in 1894 the charitable gifts and bequests in the United States amounted in round numbers to \$20,000,000; in 1895, to \$29,000,000; in 1896, to \$34,000,000; in 1897, to \$34,000,000; in 1898, to \$24,000,000; and in 1899, to the enormous sum of nearly \$80,000,000.

But a small portion of this charity, however, has been bestowed upon medical schools. It is mostly to colleges, theological schools, hospitals, museums, and libraries, that the principal amount has been given. The cause for this, I think, has been chiefly the vicious method in which all our medical schools were formerly conducted. They were practically joint-stock companies, organized

for the benefit of the faculties. As Professor Bowditch has said, one might as well expect the public to endow a cotton-mill as to endow such a school. The day of these private enterprises is now, happily, nearly past. The respectable schools of medicine are now conducted by trustees, a body of men wholly apart from the faculties, who manage the affairs of the medical school just as they would those of a university, taking control of the income and expenditures of the school, placing the professors and other teachers upon salaries, and conducting the affairs of the institution on broad lines of educational progress. Partly as a result of the influence of the profession exerted through the ASSOCIATION, the courses of study at the medical schools of to-day, and, therefore, the necessities of the student, are so wholly different from those of twenty-five years ago that it may be well termed a new era in medical education. As a consequence of the broadening and lengthening of the medical course of study, the cost of medical education has enormously increased. The public at large does not at all appreciate this changed condition, and even you, members of the profession itself who may have graduated many years since, scarcely appreciate to its full value the difference. As a consequence, the fees of the students, which can scarcely be raised beyond the present amount, are wholly inadequate for providing a proper medical education, and the medical school appeals, as does the college and the theological and the technical school, for wise and liberal endowments in order to provide this suitable education. "There is no branch of education," says President Eliot of Harvard, "which more needs endowment. Medical education is very expensive, because it has become, in the main, individual instruction. Large lectures and crowded clinics are seen to be of really very limited application, so that year by year the medical teaching becomes more and more costly."

What were the necessities of a medical school twenty-five years ago? Two lecture-rooms, in which seven professors talked, a dissecting-room, and, if possible, a clinic, which was occasionally, but rarely, in a college hospital. Practically the instruction which the student obtained, with the exception of dissecting, was limited to "book-knowledge" and "ear-knowledge." The student was not brought into contact with any patients or any concrete facts, observations, or experiments. He only listened to what his teachers said about them. Millions were given to hospitals in which the sick were treated, but only sixpences to medical schools, in which the men who are to care for their future patients were trained. "Spain," says Lyman Abbott, "in the late war had nineteenth-century guns and sixteenth-century men behind them. We know what came." Our splendidly-equipped hospitals are the nineteenth-century guns. Insufficiently trained doctors are the sixteenth-century men. The time has certainly come when the "men behind the guns" must equal in efficiency the weapons with which they do the fighting.

To perform a tracheotomy and rescue a child suffering from diphtheria is a dramatic occurrence which appeals to every one. To conduct a long series of experiments in the laboratory, by means of which the cause of diphtheria shall be found and the necessity for a tracheotomy avoided, appeals only to the educated few; yet the service done by the operation is a service only to the one patient who may be rescued by the knife, while the other is a service to hundreds and thousands of patients

who, for all time, will escape both the knife and the disease. Yet, such a series of experiments in preventive medicine brings no reward in money, a limited reward in fame, and only its largest reward in the consciousness of giving a great boon to humanity, for which it never can pay.

The era of the man who simply listened to what his teachers had to tell him and then went on his way, as a "rule of thumb" man, is happily past. This is the era of the trained man and the trained woman, and training means opportunity provided by the community and time, labor and money given by the man.

Let us look for a moment at what a medical school now needs. It stands for two things: 1. "Thing-knowledge," instead of "book-knowledge" and "ear-knowledge," teaching the facts of modern science, by scientific methods; that is to say, methods of precision. But 2, no medical school should be content simply with imparting the knowledge that exists. It should push back the boundaries of ignorance and, by research, add to existing knowledge.

In the accomplishment of the first duty of the medical school, there are required, first, didactic lectures. I am not one of those who believe that the day of the didactic lectures is past. "Never," said President Faunce, of Brown University, in his notable inaugural, "never shall we be able to do without the personality of the teacher, flaming with enthusiasm for knowledge, pressing up the heights himself and helping the student on."

In the 156 medical schools in this country there are, perhaps, over 1500 members in their faculties. In all of them are inspiring teachers flaming with enthusiasm, for a not inconsiderable proportion may properly be so described, and the influence of such enthusiastic teachers is felt by the entire class. One or two such men in every school make a good faculty.

Besides the didactic lectures, a good working library and a reading or study room is a requisite. And it is a matter of no little encouragement that in the reports of the U. S. Commissioner of Education for 1898, 72 medical schools reported 151,433 volumes in their libraries.

The great difference between the modern method of teaching medicine and the older method consists in *laboratory instruction* and *clinical instruction*, both of which must be individual. Laboratories are very costly. They require buildings, equipment, and assistants. The number of laboratories required in the present day in a fully equipped medical school is astonishing. First, the dissecting-room—the anatomical laboratory—and along with this a laboratory of histology, and another which may be combined with it, a laboratory of embryology. Next, a physiological laboratory, in which each student will not become an accomplished physiologist, but will become familiar with physiological methods and be trained in exact and careful observation; a laboratory of chemistry and, combined with it, especially, a laboratory of physiological chemistry; in the department of *matéria medica*, a laboratory of pharmacy, where the student will not become a good pharmacist, but will learn the essentials of pharmacy so that he will not make, at least, gross mistakes, which, otherwise, would constantly occur. Still more important is a laboratory of pharmacology, in which he will learn the action of drugs and be prepared rightly to use them. In obstetrics, a laboratory of practical obstetrics and obstetric operations is essential. In surgery,

he needs a laboratory in which he shall be taught all the ordinary surgical operations. In pathology, he needs a laboratory of morbid anatomy, a laboratory of bacteriology, and a laboratory of hygiene. The mere statement of this catalogue of thirteen laboratories will enforce the fact that enormous expense not only for the installation, but also for the running expenses, will be required. To show what one university abroad does, Professor Welch has stated² that the Prussian government expends, outside of the salaries of professors in the University of Berlin alone, over \$50,000 annually. What American medical school can show anything approaching an endowment which will provide such a sum?

And what has not the laboratory done for us within the last few years. It has discovered the cause of tuberculosis, tetanus, suppuration, cholera, diphtheria, bubonic plague, typhoid fever, erysipelas, pneumonia, glanders, and a host of other diseases; it has shown us how to avoid all danger from trichina, so that our entire commerce in hog-products is conditioned upon the laboratory; it has shown us how to banish suppuration, erysipelas, tetanus, and pyemia from our hospitals and reduce our death-rates after operation from 50 or 33 per cent. to 10 per cent., 5 per cent., 1 per cent., and often even fractions of 1 per cent; it has given us a really scientific hygiene in which we no longer guess but know; it has shown us the rôle of the mosquito in malaria, of the rat in bubonic plague, of the fly in typhoid fever; it has given us the power to say to diphtheria "thus far shalt thou go and no farther;" it will give us the power to utter a paean of victory over typhoid, cholera, bubonic plague, tuberculosis, yellow fever, cancer, and other implacable enemies of the human race—and yet there are those who would stay this God-given hand of help!

And the laboratory has had not only its devotees but its heroes. Listen to the story of but one. Dr. Franz Müller, of Vienna, was one of those who in his investigations of the bubonic plague in 1897 contracted the dreaded disease from the bacilli in his culture-tubes. When he became certain that he was infected he immediately locked himself in an isolated room and posted a message on the window pane, reading thus: "I am suffering from plague. Please do not send a doctor to me as, in any event, my end will come in four or five days." A number of his associates were anxious to attend him, but he refused to admit them and died alone, within the time he predicted. He wrote a farewell letter to his parents, placed it against the window, so it could be copied from the outside, and then burned the original with his own hands, fearful lest it might be preserved and carry the mysterious germ. Can you find me a finer example of self-sacrificing altruism? Was ever a Victoria Cross more bravely won?

But the establishment of laboratories, with their attendant expenses, is not the only improvement in our medical curriculum. Every well-conducted medical school requires a large hospital in connection with it. Here must be installed again a fourteenth laboratory of clinical medicine in which all the excretions of the body will be examined, tumors studied, cultures and blood-counts made, or else the patients in the hospital, from the modern point of view, are neglected. It is not too much to say that a patient requiring such examinations, be he the poorest of the poor, has his case more scientifically studied, more exactly measured, more precisely treated than most rich patients in sumptuous homes.

Again, the individual instruction to which President Eliot referred is now carried out in all of our best medical school hospitals by the establishment of small ward-classes, by whom or before whom the patients are examined, prescribed for and operated upon by the professor or instructor, each student bearing a part; and so, by having his investigations directed, his powers of observation cultivated, his mistakes pointed out, his merits applauded, the student graduates from the medical school equipped as none of us, alas, ever had the opportunity to be. All of these laboratory and ward classes imply an enormous increase in the number of assistants, young men striving not only to perfect themselves, but by teaching, to forge to the front so that the best men will win in the struggle for preferment.

Again, the course of study has been prolonged from two years, as it was 20 to 25 years ago, to four years, and in addition the terms have also been lengthened. When I was a student the course of study consisted of two sessions of about 19 weeks each, or 38 weeks in all. Now the course consists, as a rule, of four sessions of 32 weeks each, or a total of 128 weeks, an increase of 90 weeks, nearly 3½ times as much as it was 25 years ago. In 1885, 103 schools had courses of two years, and 5 schools courses of three years. In 1899, 2 schools had courses of two years, 10 of three years, and 141 of four years.³

It can be easily seen that from this additional time required another source of expense has arisen besides the increased number of assistants. The time given to teaching by members of the faculty, as a rule, has been more than tripled, as compared with twenty-five years ago. In addition to this, professors in charge of laboratories must practically give their whole time to the work and are precluded, therefore, from any income from practice. These men must receive salaries sufficient for them to live on.

Surely this statement of the difference between the education given twenty-five years ago, which required but little expenditure of money and resulted in considerable incomes, and the modern methods of education in the laboratory and the hospital, as well as the lecture-room, which require enormous expenses, is an ample reason for large endowments.

But, the function of the medical school, as I have said, should not be limited merely to the imparting of existing knowledge. No school is worthy of the name that does not provide for greater or less research work by which substantial additions to our knowledge may be made and the facilities and the results of the healing art made more efficient for the welfare of mankind. Twenty-five years ago there were practically few young men who were fitted for research work, especially laboratory work. Now every well-equipped school has attached to it, in one way or another, a score or more of young men who are eager for work, longing for the opportunities for usefulness and distinction if they can only obtain a bare living. When in my own school I look around me and see these young men thirsting for such opportunities, I am often heartsick at our want of facilities for this purpose, and I long with an intense longing for some wise and munificent friend of humanity who will endow post-graduate scholarships, fellowships and laboratories for just such an end. Our hospitals do a magnificent work in

² Higher Medical Education and the Need for Its Endowment. *Medical News*, July 21, 1894.

³ Monographs on Education in the U. S.; No. 10, Provisional Education, p. 11. James Russell Parsons, Jr., Dept. of Education for the U. S. Commissioner to the Paris Exposition of 1900.

charity, helping the sick and the forlorn, the weak and the suffering in a way which appeals to the charitable instincts of our fellow-countrymen, and to this appeal they have responded most generously. *But I venture to say that the medical school which trained a Lister, a Pasteur or a Koch has done more for humanity than all the hospitals of this country combined.* The modest laboratory at Würzburg consisted chiefly of a Ruhmkorff coil, and a Crookes' tube—and Röntgen. Other Röntgens and Listers we have among us if we but knew it. These are the men who are the world's real illustrious heroes.

It is especially in these days that in America we need such researches, for our tropical possessions have brought us face to face with new problems which we can only justly meet by the most careful investigations. It is to our credit that several of our medical colleges have already established schools of tropical medicine, which show that the profession, as well as the public, are rising to the level of our responsibilities and duties.

It is also a cheerful sign of the times that at Harvard a School of Comparative Medicine has been established, which will lead to other similar schools in connection with our medical colleges, for the broad study of disease both in man and in the lower animals. All such knowledge should be correlated, and we may well learn from the diseases of animals how to care for man, as thus far we have learned chiefly from the diseases of man how to care for animals. The endowment of this school with the modest sum of \$100,000 is an omen of future good. So too, the somewhat similar school at Buffalo bids fair to add immensely to our knowledge and therefore to our ability to heal.

What now has the American public done for the medical school? Let us contrast it with the endowments in theology. Our academic institutions have such an enormous sum-total of endowments that I do not even consider these. Let us, however, compare theology and medicine, remembering that theology is almost wholly a literary study, dealing not with the facts of Nature, requiring no laboratories and no large corps of assistants and therefore conducted at a minimum of cost. In 1898⁴ 84 theological schools reported endowments of \$18,000,000, and 71 schools do not report this item; 19 out of 151 medical schools report endowments of \$1,906,072. Five theological schools have endowments of from \$850,000 to \$1,369,000 each. Yet in 1899 there were only 8000 students of theology for whom this enormous endowment was provided, as against 24,000 students of medicine. Each theological student had the income of an endowment of \$2,250 provided for his aid, each medical student the income from \$83. As against 171 endowed chairs of theology there are only 5 in medicine.

I do not grudge a dollar to the theologian, but I plead for his medical brother, that, with a vastly more expensive education he shall have a reasonable provision made for his training.

I have already indicated to some extent the direction which these endowments of medical schools should take. They may be classed in three categories: 1. The endowment of professorships. By doing this the salary of the professor would be made available for the other wants of the school. The endowment may well take the form of a memorial, either of the generous donor, or, still better, of some distin-

guished former occupant of such chair whose name would always add luster to it. 2. The endowment of the laboratories which, as I have indicated, are so costly, both in their installation and in their yearly expenses. 3. The endowment of post-graduate scholarships and research fellowships, these being intended especially for those who will devote their time to original research. Students can not take much time for original research; their regular studies will absorb all their energies. Research must be done chiefly by young graduates under the direction of stimulating and energetic members of the faculty.

It is not, I trust, too much to hope, if not now, that in the near future the AMERICAN MEDICAL ASSOCIATION will set a fruitful example by giving each year "Scientific Grants in Aid of Research." The first object of the ASSOCIATION must be, necessarily, to place itself on a strong financial basis. It should own its own building, its printing and publishing plant, and, as soon as possible, should have a reserve fund of considerable proportions. Nothing conduces to the stability and conservativeness of any institution like a good bank balance. The British Medical Association has to-day an excess of assets over liabilities of nearly \$380,000, chiefly invested in its building at 429 Strand, London. The AMERICAN MEDICAL ASSOCIATION has made a fair start with a surplus of over \$27,000 last January, and, with its large, and, let us hope, rapidly increasing membership, it will before long assume a rank second only to the British Medical Association. Last year⁵ the Scientific Grants Committee of the British Association allotted £741, or somewhat more than \$3,500, for research work, distributed to three research scholarships, the holders of which were paid \$750 each a year, and thirty-three grants in aid of research work, varying in amounts from \$25 to \$100. Among those to whom grants were made occur the well-known names of Beevor, Vaughan Harley, Kanthack, Luff, Manson, Noel Payton, and Risien Russell. I should hope that the AMERICAN MEDICAL ASSOCIATION might even now begin by a modest appropriation, say of \$500 a year, which should be allotted by the trustees, or by a special committee on scientific grants, after a careful investigation of the merits and the character of the person to whom such grants were made. No grant should exceed \$100, or possibly even, at first, \$50 in amount. The results of such grants would be not only absolute additions to our knowledge, but the cultivation of a scientific spirit which would permeate the whole profession and elevate its objects and aims.

In pleading for these endowments of medical schools, it is but a plea for a return to the profession of a title of what they have given. Two years ago I carefully investigated the value of the services rendered to the poor in the city of Philadelphia by the medical staff of the Jefferson Medical College Hospital alone, and I found that 129 medical men were then attached to the hospital, and their services, calculated on a moderate basis of ordinary fees, I valued at over \$500,000 annually. To a profession which gives so freely of that which is most difficult to give, its own life-blood, surely the public for its own protection may give reasonable endowments to its medical schools. It will be returned to the community tenfold in better educated, better trained and more successful doctors. More devoted, self-sacrificing men and women they never can have.

4. U. S. Education Report.

5. Brit. Med. Jour., 1899, ii. p. 219.

CONCLUSIONS REACHED AFTER A STUDY OF
TYPHOID FEVER AMONG THE AMERICAN
SOLDIERS IN 1898.

ORATION ON STATE MEDICINE BEFORE THE FIFTY-FIRST
ANNUAL MEETING OF THE AMERICAN MEDICAL
ASSOCIATION AT ATLANTIC CITY, N. J.,
JUNE 5-8, 1900.

BY VICTOR C. VAUGHAN, M.D.

Professor of Hygiene in the University of Michigan; Late Major
and Division Surgeon, U. S. A.
ANN ARBOR, MICH.

It is well known that typhoid fever prevailed extensively among American soldiers assembled at state and national encampments during the brief war between the United States and Spain in 1898. In August of that year a board, consisting of Major Walter Reed, U. S. A., Major E. O. Shakespeare, U. S. V., and the writer, was appointed at the request of the Surgeon-General of the U. S. Army, for the purpose of ascertaining the causes of the existence and spread of typhoid fever in the national encampments, and of suggesting means of its abatement. In accordance with instructions, this board visited the national encampments and inspected most of the regiments. While doing this, we interviewed medical and line officers, and obtained as far as possible the sanitary and medical history of each regiment. After completing this tour of inspection, we spent about eighteen months in going over the medical records of these commands. In this work we have accumulated a vast amount of information, which we have embodied in our final report to the surgeon-general. Since much of this information may be useful to the profession, and as the report is not likely to be published soon, I have concluded that I can not do better than present some of the more important results reached in this investigation. In doing this, I wish to state that I am responsible for any failure that I may make in these statements, as this paper has not been submitted to my colleagues on the board. It will be necessary for me to condense my remarks in the form of conclusions, stated somewhat dogmatically, and dependent on the full report for further elucidation. These conclusions I will proceed to give:

1. *Every regiment in the United States service in 1898 developed typhoid fever.*—This is true of both volunteer and regular commands. I am aware of the fact that some regiments have claimed freedom from typhoid fever, and it is true that the sick reports of more than one command fail to show any evidence of this disease; but by carefully tracing the sick to hospitals, we have been able to find one or more cases of typhoid fever in every regiment. The claim is made by an assistant-surgeon of one of the Pennsylvania regiments that there was not a case of typhoid fever in his command, but the records of the Philadelphia hospitals show that certain cases sent from this regiment proved to be typhoid fever. It is true that this regiment, which was engaged in guarding powder works in New Jersey and Delaware, had relatively few cases of typhoid fever, but it did not altogether escape this disease. Official statements that certain commands escaped typhoid fever have been made. Gen. H. V. Boynton, chairman of the Chickamauga and Chattanooga National Military Park Commission, in his report to the Secretary of War, under date of Oct. 17, 1899, makes the following statement:

At the time the camp was abandoned, it is true that there was much sickness, and that a condition approximating panic prevailed with many officers and surgeons. There were large numbers of fever patients in the hospitals. Seven battalions

of troops—four colored, under Col. E. L. Huggins, of the Eighth United States Volunteer Infantry, and three white, under Col. L. D. Tyson, of the Sixth United States Volunteer Infantry—were left at the camp. The strictest sanitary measures were at once adopted by these officers, and were also rigorously enforced, both as to the camp sinks, the cooking of food, and the eating of trash, and the drinking of slop. The result was that, notwithstanding they were encamped in the same sections of the park (Chickamauga) where the departing troops had been, not a case of fever developed in either of these forces; nor did a death incident to camp disease occur.

This positive statement from one so high in authority needs careful investigation. Moreover, it will be of special interest to inquire somewhat in detail as to whether or not these regiments, by the practice of strict sanitary precautions, were able to encamp in Chickamauga Park, which at that time was widely contaminated with matter specifically infected with typhoid fever, without developing one or more cases of the disease.

The Sixth U. S. Volunteer Infantry assembled at Knoxville, Tenn., where it was mustered into the service of the United States on July 14, 1898. It remained in this camp until July 31. While at this place it had a most excellent supply of water—that furnished West Knoxville. Fecal matter was deposited in sinks which were fairly well policed, the contents being covered with dirt and lime twice a day. The health of the command seems to have been good, but soon a case of typhoid fever appeared. Very shortly after the regiment had been mustered in, one man, an athlete, who had been traveling about the country, complained of being ill and was granted sick furlough. This proved to be a case of typhoid fever. This command reached Chickamauga Park about 11 p.m., July 31. It rested for the night near the Second Brigade of the Second Division of the Third Army Corps. The next morning it was moved near the water-tower, on ground quite remote from that occupied at the time or previously by any command. On the morning of August 1, eight men reported at sick-call, but none of the cases proved to be serious. I have studied the records of this regiment carefully, and find no evidence of typhoid fever in it after it reached Chickamauga, until August 24, when a private from Company C was sent to the hospital of the First Division of the Third Army Corps. This case was diagnosed "malaria," and the man remained in the hospital only five days when he was discharged on furlough, but at the expiration of his furlough he was unable to return to his regiment. The probability is that this was a case of typhoid fever. On August 27, another case of so-called "malaria" was sent to the same hospital, and was furloughed four days later. This man also was unable to return to duty when his furlough expired. From September 1, until the regiment left Chickamauga, numerous cases of recognized typhoid fever were sent from this command to the Sternberg Hospital. One man, admitted to this hospital on September 1, died September 5, and was probably in the second week of the disease at the time of death. This man was a sergeant and had never failed to appear at sick-call in the morning with the men from his company. He expressed solicitude about himself two days before he was sent to the hospital, or, to be more explicit, on August 29. From August 24 to October 4, the date when this regiment left Chickamauga, 98 cases of protracted fever were sent from this command to Sternberg Hospital; 86 of these were diagnosed as typhoid fever, 11 as malaria, and 1 as dysentery. The man who was admitted to the hospital September 1, and

who died September 5, was the first case of recognized typhoid fever occurring in this regiment after it reached Chickamauga. The appearance of this case caused considerable solicitude, and the regiment again changed its location, and its water-supply. However, as has already been seen, typhoid fever did not abate. On October 4, as has been stated, this regiment left Chickamauga and proceeded to Porto Rico. Typhoid fever continued to develop during the voyage and after reaching the island.

The Eighth U. S. Volunteer Infantry consisted of a regiment of colored troops, recruited largely in Kentucky, and was stationed at Fort Thomas until it went to Chickamauga Park on October 8. In the August report of this command, there is 1 case of recognized typhoid fever. In the September report there are none and only 5 cases diagnosed as malaria, while only one of these was off duty for more than ten days. The October report shows 2 cases of recognized typhoid fever. The initial date of one of these was October 1, before the regiment left Fort Thomas; the initial date of the other was October 25, while the regiment was in Chickamauga Park. The November report shows no cases of recognized typhoid fever; but 2 diagnosed as malaria were of more than three weeks' duration, and 6 of fever, undiagnosed, are reported, and none of these patients had returned to duty up to Dec. 31, 1898.

2. *More than 90 per cent. of the volunteer regiments developed typhoid fever within eight weeks after assembling in the state encampments.*

It is impossible to fix any exact date on which the several regiments assembled at their state encampments. However, as the first call for troops was issued April 20, 1898, it must follow that at the earliest all regiments assembled at state encampments during the last week of that month. Bearing this in mind, our report will show that the great majority of the volunteer regiments developed one or more cases of typhoid fever within eight weeks after assembling at the state encampment.

3. *Most, probably all, of the regular regiments developed typhoid fever within less than eight weeks after going into camp.*

The following table shows the date of going into encampment and of the appearance of first cases of recognized typhoid fever in certain regular regiments:

COMMAND.	Date of going into Encampment.	Date of first case of recognized Typhoid Fever.
Second, U. S. I.	April 22, 1898.	May 28, 1898.
Fourth, U. S. I.	April 22, 1898.	May 18, 1898.
Sixth, U. S. I.	April 22, 1898.	May 19, 1898.
Seventh, U. S. I.	April 24, 1898.	May 26, 1898.
Thirteenth, U. S. I.	April 23, 1898.	May 8, 1898.
Sixteenth, U. S. I.	April 22, 1898.	May 20, 1898.
Twenty-second, U. S. I.	April 22, 1898.	May 29, 1898.
Twenty-fourth, U.S.I. (col.)	April 20, 1898.	May 28, 1898.
Twenty-fifth, U.S.I. (col.)	April 20, 1898.	May 28, 1898.

When war with Spain was proclaimed, the total strength of the standing army of the United States was 27,000 officers and men. These troops were scattered at about 100 military garrisons. All of the soldiers were well housed, and their quarters were, from a sanitary standpoint, in good condition. At each garrison, the water-supply was above suspicion, and the disposal of waste was such as not to endanger the health or the life of the soldiers. There was no epidemic at any post, and the army was reasonably free from infectious diseases except those of venereal origin. The number of cases of typhoid fever among the 27,000 officers and men during

the first four months of 1898 was distributed as follows: In January, 9 cases with 1 death; in February, 3 with 1 death; in March, 4 with no deaths; in April, 6 with 1 death. During the last week of April and the first week of May, 1898, the regular regiments were assembled in national encampments and placed under canvas.

4. *Typhoid fever not only appeared in every regiment in the service, but it became epidemic, both in the small encampments of not more than one regiment, and in the larger ones consisting of one or more corps.*

The statement has been made that the epidemics of typhoid fever in our national encampments in 1898 were due to crowding together large numbers of men. The Third North Carolina Volunteer Infantry, at its isolated post at Fort Macon, N. C., developed typhoid fever before it was sent to Knoxville, where it became a part of the Second Division of the First Army Corps.

When we reached Knoxville, Tenn., in our round of inspecting the troops, we were informed that the Fourth Tennessee was encamped near that place, where it had been since mobilization, and that it was wholly free from typhoid fever. A personal investigation showed the following facts: This regiment assembled June 28, although it was not mustered into United States service until about the middle of July. On August 12, Ernest Martin, who had not been well for a week preceding this time, was admitted to the regimental hospital. On August 15 he was furloughed, and on September 11 he died at his home in Nashville, Tenn., of typhoid fever. From the date of this first case up to the time of our inspection (Sept. 14, 1898) there had been in this regiment not less than 11 well-marked cases of typhoid fever, although none had been so diagnosed by the regimental surgeon.

The Fifteenth Minnesota, at its regimental encampment at the Fair Grounds at St. Paul, Minn., and the Thirty-fifth Michigan, at Island Lake, Mich., developed epidemics of typhoid fever. Other instances might be cited, but these suffice to show the truth of the statement that the disease became epidemic in small as well as large encampments.

5. *Typhoid fever became epidemic in camps located in the Northern as well as in those located in the Southern States.*

Some medical officers have placed stress on the fact that Northern men were transferred to the Southern States in the summer time, and have attached considerable importance to the influence of non-acclimatization in the production of the epidemics of typhoid fever. In answer to this, we need only call attention to the fact that the Fifteenth Minnesota, Thirty-fifth Michigan and the Two Hundred and Third New York furnished large numbers of cases of typhoid fever, practically all of which developed before they crossed the Mason and Dixon line. There is nothing more certain than that the prevalence of typhoid fever among the troops in 1898 was not due to geographic location.

6. *Typhoid fever is so widely distributed in this country that one or more cases are likely to appear in any regiment within eight weeks after assembling.*

We have no reliable data concerning the extent to which typhoid fever prevails in this country, but from the number of deaths due to this disease, we can fairly estimate the number of cases. The following figures may give us some idea as to the chance of infected men being found in each volunteer regiment. In making these calculations, we will figure on the number of cases of typhoid fever in New York City. This city is selected

because it is not subject to epidemics of this disease, and in fact, is believed to be unusually free from it. Supposing that typhoid fever is no more deadly there than it is in Hamburg, and there is no reason for believing it is, then 299—the number of deaths from typhoid fever in New York City in 1897—is about 7.5 of the total number of cases of typhoid fever that occurred in that city in the year given. On making this computation, we find that there probably were 3986 cases of typhoid fever in New York City in 1897. It is safe to say that at least four-fifths of the cases of this disease occur in individuals of military age—between 18 and 45. This means that in 1897 there were in New York City 3188 cases of typhoid fever among those inhabitants who were from 18 to 45 years of age. The government census for 1890 gives that city's population at that time as 1,515,301. A police census made, in April, 1895, indicated a population of 1,849,866. I will be liberal in my calculation and suppose that its population in 1897 was 2,000,000. In round numbers, the number of people between 18 and 45 years of age is one-half the total population. On this basis, the number of people of military age in New York City in 1897 may be placed at 1,000,000—this includes both males and females. Had this 1,000,000 people of military age been divided into regiments of 1300 each, they would have furnished 769 commands. We have seen that the number of cases of typhoid fever there among people of military age was probably 3188, and if these had been evenly divided among the regiments of 1300 each, each command would have contained at least four persons who in all probability would develop typhoid fever during the year. I make no claim that the above given figures are accurate. I have presented them simply for the purpose of showing the chances of there being men infected with typhoid fever in every regiment of volunteers. I think that it must be admitted that there is not much difficulty in accounting for the origin of typhoid fever in our national encampments. With this disease as prevalent as it is throughout the country, it is more than probable that in any organization of 1300 men of military age, taken from private life and held together for two months, one or more cases will develop.

7. *Typhoid fever usually appears in military expeditions within eight weeks after assembly.*

The following quotations taken from a paper on "Enteric Fever in Camps," by Surgeon-Captain Davies, assistant professor of hygiene at the English Army Medical School, illustrates the above statement:

In the Galeaka-Gaika War in South Africa, the troops crossed the River Kei in December, 1877, in the hot and dry season. Diarrhea and "simple continued fever" soon became prevalent, but the general health was good. In the middle of January, 1878, heavy rains came on. Several cases of enteric fever occurred toward the end of the month. In February sickness increased, consisting principally of diarrhea, dysentery, and common continued fever. Bowel complaints diminished toward the end of March, but as the cold weather came on, enteric fever, at first mild and insidious, occurred throughout the country; and in May it is reported that no place was free from it.

In the Zulu War, which commenced at the end of December, 1878, fever appeared at the headquarters at Helpmakaar, and at Rorke's Drift, in the middle of February, accompanied by diarrhea and dysentery; the fever was thought to be "bilious remittent," or "enteric," or a mixture of both. Helpmakaar became so unhealthy that the troops had to be moved to Utrecht and Dundee. Epidemics of enteric fever immediately broke out at both of these places.

In the Afghan campaign of 1878-1880, it is noted that cases occurred at almost all the stations occupied by European

troops stretching from the Indian frontier to Kabul and Kandahar. Some of these posts had probably never been occupied before, and many of these cases were quite isolated.

In the Egyptian expedition of 1882, there was great prevalence of bowel complaints, from the first landing of the troops in the latter part of July—diarrhea, dysentery and fever. Enteric fever occurred very soon, both at Alexandria and at Ismailia. When the troops arrived at Cairo, the disease increased gradually, but did not reach any great prevalence until October and November. During October, November and December, out of a total of 319 deaths no less than 223 were due to enteric fever.

In the Nile campaign, in 1884-85, a great number of isolated posts were occupied, extending over a large tract of country. Enteric fever occurred at all or nearly all of these posts, most severely at Assuan and Wady Halfa.

During the French operations in Tunis in 1881, the disease was extremely prevalent, about one-fifth of the whole force being attacked. It has been stated that all the columns on the march, and nearly every occupied post were attacked more or less. In some instances bodies of troops suffered from the disease who had never been in contact with other (infected) troops, and who had not occupied any old (infected) encampments.

I have brought in these quotations in order to show that typhoid fever generally appears in military expeditions. Similar experiences are recorded in the history of mining camps in various parts of the world.

8. *The miasmatic theory of the origin of typhoid fever is not supported by our investigations.*

There are still some who believe that typhoid fever is due to a poison or miasma given off from the earth in gaseous form. I would not mention this obsolete theory were it not for the fact that while inspecting the camps we found intelligent medical officers who believed that some intangible local condition inherent in the place was an important factor in the production of the epidemic. There is apparently in man a tendency to believe in the evil genius of locality. He is prone to attribute many of his misfortunes to indefinable conditions surrounding the place in which he has suffered. As I have stated, no fact in our investigations has been brought out more prominently than the demonstration that locality was not responsible for the epidemics. The Fifteenth Minnesota first developed typhoid fever at the fair grounds at St. Paul. There is certainly no evidence that there is any evil climatic influence connected with this place. This command carried the epidemic with it to Fort Snelling, which has long had the reputation of being one of the most healthful army posts in the United States. From Fort Snelling the Fifteenth Minnesota was transferred to the open fields at Camp Meade, where generations of Pennsylvania farmers have passed the average number of years allotted to man without suspecting that their locality was an unhealthy one. However, typhoid fever continued with the regiment from Minnesota, because the men carried the germs of this disease in their bodies, clothing, bedding and tentage. Certainly, any rational being would prefer any of the above-mentioned localities to Port Tampa, Fla., as a place of summer residence, and yet there was not a regiment in the Fourth Army Corps, encamped for so long a time in Florida, that had as many cases of typhoid fever as did the Fifteenth Minnesota.

9. *The pythogenic theory of the origin of typhoid fever is not supported by our investigations.*

Murchison proposed this theory of the origin of typhoid fever. This author makes the following statement: "Typhoid fever may be generated independently of a previous case by fermentation of fecal, and perhaps

other forms, of organic matter." Translated into terms of modern medicine, this theory is founded on the belief that the colon germ may undergo a ripening process by means of which its virulence is so increased and altered that it may be converted into the typhoid bacillus, or at least may become the active agent in the causation of typhoid fever. Many French, English and American army medical officers believe that typhoid fever may originate in this way. Rodet and Roux, of the French army, have stated their belief that outside of the body the colon bacillus acquires "typhigenic" properties. Surgeon-Captain Davies has expressed his belief in this theory, and some of the medical officers in the American army have also given it their adherence. Surgeon Davies gives the following statement of the reasons for his belief in this theory:

It is well known that "camp diarrhea" is of the commonest occurrence among troops shortly after taking the field in a tropical and subtropical climate. Change of habits, change of food, improper or unsuitable food, bad water, heat and exposure to sun, and chill—these are all obvious factors in its causation; there is nothing in any way specific. Let us consider the sequel as regards the individual, and as regards his surroundings. The individual may in some cases remain in fairly good health and vigor in spite of a continuance of a bowel trouble; other individuals may suffer more, from the exposure, fatigue and weakening effects of the continued flux. The surroundings may possibly be and remain sanitary, the camp clean, the water pure; but in all probability the reverse will be the case, at any rate, in some instances: the water bad, the soil fouled, very likely overcrowding of the camp, with consequent difficulty, if not impossibility, of proper removal or disposal of fecal matter. Under certain conditions of heat and moisture, favorable to the development and multiplication of low forms of vegetable and animal life which is the more likely or reasonable to expect: That diarrhea in weakly and exhausted individuals should remain diarrhea and nothing more; or that with an increase of filth and decomposition, polluting soil, air and water, a development of filth-generated, pythogenic poison, should take place, capable of causing in such weakly persons a fever, with diarrhea, a poisoning of the organism, producing pyrexia and inflammation of certain glands in the alimentary tract, in fact, a specific fever? Is this supposition of the evolution, gradual or rapid according to circumstances, of a disease poison, dependent on increased conditions of pollution of soil, air, or water, either separately or all three together, unreasonable or illogical? Would it not, on the contrary, be more unreasonable to suppose that, under such conditions, there could be no evolution at all? These conditions of camp pollution undoubtedly exist, and tend to increase, in many instances; are they to have no effect? Is diarrhea to continue as simple diarrhea, or is evolution to come into action and produce a new disease? Now, indeed, only because the causes necessary for its production are just now brought into operation—spontaneous only in the sense that water is of spontaneous origin when from hydrogen and oxygen the electric spark has produced water, where no water was before.

I believe that the results of our investigations controvert this theory conclusively. In the first place, we have been able to show that the specific poison of typhoid fever was introduced into every one of our national encampments, and with the disease as widespread as it is in this country. I believe that we have good reasons for the claim that one or more men already specifically infected with typhoid fever enlisted in nearly every command. There is, therefore, no necessity of resorting to the theory that the colon bacillus may be converted into the typhoid germ. Moreover, all the known facts of experimental bacteriology are at variance with this theory. So far as the supposition that simple diarrhea may develop into typhoid fever is concerned, I may state that in my

opinion our investigations conclusively prove that this is not true. The history of typhoid fever in every encampment shows not only that this disease was not evolved from simple diarrhea, but that as a rule the men who had diarrhea did not subsequently develop typhoid fever. This subject will again be considered.

10. *Our investigations confirm the doctrine of the specific origin of typhoid fever.*

As has already been stated, we have been able to trace the introduction of typhoid fever into every one of our national encampments and into the majority of the regiments. In the case of the few commands about which there is some uncertainty as to the men bringing the typhoid infection from their homes, I may state that in all of these there was ample opportunity for the introduction of the specific poison from other commands.

11. *With typhoid fever as widely disseminated as it is in this country, the chances are that if a regiment of 1300 men should be assembled in any section and kept in a camp, the sanitary conditions of which were perfect, one or more cases of typhoid fever would develop.*

I have already stated my reasons for belief in the above given proposition. In such a camp, however, the disease would not become epidemic, and ultimately it should disappear altogether.

12. *Typhoid fever is disseminated by the transference of the excretions of an infected individual to the alimentary canals of others.*

It is more than probable that many individuals may for a while carry and eliminate the specific bacillus of typhoid fever without themselves developing the disease. Later, I will make some statements concerning the probable proportion of men who are immune to this disease. It is now a well-known fact that persons who have recovered from typhoid fever may for a long time continue to carry and excrete the specific poison. It has also been shown that the longevity of the typhoid bacillus, both inside and outside of the body, is much greater than is generally supposed.

13. *Typhoid fever is more likely to become epidemic in camps than in civil life because of the greater difficulty of disposing of the excretions from the human body.*

This proposition is so self-evident that it needs no lengthy argument to support it. The influence of the introduction of sewers into cities in decreasing sickness from this disease is well known to every student of sanitary science. Moreover, since the disease is disseminated by the transference of the excretions of an infected individual to the alimentary canals of others, it must follow that the more thoroughly and completely the excretions are removed from the vicinity of habitations the less will be the danger of infecting the inhabitants. In fact, the whole question of the prevention of typhoid fever in armies is largely one of the disposition of the excretions. Later I will give figures to show that the prevalence of typhoid fever in certain camps was in direct proportion to the thoroughness with which the excreta were removed from the vicinity of the camps.

14. *A man infected with typhoid fever may scatter the infection in every latrine of a regiment before the disease is recognized in himself.*

The elimination of typhoid bacilli from the bowels probably begins soon after infection. If this be true, during the entire period of incubation an individual may be a source of danger to others. Moreover, in most instances of typhoid fever the disease is not recognized during the prodromal stage, and during this time the

excretions may be laden with typhoid bacilli. It must be evident from this that the only way in which typhoid epidemics can be with certainty prevented in armies is by the complete disinfection of the stools of all, both the sick and the well.

15. *Camp pollution was the greatest sanitary sin committed by the troops in 1898.*

In the history of the different regiments given in our report, we have had too frequent opportunity to call attention to the fearful pollution that existed in many camps. We have stated that fecal matter was deposited on the surface about the camps at Chickamauga and at other national encampments. Much of this filth must have been specifically infected with typhoid fever. Sinks were frequently overflowed by heavy rains, and their contents were distributed on the adjoining surface. I can not here dwell on this point, and must refer for particulars to regimental records given in our report.

16. *Some commands were unwisely located.*

While there is no evidence that any of the places selected for national encampments could be called unhealthful, it is true that some of them were not suited for camp sites. It was quite impossible to keep camps in a sanitary condition at the location for a while occupied by one brigade of the Fourth Army Corps near Port Tampa, Fla. On account of the nature of the ground and the surroundings, Palmetto Beach was certainly a very unsuitable location for a permanent camp. Every medical officer in the First Division of the Seventh Army Corps condemned Miami, and this condemnation was approved by officers of both staff and line, who visited this encampment. The men could not be made comfortable at this place. Notwithstanding these facts, there were regiments at Chickamauga that had more cases of typhoid fever than did any of those in the division at Miami, but this is no reason why the troops at the latter place should have been so uncomfortably situated. Some commands were unwisely located, for the simple reason that the soldiers could not be comfortably accommodated at the place selected. There was, however, a much more serious defect in the location of certain commands. Some regiments at Chickamauga, as we have shown in our report, were so located that they received the drainage of other regimental camps. There was certainly no sufficient excuse for this.

17. *In some instances the space allotted the regiments was inadequate.*

This was true of more than one command at Chickamauga. For instance, the One Hundred and Fifty-eighth Indiana was forced to contract its lines to half the regulation distance, and then it was only fifty feet distant from the Sixth Ohio. The sinks of the last-mentioned regiment and the kitchens of the First West Virginia were only twelve or fifteen feet apart. I am forced to conclude from this and numerous other similar examples that there were line officers in the First and Third Army Corps whose efficiency might have been enhanced by some knowledge of camp hygiene.

18. *Many commands were allowed to remain on one site too long.*

There were regiments at Chickamauga that did not move a tent from the time of arrival in May until that of departure late in August.

19. *Requests for change in location made by medical officers were not always granted.*

As an illustration, I will refer to the official records of the Fifth Pennsylvania. This command reached Chickamauga Park on May 20, and was unfortunately located

on low ground. Requests for change in location were repeatedly sent in during June and July. The earth became muddy, the camp received the washings from other camps above, the sinks rapidly filled with water and overflowed, and yet requests for change in location were unheeded until August 12, when the regiment was allowed to occupy a new camp two miles to the west and on a higher piece of ground.

20. *Superior line officers can not be held altogether blameless for the unsanitary condition of the camps.*

As we have already seen, some of the regiments were improperly located from a sanitary standpoint. This was done by superior line officers, and sometimes in the face of protests from the medical officers. We have also seen that requests for change in location were disregarded and regiments were allowed to occupy one site for too long a time. In general, the camps became very filthy. It must therefore be admitted that line officers were to some extent responsible for the condition of the camps under their command. The medical officer can only recommend; the line officer may command. We think it unfortunate that no adequate instruction is given in hygiene in our national military school. It does seem that line officers should at least know enough of this subject to be able to recognize the importance of reasonable requests and recommendations made by medical officers.

21. *Greater authority should be given medical officers in matters relating to the hygiene of camps.*

It is of the greatest importance that more authority be granted medical officers in all matters pertaining to the hygiene of camps. Certain men in the medical corps should be selected to do the duties of sanitary inspector, and these should be chosen on account of recognized ability in this particular line. The sanitary inspector should make his reports in duplicate, one copy of which should be presented to the commander in charge of the troops, while the other should be forwarded to the surgeon-general. When the line officer in command fails to comply with requests made by a medical inspector, he should state in writing the reasons for non-compliance, or at least he should in writing acknowledge the receipt of the recommendation.

22. *It may be stated in a general way that the number of cases of typhoid fever in the different camps varied with the method of disposing of excretions.*

This is well illustrated by the methods of disposing of fecal matter and in the number of cases of typhoid fever in the three divisions of the Seventh Army Corps. The First Division was most uncomfortably located at Miami, Fla., from the last week in June until the second week in August. On the last-mentioned date it was removed to Jacksonville, where it joined the other divisions. During a part of its stay at Miami, and during the entire period of its encampment at Jacksonville, water-carriage was employed for this disposal of fecal matter. In the Second Division the tub system was employed. By this method infected fecal matter was scattered all through the camp. In the Third Division regulation pits were used. The number of cases of typhoid fever was smallest in the First Division, and greatest in the Second Division.

23. *The tub system of disposal of fecal matter as practiced in the Second Division of the Seventh Army Corps is to be condemned.*

Of all the methods for the disposal of fecal matter practiced in the national encampments in 1898, I regard this as the most unsatisfactory.

24. *The regulation pit system is not a satisfactory system of disposing of fecal matter in permanent camps.*

Especially is this true in hot weather. It is a very difficult thing to have soldiers appreciate the necessity of keeping fecal matter covered. As I have elsewhere stated, in many camps, orders were issued requiring each man to cover his stool as soon as deposited, but we did not inspect the pits of a regiment in which we did not find exposed fecal matter. Moreover, in the camps in 1898 flies swarmed so numerously that the first droppings of fecal matter were often covered with them before the act of defecation was completed. The pit system may be employed when armies are on the march, and stopping at one place for a few days at most, but even then they are sources of danger, and it is quite impossible to prevent the spread of typhoid fever in camps in which this method of disposing of fecal matter is employed. At Chickamauga it was well-nigh impossible to prepare sinks of proper dimensions, and still more difficult to keep the contents of these sinks properly covered. The clay thrown out in digging the pits hardened in the sun, and when thrown back on the contents had but little absorptive power, and the result was that fecal matter was constantly exposed. In some of the camps about Tampa it was impossible to dig sinks to proper depth on account of the height of the ground water. For these reasons, I am thoroughly convinced that if epidemics of typhoid fever are to be prevented, some other method of disposing of fecal matter in camps occupied for a week or longer must be resorted to.

25. *Our board has recommended that in permanent camps where water-carriage can not be secured, all fecal matter should be disinfected and then carted away from camp.*

For this purpose we have made a special recommendation that galvanized iron troughs containing milk of lime be used for the reception of all fecal matter, and that the contents of these be removed daily by means of the portable odorless excavator. I am aware of the fact that this method of disposing of fecal matter will be attended by increased cost, but I am confident that it will greatly lessen the number of cases of typhoid fever. These troughs, and the method of using them, have been fully described in our report. I believe that there is no question pertaining to army hygiene of greater importance than that relating to the method of disposing of fecal matter. The way in which this is done largely determines the number of cases of typhoid fever that will develop in any command.

26. *Infected water was not an important factor in the spread of typhoid fever in the national encampments in 1898.*

There probably were local water-supplies that became specifically infected with the typhoid-fever bacillus, but infected water was not the great factor in the causation of this disease. It is possible that the piped water at Chickamauga Park became specifically contaminated. Certainly the location of the intake pipe in Chickamauga Creek, so near the junction of that stream with Cave Spring Branch, which drained many of the camps, was not justifiable, and it hardly seems possible that the piped water wholly escaped contamination. However, that even at Chickamauga infected water was not the chief factor in the spread of typhoid fever is shown by the fact that regiments that did not drink this water also became widely infected with the disease, and it is furthermore demonstrated by the fact that the spread of typhoid fever continued after the regiments had been

removed to Knoxville, Tenn., and Lexington, Ky., at both of which places the water-supply was above suspicion. It is also probable that some of the local water-supplies at Chickamauga became specifically contaminated. This might have been true of the wells from which the regiments of the Second Division of the First Army Corps for a while drew their supply. The location of the Jay's mill well, for instance, was such as to receive the drainage from typhoid fever infected camps near it, and it is not likely that this water escaped specific contamination. I am also inclined to attribute the greater prevalence of typhoid fever in the Third Army Corps to the fact that the sites covered by the regiments of this corps furnished many wet weather springs, which in all probability were specifically contaminated. That the water was not infected at Jacksonville seems to be beyond question. The supply came from artesian wells more than 1000 feet deep, and was distributed through the camps by means of pipes. In August and September of 1898, there were in round numbers at Jacksonville, 30,000 civilians or inhabitants of the city, and the same number of soldiers in camp near it. Both civilians and soldiers drank water from the same source. There were only a few sporadic cases of typhoid fever in the city at a time when each of the three division hospitals was receiving a score or more of patients with this disease each day. The same condition existed at Knoxville. Here the soldiers obtained their water-supply from the pipes that furnish West Knoxville. We satisfied ourselves, from an inspection of the health officer's records, that there were no cases of typhoid fever among the citizens, and at that time there were hundreds of cases among the soldiers. At Camp Alger, certain local water-supplies probably became contaminated, but there is no evidence that this was generally true. Each regiment obtained its supply from a bored well, and while there was some question about the wisdom of the location of a few of these, the majority were so situated and so constructed that infection seemed well-nigh impossible. The same was true of the water-supply at Camp Meade.

27. *Flies undoubtedly served as carriers of the infection.*

My reason for believing that flies were active in the dissemination of typhoid fever may be stated as follows: *a.* They swarmed over infected fecal matter in the pits and then visited and fed on the food prepared for the soldiers at the mess tents. In some instances where lime had recently been sprinkled over the contents of the pits, flies with their feet whitened with lime were seen walking over the food. *b.* Officers whose mess tents were protected by means of screens suffered proportionately less from typhoid fever than did those whose tents were not so protected. *c.* Typhoid fever gradually disappeared in the fall of 1898 with the approach of cold weather, and the consequent disabling of the fly.

It is possible for the fly to carry the typhoid bacillus in two ways. In the first place, fecal matter containing the typhoid germs may adhere to the fly and be mechanically transported. In the second place, it is possible that the typhoid bacillus may be carried in the digestive organs of the fly and may be deposited with its excrement.

28. *It is more than likely that men transported infected material on their persons or in their clothing, and thus disseminated the disease.*

In some of the commands it was customary to detail men from the line every morning to serve as orderlies

at the hospital. These men went to the hospitals, handled bedpans used by persons sick with typhoid fever, and at night returned to their comrades. The most of them were wholly ignorant of the nature of infection and the methods of disinfection. In fact, at one of the division hospitals we saw orderlies of this kind go from the hospital and partake of their midday lunch without even washing their hands. These men handled not only the food which they ate, but passed articles to their neighbors. It seems to me that a more certain method for the dissemination of infectious disease could hardly have been invented. I have stated that in some of the camps the surface of the ground, especially where there were strips of woods, was frequently dotted with fecal deposits. At the time of our inspection of the Third United States Volunteer Cavalry at Chickamauga it was quite impossible to walk through the woods near this camp without soiling one's feet with fecal matter. Much of this was probably specifically infected, and it is by no means improbable that the infection was carried by the men into their tents, where blankets and tentage became infected.

29. *Personal contact was undoubtedly one of the means by which the infection was spread.*

The truth of this statement will be more evident after an inspection of the charts showing distribution of the disease in different regiments, which we have provided for our report. On making such an inspection one must be impressed with the fact so plainly evident that men who were closely associated developed typhoid fever simultaneously. Men in the same company came down with the disease on or about the same time. This became still more evident when we studied the cases with reference to the tents occupied by the men. Certain tents were badly infected, and the majority of all of their inmates developed the disease; while other tents wholly escaped. There are reasons for believing that this was an important factor in the spread of the disease. Blankets and tentage became soiled with typhoid discharges, and in this way the disease was carried by the command wherever it went.

30. *It is probable that the infection was disseminated to some extent through air in the form of dust.*

The shell roads through the encampment at Jacksonville were ground into the finest dust by the heavy army wagons. The scavenger carts carrying the tubs filled with fecal matter passed along these roads, and their course could often be traced by bits of feces falling from the tubs. Other vehicles ground up the fecal matter and dust together, and the winds disseminated these particles here and there. Men inhaled this dust; it was deposited on their food, and men ate the dust. Having seen these things, I am inclined to the opinion that infected dust was one of the factors in the dissemination of typhoid fever. I am aware of the fact that complete desiccation soon destroys the typhoid germ, but dust is not always completely desiccated.

31. *A command badly infected with typhoid fever does not lose the infection by simply changing location.*

I do not mean to say that it is not advantageous for a regiment badly infected with typhoid fever to change its location. On the other hand, in our history of the Second Division of the First Army Corps, we have shown that such change is of advantage and may be followed by a reduction in the number of cases; but mere change in location is not sufficient to stamp out the disease in a command after it has become widely disseminated. The histories of many regiments show this to be

true. The Second Division of the First Army Corps became badly infected with typhoid fever at Chickamauga; later it moved to Knoxville, Tenn., at the latter place the location was an ideal one, the water-supply was above suspicion, the surface was gently rolling and natural drainage good. The soil was deep and pits of proper depth were easily constructed. Soil thrown out in digging pits dried in the sun and became highly absorptive, so that when thrown back on the fecal matter it readily took up the moisture. Notwithstanding all these favorable conditions typhoid fever continued, and instead of showing the slightest abatement increased in prevalence. The regiments that went from Chickamauga to Lexington, Ky., had a similar experience, although it was not so marked in these, probably because they had been more severely afflicted at Chickamauga and a larger proportion of the susceptible material had been used up. The regiments of the First Division of the First Army Corps that went to Porto Rico carried the infection along with them, with but little, if any, abatement. Numerous other equally striking illustrations might be given.

32. *When a command badly infected with typhoid fever changes its location, it carries the specific agents of the disease in the bodies of the men, in their clothing, bedding and tentage.*

This is shown by the fact that when commands changed location, leaving behind all their sick, and when they went to places free from the infection, the disease continued with them.

33. *After a command becomes badly infected with typhoid, change of location, together with thorough disinfection of clothing, bedding and tentage, is necessary.*

Even when disinfection is carried out as here suggested, the command will not altogether lose its typhoid infection, because some of the men will carry the germs of the disease in their bodies. Change of location removes the command from the infected locality; disinfection of clothing, bedding and tentage destroys the infected material deposited on these articles; but the germs that have already been introduced into the bodies of the men are not so easily reached. The utility of disinfection of clothing, bedding, and tentage was demonstrated by Colonel Girard, who carried out this procedure in some of the most seriously infected regiments at Camp Meade with gratifying results.

34. *Even an ocean voyage does not relieve an infected command of its infection.*

This is shown to be the case in the study of various commands that went to Cuba and Porto Rico. The regiments constituting the Fifth Army Corps that went from Tampa to Santiago in June were not widely infected before embarkation, and some of them were on board ship for sixteen days, and yet all developed one or more cases either on the way or soon after reaching Cuba. The regiments that went from Chickamauga to Porto Rico were widely infected before leaving this country and the disease continued after their landing with but little, if any, abatement.

35. *Except in case of most urgent military necessity one command should not be located on a site recently vacated by another.*

This principle holds good even when the vacating regiment is not known to have suffered from any infectious disease. This axiom in military hygiene was frequently violated during the summer of 1898. In many of the state encampments the regiments that responded to the second call were located on sites re-

cently vacated by commands that had proceeded to the national encampments. This was true of the Fifteenth Minnesota, the Thirty-fifth Michigan, and the Two Hundred and Third New York, each of which, as we have already seen, developed a large number of cases of located on ground which had recently been vacated this disease. The Third Illinois at Chickamauga was by the Sixteenth United States Infantry. The regular regiment had occupied this site only eight days, and during this time had reported no sickness, but soon after it reached Tampa it developed 13 cases of acute intestinal catarrh, 3 of diarrhea, and 3 of typhoid fever. When the Second Brigade of the First Division of the First Army Corps reached Chickamauga Park, the site selected for the regimental camp of the Third Illinois occupied a part of that recently vacated by the Sixteenth United States Infantry, while the other regiments of this brigade were placed some distance away. This brigade remained at Chickamauga until July 22, during which time the Third Illinois developed 60 cases of typhoid fever, the Fourth Pennsylvania 26 cases, and the Fourth Ohio 19 cases. Additional instances of this kind have been given in our report.

36. *The fact that a command expects to change its location does not justify neglect of proper policing of the ground occupied.*

The filthy condition of some of the regimental camps at Chickamauga was explained on the ground that each regiment expected to be called to the front in a few days, and therefore neglected camp sanitation. A camp site should be thoroughly policed up to the moment of vacating it. This should be insisted on as a matter of military discipline, and camp commanders should regard proper attention to the sanitation of the sites occupied by their troops as one of their highest duties, and its neglect as a crime.

37. *It is desirable that the soldiers' beds should be raised from the ground.*

In some of the regiments at Camp Alger the tents were never floored. On inspecting these commands in August, we found dust several inches deep in the tents. During the day-time, in fair weather the blankets were taken out, and men, possibly with their feet soiled with infected material, walked around in this dust, and at night threw their blankets down on it and there slept. This was both unsanitary and uncleanly. We admired the enterprise of the men in some regiments who built in their tents a scaffold of poles, covered this with straw, and made their beds on this. I can not but think that sleeping in a dust pile, which is possibly infected with typhoid material, is not wise.

38. *In some of the encampments the tents were too much crowded.*

This was true both of the space allotted the tents and of the number of men occupying each tent. In some instances the tents of the same company were so close together as to leave no space between them, and those of two adjacent companies were crowded together back to back. Inasmuch as none of these commands were in the vicinity of any hostile camp, this overcrowding seems to have been wholly unnecessary. In some of the commands at Chickamauga the tents were not shifted, but stood continuously on the spot where they were pitched in May until the command left late in August.

39. *Medical officers should insist that soldiers remove their outer clothing at night when the exigencies of the situation permit.*

With from twelve to sixteen men in a tent, all sleeping in the clothes worn during the day and possibly with some of them soiled with infected fecal material, the effect on the general health certainly could not have been beneficial, and the possibility of the dissemination of the infection must be admitted. If privates in the ranks would give as much attention to personal cleanliness as officers do, and if they were furnished with quarters in which they could keep themselves clean, typhoid fever and other infectious diseases in armies would be greatly decreased. As I have already stated, our investigations show that tent infection must have been an important factor in the distribution of typhoid fever.

40. *Malaria was not a prevalent disease among the troops that remained in the United States.*

We have shown in our report that blood examinations for the plasmodium of malaria made by competent men at Chickamauga, Knoxville, Camp Meade, and Jacksonville, show that malaria was a rare disease among the troops that remained in the United States. This disease was undoubtedly more common in some of the camps than the blood examinations would indicate, because these were made for the most part on hospital patients and not on those who merely reported to the regimental surgeon, were given quinin, and were returned to duty in a day or two. The malaria that did exist in the national encampments in this country yielded readily to quinin, and the cases that did not yield to this treatment were not malaria.

41. *The continued fever that prevailed among the soldiers in this country in 1898 was typhoid fever.*

There is no evidence that any other continued fever was found among the troops that remained in the United States. One surgeon claims that dengue prevailed in his regiment at Chickamauga. I think it quite impossible for dengue to have prevailed in one regiment, while all other troops of two army corps encamped at the same place escaped this disease." It was claimed by some that the continued fever prevalent at Chickamauga differed from typhoid, and that it was a disease peculiar to the place; it was designated "Chickamauga fever." That the continued fever prevalent in our camps in 1898 was typhoid fever is demonstrated by the following facts: *a.* When the temperature-curve was not vitiated by the use of antipyretics, it was that of typical typhoid fever. *b.* The fever was not broken or arrested by the administration of quinin. *c.* The death-rate was that of typhoid fever. *d.* Whenever a post-mortem examination was made, and the total of these was considerable, the characteristic lesions of typhoid fever were found.

42. *While our investigations show that coincident infection with malaria and typhoid fever may occur, the resulting complex of symptoms does not seem to be sufficiently well defined and uniform to be recognized as a separate disease.*

In our report we have devoted a special chapter to this subject, and I will be compelled to refer those desiring detailed information to this.

43. *About one-fifth of the soldiers in the national encampments in the U. S. in 1898 developed typhoid fever.*

Among 44,803 officers and men in regiments of the First and Third Army Corps, the records of which we have carefully studied, the number of cases of typhoid fever according to our estimate was 9660. This is equivalent to 21.56 per cent. In the Fourth Army Corps the percentage seems to have been somewhat less. However, the records of some of the regiments of this

corps were not well kept, and we can not be so positive concerning the number of cases.

44. *Army surgeons correctly diagnosed a little less than half the cases of typhoid fever.*

The total number of probable cases of typhoid fever among the regiments studied in Chickamauga was 9660. Of these 4068 were diagnosed typhoid fever either by regimental or hospital surgeons. Most of the cases improperly diagnosed were sent to general military hospitals, or to civil hospitals with the diagnosis, "malaria." In 80 out of 85 cases sent from the Fifth Maryland to civil hospitals in Baltimore, the diagnosis was changed from malaria to typhoid fever. Of 98 cases sent from the Eighth New York to hospitals in New York City, all were recognized as typhoid fever by the physicians in the hospitals, while the majority of these had been entered on sick reports under other diagnoses. The failure of regimental surgeons to properly diagnose many cases of typhoid fever is easily explained. Orders required, very properly, that every man sick for forty-eight hours should be sent to the division hospital. It will be seen from this that the cases were not under the observation of the regimental surgeon for a sufficient time for him to make a diagnosis. There is also some excuse for the failure of the surgeons at the division hospitals to recognize all the cases of typhoid fever. Many of the less severe of these cases remained in hospitals for a short time, and were furloughed home, or forwarded to some general hospital. Moreover, we have shown in the body of our report that, in recognizing nearly one-half the cases of typhoid fever, the army surgeon probably did better than the average physician throughout the country does in his private practice.

45. *The percentage of deaths among cases of typhoid fever was about 7.5.*

Of the 9660 cases already mentioned as occurring among certain troops at Chickamauga, 713 died. This gives a death-rate of 7.38 per cent. This corresponds closely with the death-rate for typhoid fever in those places in which most accurate records have been kept. In the city of Hamburg, during the years 1886-87, there were 10,823 cases with a death-rate of 8.5 per cent. Brandt has collected 19,017 cases treated by cold baths with a mortality of 7.8 per cent. Of 2293 cases treated in some of the larger hospitals in this country in 1897, 9.24 per cent. died. Further details concerning the mortality in typhoid fever are given in our report.

46. *When a command is thoroughly saturated with typhoid it is probable that from one-third to one-quarter of the men will be found susceptible to the disease.*

I am inclined to believe, but desire to state it as an opinion, that typhoid fever disappeared in some of the regiments only after all the susceptible material had been exhausted. This was probably true in all regiments which had 400 or more cases.

47. *In military practice typhoid fever is often apparently an intermittent disease.*

This fact is shown especially in the study of the Eighth New York. Please bear in mind that I state that typhoid fever is apparently an intermittent disease. I do not mean that the apparent intermissions are afebrile; I only mean that the men sick with this disease had periods of improvement which were so marked that regimental surgeons often returned the men to duty, probably at the request of the men themselves. We have discussed this very fully in our history of the Eighth New York.

48. *The belief that errors in diet with consequent gastric and intestinal catarrh induced typhoid fever is not supported by our investigations.*

This belief, which was formerly held by many, is founded on false conclusions arising from erroneous conceptions of the etiology of the disease. Moreover, the early symptoms of typhoid fever are often confounded with those of simple gastrointestinal catarrh.

49. *The belief that simple gastrointestinal disturbances predispose to typhoid fever is not supported by our investigations.*

The members of our board began their investigations with the belief, which seems to be quite generally held, that acute diseases of the gastrointestinal tract render the individual more susceptible to subsequent infection with typhoid fever. However, our studies have forced us to come to the following conclusions concerning the relation between typhoid fever and preceding temporary disorders, including those diagnosed as diarrhea, enteritis, gastroenteritis, gastroduodenitis, intestinal catarrh, gastrointestinal catarrh, gastric fever, and simple indigestion: *a.* The temporary gastrointestinal disturbances of May and June had but little if any effect on subsequent infection with typhoid fever. *b.* The temporary gastrointestinal disturbances of July and August, instead of predisposing to typhoid fever, gave a certain degree of immunity against subsequent infection with this disease. In our report we have attempted to give an explanation of this.

50. *More than 80 per cent. of the men who developed typhoid fever had no preceding intestinal disorder.*

In 2763 cases in which this point was especially investigated, 2356 were not preceded by any intestinal disorder.

51. *The deaths from typhoid fever were more than 80 per cent. of the total deaths.*

The percentage of deaths of typhoid fever to total deaths is not so high if we accept the diagnoses given in the official reports.

52. *The shortest period of incubation in typhoid fever is probably something under eight days.*

This statement is founded on data obtained by a study of typhoid fever among the hospital corps, men and women nurses at Chickamauga. The details are given in our report.

53. *One who has lived in a camp in which typhoid fever is prevalent is liable to develop this disease any time within eight weeks after leaving such a camp.*

The particulars bearing on this statement are given in our history of the Fifth Pennsylvania.

SECTION ON PRACTICE OF MEDICINE.

ADDRESS OF THE CHAIRMAN.*

BY GEORGE DOCK, M.D.

ANN ARBOR, MICH.

We meet again for the consideration of a well-filled program. The number of papers is considerably less than last year, but is still so large that, allowing for the usual proportion of authors unavoidably prevented from appearing, our time must be economically used in order to get through. An effort has been made to group papers on allied topics so that the discussion may be directed to the series, and repetition avoided in that way. In most cases the topics for the groups were arranged

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by the officers of the Section. Other set discussions on chosen topics were projected, but for various reasons could not be carried out as planned. The officers of the Section take not a little pride in the large number of abstracts and synopses published in the program. The utility of these in preparing members of the Section for the best appreciation of papers, and in bringing out pertinent comments and criticisms, seems obvious. For the benefit of future progress, attention may be called to the advantage of making the abstracts as short as possible. This can be done better by the author than by the Section officers or the editor of THE JOURNAL. It would seem that about 100 words should be the limit.

The number of papers on our program leads to the question whether it is not advisable to form a new Section, in order to take up part of the work, and interest will naturally be directed to the unofficial Section on Pathology, of whose existence you already know. There are a number of thoughts that may be expressed in this connection. In general, it seems better to have a few sections as possible in an association made up, as this one is, largely of general practitioners. Yet such is the amount of material that specialization is certain to press its claims in various directions. So far as the proposed new one is concerned, there is a doubt in the minds of some as to the scope intended, due to the various meanings given the term "pathology" and also to the activity of the Section officers. If we take away from the existing Sections on special pathology and therapeutics all their papers devoted to pathologic topics, and place these in a group by themselves, we emasculate the former. Perhaps there is no greater need, not only in medicine, but also in surgery, gynecology and various other branches, than the constant repetition of the principles of pathology, the assertion of the anatomic, physiologic and chemical basis of diseases and the cultivation of positive standpoints in these branches. For the specialist in pathology, such a section might doubtless be a source of much interest, but even he might gain something by annual contact with the clinical workers in hospital and general practice, that he would not find in a special section.

On the other hand, a section devoted to experimental pathology might be useful, still more so one in which general pathologic problems might be considered and where, in addition, specimens might be exhibited, methods demonstrated and apparatus shown. So far as the exhibition of anatomic specimens is concerned, it seems to the speaker that these should be selected with special reference to their importance in pathology or to the method of preparation or preservation. With energetic Section officers, such as were wisely selected for this year, the results would be of great value. It might also be useful to limit the source of such specimens each year to the section of country in which the meeting is held. In this way not only would the labor, expense and risk of distant transportation be avoided, but a general cultivation of anatomic work excited, and, combined with a practical exhibition of apparatus, a more rapid diffusion of methods of all kinds set up.

The chairman of a Section in the year completing a century should be pardoned if he falls into the mood natural to such an epoch. At the end of this century, nothing could be more agreeable than to recount the great discoveries that have made it, in medicine, more interesting than any that have gone before. But all these things have been told and retold by more eloquent tongues,

and there is another operation that is often more useful though not so pleasant—the examination of the past with a view to facing the future with more certain glance. Socrates held that an unexamined life was not worth living. The same thought might be applied to a profession, and although I would not give the impression that, like Socrates, I have a divine command to examine medicine, the chair in which your favor has placed me may be held responsible for any seeming impiety on my part for attempting it.

Not long ago, in talking with a master of one of its most successful technical subdivisions, my friend remarked that medicine was becoming daily more easy. Against the word "easy" I had to protest, though realizing what was meant. So far from growing easier, the art as well as the science of medicine grows daily more difficult. It is more certain, more thorough, more far-seeing and more far-reaching than ever before, but it requires of its votaries more knowledge, more technical dexterity, greater expenditure of time and greater lucidity of judgment than ever before. We have only to point to any one of the commonest diseases to make this clear. Take a case of typhoid or malarial fever, or of pulmonary tuberculosis, and consider the numerous things to be done and to be thought about that twenty years ago were as far from our minds as was Aristotle's treatise on the constitution of Athens.

It is an interesting and to some a discouraging fact that, although medicine has made most remarkable improvements in this century, its influence over the layman seems less than before and waning rapidly. While it is becoming more positive, more candid, more accurate, the grossest delusions flourish. Not only the plausible nostrum-maker, but the palmist, the astrologer and the ridiculous therapeutic claims of a dozen half-crazed brains have their believers by the thousand. Not many years ago a favorite theme of semiscientific poets was the prediction of a rapidly approaching golden age, when the physician, trained in biologic laws, should occupy the place once held by priests and augurs, but wield his authority only for good ends. Failure in the consummation of this ideal need not make us despair of human nature. In a time of rapid advance it must happen that great differences exist between the trained and the untrained. Moreover, this is an age with little respect for authority. Not only now as before, *irrit der Mensch so lang er strebt*, but it is perhaps well for medicine that people no longer look on its real proficient with the faith of the savage in his medicine-man. Healthy skepticism can do us no harm, and we must remember that with all our advances we still have about us some relics of medievalism. The subject, however, is rather one for the psychologist than the physician, and at this time may be passed over for the consideration of one that affects us more directly, and we may venture to raise the question whether we have used to the best advantage the talents given us by this century, and whether we are likely to be prepared as well as possible for the revelations of the next. A few examples may be considered.

In the first decade of our century Corvisart again gave to the world what the preceding century had rejected. His translation of Auenbrugger's invention of percussion, enriched by his own brilliant commentaries, was soon enlarged and controlled by master minds in every country. For half a century this has been a method of undisputed value in the determination of the

existence and extent of a large number of important diseases. In the second decade Laennec opened up a new world with the stethoscope. This has been explored by all the great physicians of the last seventy-five years, in the face of argument and ridicule, and, with percussion, has helped to call attention to the value of inspection and other so-called physical methods of diagnosis, but how often do we see them all entirely neglected or carelessly used. Not only is the routine examination of the body frequently left undone, but even with marked symptoms on the part of the various organs accessible by these methods, either no examination is made, or it is made in a manner that would be ludicrous if the results were not often most serious. A striking example of neglect of physical examination recently came to my notice. One of my assistants found that a man who consulted him had a complete transposition of the viscera. The manipulations excited the patient's interest, and when he was told the state of affairs said he had been examined seven times for life insurance and been treated once for pleurisy, in a large city hospital, without having the condition discovered. In the third decade Bright showed the relation of albuminuria to kidney disease, and in the fifth Henle and others made clear the diagnostic importance of tube-casts. Though the actual value of these two discoveries has often been exaggerated, they are still essential in diagnosis, but how often are they neglected. Perhaps few fail to make use of tests for albumin in cases in which certain diseases are suspected, yet, as a routine measure, they are often omitted. As to casts and also other substances in the urine, such as blood, pus, and pathogenic bacteria, many physicians are as if these things had never been.

It is not difficult to explain the reasons for this state of affairs. One is indolence, but the most important is that the methods have not been acquired at the medical school; perhaps some of them have not even been seen by the helpless student. Even if the methods have been learned, the student often has not the fundamental knowledge that diagnosis means more than the naming of a disease. Satisfied if he recognizes, even vaguely, one clinical picture in a sick man, he fails to retain or acquire a mastery of diagnostic measures. The condition depends in turn partly on the absurdly large number of medical schools in the country. With from six to seven score of these the obtaining of students must be a more important matter than their training. One of the most certain hopes of the new century is that, comparatively early, many of the superfluous schools will become extinct. Along with concentration of labor in the schools and improvement in the previous preparation of students, we can confidently expect a notable change for the better in methods of teaching, for there has probably never been a time when teachers of medicine, as well as undergraduate students, were so critical in regard to methods as now.

Another topic worthy of examination is that relating to the more instrumental part of diagnosis—a thing that has within a short time assumed important proportions, but the various relations of which are often neglected. It is here especially that apparent ease tempts to superficial examination of the sick.

The many manipulations included under the general head of laboratory examinations vary so much in difficulty, in certainty and in weight as evidence that it is only natural that mistakes occur, yet these are so

vital that those concerned should be constantly on the alert to guard against them. How difficult it is to measure the importance of each laboratory fact in itself is often illustrated in practice. I have known of a surgeon being told that in a certain case an enlarged spleen was part of a leukemic process, and with the remark that he believed "clinical observation more trustworthy than instrumental diagnosis," he proceeded to open the abdomen. Another time the report on a sputum examination for tubercle bacilli is negative, but now, instead of relying on the clinical examination, too often sufficient, the patient is allowed to go on as if the negative examination had the same value in one case as a positive one in another. How often is it forgotten that laboratory methods must be learned as separately as any other specialty. No one would think that ability to feel alterations in the pelvic organs gives facility in the interpretation of ophthalmoscopic pictures, yet how often is it taken for granted that one who can cultivate tubercle bacilli can, without practice, detect malarial parasites, or that one who can see tube-casts can also be infallible in the microscopic distinction of primary and secondary anemias.

No doubt the unprepared but ambitious laboratory expert is partly responsible for the present state of affairs, but it would seem that the physician who calls on such an expert should select him with as much thought as he would an operating specialist. Often, too, the physician could control the work of the expert, either by asking for the proof or an explanation of the steps followed. Some time ago a bottle of specimens came to me after making the rounds of half a dozen microscopists. All the previous examiners asserted that the specimens were animal parasites, and their appearance to the naked eye—small, black, thread-like bodies, as they were—made this seem probable. A glance was enough to show that in fact they were the well-known vegetable spirals, the cause of error to so many microscopists in the last fifty years. Some comparisons made it practically certain that the tissue came from bananas. Yet this discovery, so easy to control, was ignored by those in charge. By a curious coincidence the patient herself came under my observation many months later, and on hearing my statement about the specimens, admitted an excessive consumption of bananas, the cause of so much trouble.

When the position and limitations of the laboratory worker are more clearly understood, his remuneration will be better regulated than now. In many places he will be part of a hospital staff, in a laboratory equipped for all kinds of work. In others he will have his private laboratory, and in still others, where the field is not so large, he will have the less brilliant, but not less useful and perhaps more interesting position of assistant to a busy practitioner of broad views.

An examination of the status of another great division of our art, that of therapeutics, is also well worth while in the last days of the century. In materia medica, this century, especially in the latter part, has been prodigal if not discerning. The extraordinary activity in the production of new drugs, though it may give us some that far outrank poppy and mandragora, also makes more difficult the judgment so essential to rational practice. So confused are our standards that it is often impossible to distinguish the wares of the professor of chemistry or pharmacology from those of the modern seekers after the philosopher's stone. In addi-

tion to the products of synthetic chemistry we have a new field in the long-unused animal kingdom. Here constant examination is necessary. It is not easy for the busy man to see how the so-called lymph of an alleged goat should not be as potent as thyroid extract. Serum, too, is a word that suggests potentialities of many kinds, though so widely applied that Virchow's jocular definition—"Serum is any fluid that is not precisely urine"—seems peculiarly apt. One hopes that the end is near when discoverers are driven to such names as "hydrogogin" and "anusol," but the possibilities of the prefix "eu" temper the hope considerably.

No doubt the commercialism of the day is partly responsible for the present state of this branch of medicine, but the medical profession has a heavy load of guilt. I am credibly informed that in a large factory of preparations used only by the profession, thirty clerks are kept busy answering letters from doctors in regard to the treatment of particular cases in practice. These clerks make no pretense to a knowledge of medicine, or even of drugs. They have their trade catalogue, from which they readily secure the desired information. But will this tendency stop with therapeutic problems? Will not diagnostic and pathologic questions also be given the manufacturing pharmacist for solution, and will he be so blind to his own interest as to remain silent? We can gather some idea of this in some recent literature on the important subject of vaccination, a subject strangely neglected in medical schools and scientific laboratories. In this we learn of *vaccinia sine eruptione* as a satisfactory explanation of what would strike a critical observer as a complete failure of the virus. No wonder that "a boy living in the infected district," who performs the operation, is put forth as a witness concerning a matter of which Jenner himself might not be competent to judge.

Therapeutic false prophets will last long into the twentieth century, but the examined, criticiised life then, as ever since the days of Hippocrates, will be but little influenced by them. To it, "they come like water and like wind they go."

IMPROVED METHODS AND DETAILS IN THE CARE OF PATIENTS DURING SURGICAL OPERATIONS.

BY FENTON B. TURCK, M.D.
CHICAGO.

Surgery has reached so high a state of perfection in technique, in toilet and in the care of the patient before and during operation, that there would seem to be nothing left for improvement. Notwithstanding our apparently perfect precautions, however, the surgeon occasionally loses cases through septic infection, shock or other causes.

In the case of septic infection, the surgeon is bewildered in the attempt to determine the source of infection. "The operation is successful but the patient dies," sometimes as the result of infection, sometimes from shock, oftentimes from both. The object of this preliminary report is to present a few facts that may indicate some of the subtle causes of infection and shock occurring, though all the usual precautions have been taken. In operating on the abdomen, the skin is found to be a source of infection. Welch and others have clearly shown that bacteria are still found in the skin, even after all the usual preparations have been made. I have made a number of cultures from the skin

before and after operations by various surgeons, as well as in cases of my own. The method was to take cultures from the operative area after the usual aseptic preparations of the skin had been made. After the incision cultures were made from the wound and from the peritoneal cavity. The operation completed, cultures were made from the superficial area, the skin, the deeper connective-tissue layer, the peritoneal cavity and the laparotomy sheets and towels. The result of the bacteriologic investigation was positive in each case and confirmed the observations made by others. The detailed results of my bacteriologic work are reserved for a more complete report.

The laparotomy sheets and towels, as they become wet, are capable of transmitting infection from the field to the edge of the wound and peritoneal cavity. The indications are, therefore: 1, to prevent, as far as possible, infection from the skin and contact with the skin, with the hands, instruments, sponges, etc.; 2, to protect the skin from becoming contaminated by pus or visceral contents. To meet these indications I have devised an improved laparotomy sheet made from thin rubber dam which is fitted close to the body and is illustrated by the accompanying cut (Fig. 1).

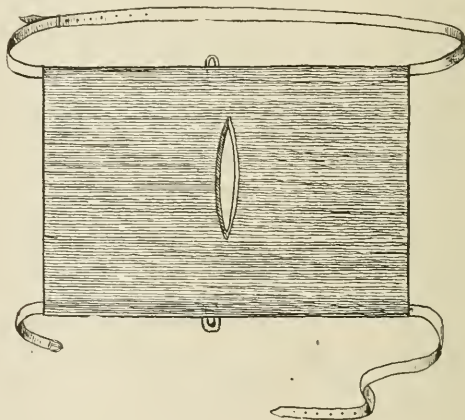


FIGURE 1.

The advantages of this rubber protective are that it not only lessens the danger of infection from the skin, but prevents the latter from becoming contaminated. It also prevents the loss of heat by evaporation from the exposed area of the body, thus lessening danger of shock. The use of the protective does not prohibit the additional use of the linen laparotomy sheet. The former is so arranged as to fit closely and does not interfere with the field of operation.

Some surgeons consider it necessary to protect the edges of the wound by suturing the peritoneum to the skin. This requires considerable time, and as the stitches are usually placed at some distance from each other, the edges are not entirely protected. If the rubber sheet be folded and under the edges of the wound, it may be clamped and held in position after the removal of the hemostatic forceps; the clamps act at the same time as self-retaining retractors, which may be used at any moment. This is shown in Figs. 3 and 3a.

Having presented methods for protecting the viscera from infection by the skin, the next important consider-

ation is the protection of the abdominal cavity and the edges of the wound from any possible danger of infection that may arise from opening the viscera, as in operations for gastroenterostomy, enteroanastomosis, cholecystotomy, etc. When a pus cavity exists in the abdomen it is often impossible to avoid peritoneal infection. As an

the shield or protector entirely overlaps the edges of the wound, the two portions, stomach and intestines, are entirely excluded from the peritoneal cavity. When the

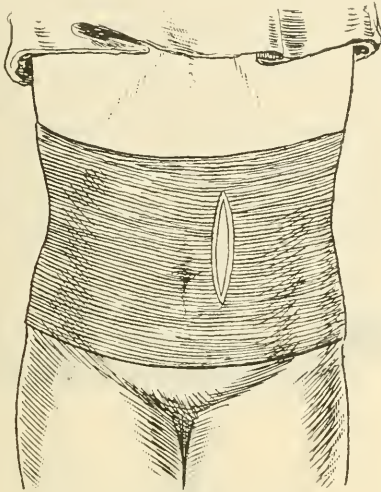


FIGURE 2.

illustration of the method for preventing this infection, the operation of gastroenterostomy may be taken.

A square sheet of rubber dam is made with two small openings which are reinforced by a rubber band forming a collar, as shown in Fig. 4. The openings are about

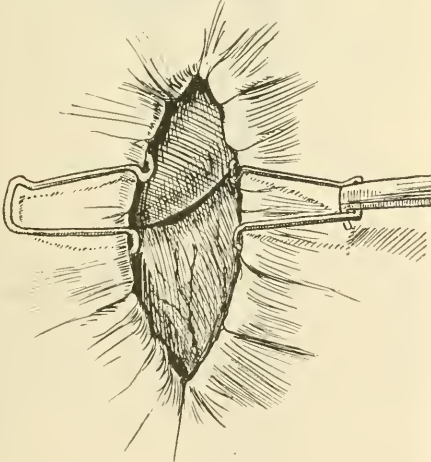


FIGURE 3.

three to six inches apart. The protector or shield is laid over the abdominal wound, and the portion of the stomach to be incised is drawn through one of these small openings, which stretches and hugs closely the protruding viscus. The loop of intestines selected for the anastomosis is drawn through the other opening. As

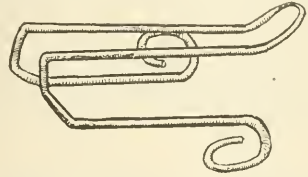


FIG 3a.—The self-retaining retractor and clamp.

viscera are opened for the anastomosis, the contents can not possibly gain access to the cavity, or come in contact with the rest of the viscera. This is well shown in Fig. 5.

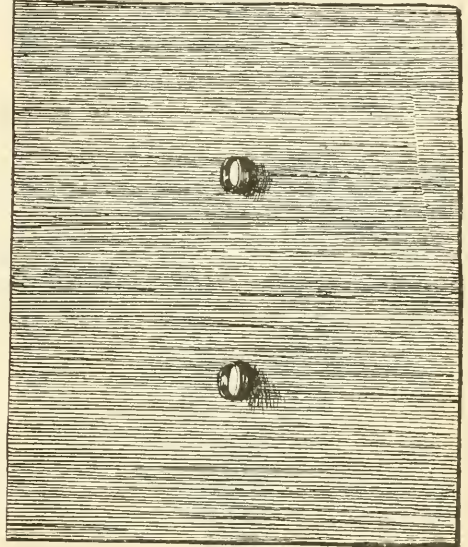


FIGURE 4.

The constriction band around the viscera not only prevents the gastric or intestinal contents from contaminating the wound, but also prevents any considerable

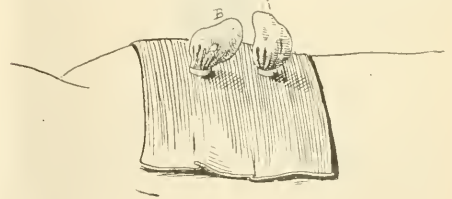


FIG 5.—A, stomach; B, loop of intestine.

escape of the contents. Acting like clamps, but without undue pressure, it at the same time prevents hemorrhage

—a very important point in operating on the stomach. The completion of the anastomosis is shown in Fig. 6.

The operation completed, the entire shield is slit open with scissors, the viscera set free, and replaced in the abdominal cavity. The principle involved in other operations, such as end-to-end anastomosis, is the same. In cholecystotomy, or any operation of like nature, a shield with one opening only is used. In all the various operations where this method is serviceable, gauze may be used in addition to the shield. When gauze is used

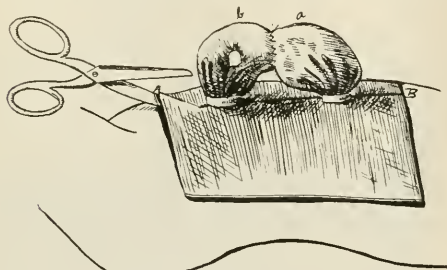


FIGURE 6.

alone in the cavity there is great risk of infecting the viscus, whereas by this method the rubber dam can be kept perfectly clean, at the same time absolutely "walling" off, and excluding the operative area from the rest of the field. Where this special field or protector is not available¹ one may be improvised by using a new rubber dam of medium thickness. A small round hole is punctured at the points desired, and the viscera drawn through as described above.

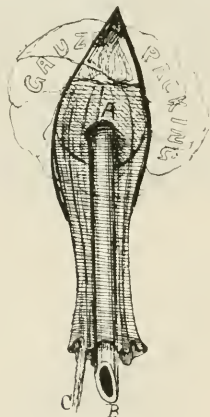


FIGURE 7.

The advantages claimed are: 1. Absolute shutting off of the abdominal cavity from the danger of infection; from the escape of visceral contents and pus; and from any outside influence. 2. Preventing the escape of the visceral contents. 3. Preventing or checking hemorrhage. 4. Protection of the viscera from trauma in handling. As the rubber-covered viscera are grasped and not the viscera directly there is less danger of injury. Furthermore, as the viscera are held in position by this simple method, much tugging and pulling in holding

¹. Made for me by Miller Rubber Mfg. Co., Akron, Ohio, and sold by dealers.

them in the wound is avoided. This is a decided advantage in preventing shock. 5. As the viscera are covered in with rubber, there is no evaporation—no desiccation or loss of heat—which is another important factor in the prevention of shock.

Another valuable protective device, though not so serviceable as the foregoing, is that which I have named the rubber drainage coffer-dam. It consists of a thin rubber cylinder and is used as a protection against leakage. Around the drainage-tube at the point of insertion—as for example in cholecystotomy where drainage of the gall-bladder is desired—the thin flexible cylinder is stretched around the neck of the gall-bladder, and fits snugly to the outer wall, but not with sufficient pressure to shut off circulation. A few stitches hold it in place. The drainage-tube is then inserted within the rubber cylinder and stitched into the gall-bladder in the usual manner. Between the inner drainage-tube and the rubber coffer-dam, a few strands of the suture mate-

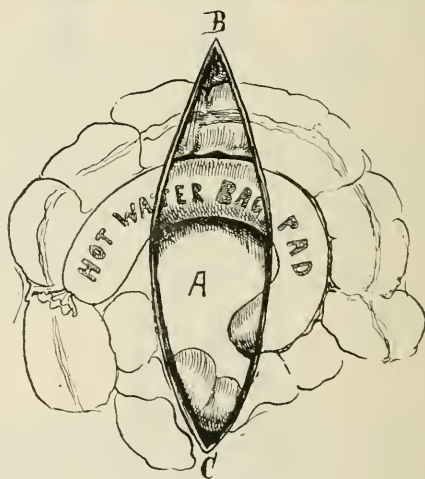
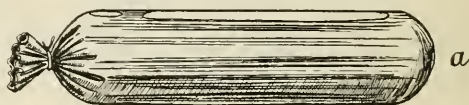


FIGURE 9.

rial are placed for drainage. The folds of the thin wall of the cylinder act also as capillary drainage-tubes. By means of the rubber coffer-dam, we are enabled to more completely shut out the peritoneal cavity. Gauze may now be packed around this coffer-dam in the usual way. This device with some of the various modifications and sizes of thin cylinders may be used in other operations and is shown in Fig. 7.

In abdominal operations, when we have used every precaution against infection, we still have another threatening factor—shock.

In operating on the upper abdominal area, in liver, stomach, or intestinal operations, this factor of shock is a constant menace to the life of the patient, and a great source of anxiety to the surgeon, however perfect his technique may be. In the above described methods I have called attention to the manner of preventing in-

juries in handling the viscera and methods of preventing desiccation of exposed viscera and loss of heat. The application of heat to the viscera is for the purpose of stimulation and it is usual to apply hot sponges for this purpose. The heat in the wet sponge is soon dissipated and instead of supplying heat the sponge abstracts it from the viscera and surrounding tissues. The sponge can not be changed frequently enough to keep up the temperature. To avoid this, I have placed within a gauze pad a small, thin, rubber, hot-water bag.² These are made in different shapes and sizes, adapted for various uses, as shown in Figs. 8a and 8b.

In some cases the gauze is not needed for absorptive purposes, but simply for holding back the viscera. The hot-water bag alone may then be inserted into the abdominal cavity and a ring may be formed such as shown in Fig 8b, and surrounding this a plain gauze sponge may be placed. This acts as a coffer-dam for the operative field.

The rubber bags to be placed within the abdominal cavity may be rendered absolutely sterile, then partially filled with sterile water and heated in the receptacle or

and those placed within the abdominal cavity. The value of the heat obtained from hot water introduced into the abdominal cavity is well known, also that it is necessary to maintain heat. But there are many objections to water placed directly within the abdominal cavity. The danger of spreading infection is especially important, and it has been claimed that some of the evil results are due to "flooding" the endothelial layers of the peritoneum. With the hot-water rubber pads we possess all the advantages of heat stimulation to prevent shock and none of the above disadvantages. To keep these rubber abdominal pads or sponges at the desired temperature, a receptacle is used containing water and surrounded by a water-jacket. This also keeps count of the sponges used. (See Fig. 9.) Each time the lid is raised it is connected with a small apparatus which rings a bell and registers one, two, and so on. By this automatic registering of the number of sponges taken from the receptacle a perfect check is kept.

The advantages of the hot rubber sponge pads are:

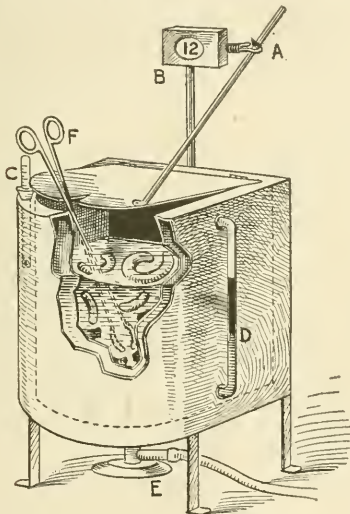


FIG. 9.—A, rod connected with coverlid; B, register; C, thermometer; D, water gauge; E, burner; F, forceps.

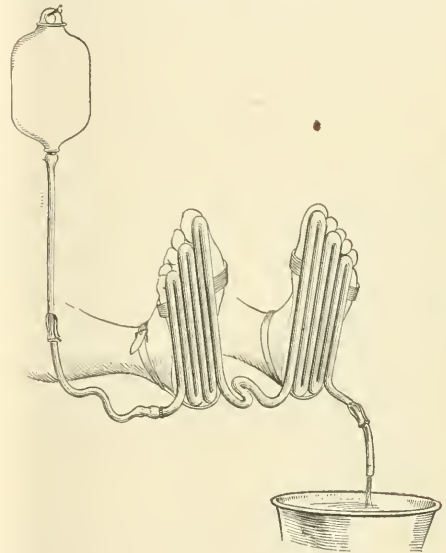


FIGURE 10.

bath to the desired temperature. The degree of temperature which I have found most useful is about 48 C.—118.4 F. A thermometer placed in the water-bath regulates the temperature of the sponge pads and bags. (See Fig. 9.)

There must be a distinction made between measures used in the prevention of shock, where this is imminent, and those used where profound shock is present. In all measures for preventing shock the application of heat is one of our most valuable agents.

In previous contributions on this subject³ I have shown that splanchnic congestion in shock is most readily reduced by the application of heat to the splanchnic area. The methods of application are already quite well recognized, such as the use of intragastric hot-water bags,

1. The continuous application of heat at the required temperature.
2. These hot-water rubber abdominal pads or bags are soft and yielding like a water-bed.
3. They can be changed at will and can be removed through a small opening.
4. At the end of the operation, before closing the abdominal cavity, a hot-water rubber pad is placed in the cavity under the line of the closure. A small gauze pad is placed over this to catch any blood discharge. This bulges the walls upward sufficiently for the more accurate closing of the abdominal wound. In removal the pad is partially pulled out through the small opening at the end of the wound; the water enters the extracted portion, and the bag is easily withdrawn, far more easily than gauze can be dragged out.

Another method for the prevention of shock is the stimulation of the soles of the feet. The plantar reflexes are already well recognized; the vasomotor effects are not so well understood by the general profession. Stim-

2. Journal of American Medical Association, June 11, 1896; Turck: Surgical Shock, *ibid.*, June 19, 1897.
 3. Proc. Am. Gastro-Ent. Ass'n., 1900. Turck: The Splanchnic Circulation and Its Relation to the Stomach and Intestines.

ulation of the terminal nerves results in more prompt and effectual action than when stimulation is applied to the nerve trunk. In experiments on dogs I have observed that heat stimulation applied to the soles of the hind feet produces a marked effect on the splanchnic circulation. When hot water is applied at the temperature of 50 C. it causes a marked contraction of the splanchnic vessels with a rise in blood-pressure. When moderate shock is produced in the dog it is possible to lessen it by the application of heat to the soles of the hind feet. When profound shock is established it requires more active measures, such as the introduction into the stomach of the hot-water bag at a temperature of 55 C.

In order to provide a practical and effectual means of applying heat at a constant temperature, to the soles of the feet during surgical operations, I have had made the hot-water-coil slippers shown in Fig. 10. These slippers have been of valuable service in the prevention of shock in my own experience. I now recommend them to surgeons in all abdominal operations. Even when shock is not imminent the use of heat applied to the soles of the feet is valuable. A good effect is produced on the circulation and better elimination is established.

NEURASTHENIA AND THE REST CURE.

BY FREDERICK A. MCGREW, M.D.

DAVIS, ILL.

The use of the rest cure as a method of treatment is rapidly increasing. "Retreats," "rest-homes," etc., are springing up in the neighborhood of cities in numbers almost rivaling the hospitals. In growing numbers patients with nervous complaints present themselves with a history of having "already taken the rest cure." Some of these have done so under professional advisement; others at their own discretion, or at the solicitation of friends. Some have been benefited, for without doubt it is a valuable resource in certain neurasthenic states. Some have escaped with no unpleasant effect other than an irksome sequestration; while others have returned with either a waning confidence in the judgment of their physicians, or a firmly fixed belief that their ailments are beyond the comprehension and reach of ordinary medical skill.

Considering the ill-defined scope of the term "neurasthenia," and the inexactness with which text-book and journal writers prescribe the rest cure for its treatment, it is not surprising that there should be many "cut-and-dried" rest-cure methods. Unless we desire this useful measure to come into disrepute, there must be a more definite knowledge of its proper use and limitations. And this means, first of all, the substitution of a working scientific basis in place of the prevailing haphazard fashion of disposing of troublesome neurasthenia patients.

From my observation of these cases in private practice, and during a service on the resident staff of the Alma Sanitarium, where the study of neurasthenia and its treatment is simplified by the number of cases for comparison, I have come to classify them under three heads, viz.: 1. Developmental neurasthenia. 2. Overstimulation neurasthenia. 3. Developmental plus overstimulation neurasthenia.

A long discussion of the symptomatology of each of these classes is foreign to the object of this paper. It will suffice for our present purpose to indicate the distinguishing features of the two primary classes, as the

third class partakes, in varying degrees, of the qualities of the other two.

Neurasthenia, whether due to abnormal development or over-stimulation, exhibits itself symptomatically in fatigue, especially that of brain and muscle. We rely on the history and the symptoms associated with fatigue in determining the class to which a given case belongs, and, as will appear, the course to be pursued in the treatment.

DEVELOPMENTAL NEURASTHENIA.

There are some individuals in whose lives a nerve asthenia is an evident and prevailing factor from the cradle to the grave. Most of them are the offspring of degenerate parents and the neurasthenia is inherited. Occasionally individuals are born with a constitutional nerve weakness which can be traced to no taint in the immediate or remote ancestry, and then it is due to some adverse influence during fetal life; some disorder of nutrition during the developmental period; some accident of labor; or perhaps, unhealthy environment and habits during the formative years of childhood. Neurasthenia due to abnormal development usually manifests itself at an early age, but is either disregarded by the guardians of the child, or they trust to time for a cure. Instability and imperfect balance characterize the activity of the brain and cord in these nervous children, who commonly combine an inability to sustain prolonged exertion with an unusual cleverness of thought and action.

The developmental neurasthenic who eventually comes under professional care is usually a woman of remarkably healthy appearance, who complains most of a chronic fatigue. Her other symptoms are various, indefinite, and legion. Many of them are not incompatible with health, many more are exaggerations of normal physiologic functions, but she readily discloses the fact that they are nearly, if not quite, all associated with exertion, and consequently with the fatigue which follows it. She appears well nourished, but her flabby muscles, weak heart, insufficient respiration, and languid air tell us more plainly than words, that under the superficial accumulation of unoxidized fat there are nerves and muscles, a heart, stomach, and other organs which years of indolence have made inactive.

It is quite evident that what such a patient needs is not rest, but *exercise*—such exercise as shall tend to harmoniously develop and strengthen every part of the physical organization. Much care needs to be used in inaugurating such a course of physical training, because self-confidence is at low tide, habits of mind and body are slow to yield, and a failure of persistent effort is not only easy but woefully discouraging. It is seldom possible to bring such patients sufficiently under the directing and moral influence of physician and nurse in their own homes, but oftentimes intelligent treatment in the routine course of an institution will bring about a comfortable degree of resistance to fatigue, and such an amelioration of the symptoms as amounts almost to a cure. The change of diet and surroundings, and the carefully graduated physical culture must be combined with stimulating and eliminative hydrotherapeutic measures and massage. And it may not be out of place to remark, that these patients should have the judicious sympathy of their attendants, and a ready attention to their petty complaints, that their cooperation and confidence may be secured; for without these latter it is needless to attempt a cure.

OVERSTIMULATION NEURASTHENIA.

In this class belongs the individuals born with nervous strength equal to their general organic hardihood, but whose baneful habits of life end finally in the exhaustion of their inherited nervous vitality. Habitual overstimulation is the physiologic expression of the cause. In contrast to the vast majority of the neurasthenias of development, which are inherited, those which result from overstimulation are all acquired.

Usually they are men in the prime of life, so far as years are concerned; business men worried by their affairs, troubled by sleepless nights and hurried days, until the brain fags and the nerves are "on edge." Equal strife for wealth and position, equal emergencies in business, responsibilities, exhausting labors, etc., do not exhaust equally the nervous vitality of different men, for the pace that kills the common horse only strengthens the thoroughbred.

To this class also belong the overworked and underfed student, the society "bud" who rests little from the excitement of her first seasons, the minister of the gospel who assumes too much work and responsibility, and all of that large element of American men and women who inherit nerve strength sufficient for the places in life to which they are born but insufficient for the strain which the circumstances of a more ambitious career throw on them. Any endeavor will sap the nervous force which drives the blood too fast and too long through the brain, exhausts its energy, gives it insufficient time for relaxation and repair, and takes from the remaining organs of the body the blood they need for removing the waste matter and restoring the wearing cells. Those who acquire neurasthenia usually suffer from indigestion and all the evils attending malnutrition and defective elimination.

When body and brain finally refuse to respond longer to stimulation, they strike, and "nervous prostration" is the result. We then have the lamentable spectacle of a "nerveless," melancholy, dyspeptic man with no confidence in himself and no abiding faith in others, tremulous, hesitating, incredulous, often suicidal. He is afflicted with insomnia, morbid fears, nervous chills, seminal emissions, flatulency, constipation, pain through the loins and back, weariness, and general debility. Digestion is deranged, malassimilation and malnutrition supervene, and a consequent loss in weight adds to the depression of his mind.

Evidently what such an individual needs is *rest*, as complete as it is possible to have, food for his wasted tissues and an opportunity for them to be restored. The rest cure is the treatment par excellence for the neurasthenia of habitual overstimulation.

In addition to complete rest and feeding, general massage, combined with passive movements; special abdominal massage; hot fomentations along the spine and over the stomach and liver; saline spongings, and general faradism are measures promoting elimination of fatigue and waste products and increasing the general muscular and arterial tone. This supplementary treatment is all sedative and nutritive, and should be given in the quietness and subdued light of the rest chamber, by a nurse adapted by disposition and training to care for rest-cure patients.

Some degree of gastric dyspepsia accompanies the neurasthenia of overstimulation. It exists in the form of a neurosis, and consequently presents as varying aspects as does the neurasthenia itself. An analysis of the stomach contents after a test-meal to-day may

show more or less hyperacidity, while a repetition tomorrow may show a subacidity or even an anacidity. The rest treatment of the neurasthenia benefits the gastric neurosis, and the recovery of the latter precedes or keeps pace with the former. Nitrohydrochloric acid and nux vomica should be administered.

Besides the psychic causes already enumerated, neurasthenia may be acquired in consequence of the derangement or misuse of the organs. Gastric hyperacidity and abuses connected with the sexual affections may be mentioned as especially frequent forerunners of the disease. The former, due to habitual gluttony, causes undue stimulation of the stomach to excessive secretion, and results eventually in gastric fermentation, starch indigestion, intestinal dyspepsia, and ptomain poisoning. Gorging, toxemia, increased acidity of the blood, and gastric irritability find expression in "nervousness," "fidgets," insomnia, "blues," lassitude alternating with periods of intense energy, and all the other symptoms of uricacidemia. The attack of so-called "nervous prostration" may finally come precipitately. Inability to control the hand in writing, or to concentrate the mental faculties to the business in hand, a wavering disposition, a lapsing memory, take the place of the energy, firmness, power of prolonged application, and general high-pressure activity that previously characterized the individual.

Gastric hyperacidity and the neurasthenia which follows it are benefited by the rest cure. The diet in these cases requires careful management, for most patients will need a dry one, restricted in amount, and with little residue, until the habit of prodigious stimulation under which the stomach has been accustomed to act, is broken up. Loss in weight is the rule, and a long course is often necessary to re-establish the organic functions on a healthy basis. Liberal draughts of mild saline waters are exceedingly beneficial in promoting nutrition and the elimination of the toxins from the body. Colonic flushings, to counteract the constipation and clear the large bowel, will be found valuable. They are stimulating to the circulation and sedative to the nervous system. But of all the adjuvant measures of utility in cases of neurasthenia accompanied by hyperacidity, the best one is gastric lavage, which should be given twice each week, at regular intervals, an hour before taking food. After the patient has emerged from the rest-cure chamber a rest of half an hour in recumbent posture should be strictly enjoined, and the stomach washings should be continued until the patient has recovered, though they may be diminished in frequency during the last weeks of convalescence. In the after-treatment only very moderate exercise should be taken and that not immediately after meals. Indeed, rest in bed for half an hour should be the rule after the noon meal until recovery is complete. This course differs from the method adopted for overstimulation neurasthenia from psychic causes, for there abundant exercise in the open air is enjoined, and the cultivation of athletic pursuits and calisthenic exercises advised.

There is a class of cases, common among women, in which neurasthenia seems to be closely connected with the sexual affections. In the psychic cases hitherto mentioned the intellectual faculties have played the greater part, but it is the emotional faculties which overreach the capacity of the individual's endurance. Psycho-sexual emotions are serious and frequent offenders. Excessive indulgence, sexual uncongeniality, and a trifling with various methods of preventing conception

are probable causes of emotional overstrain, with nervous prostration as a grave consequence. Unrequited love, love-longing, conjugal infelicity, and diseases disqualifying for sexual pleasure and gratification, have each their quota in the ranks of this class.

The rest cure, as outlined above under the treatment of overstimulation neurasthenia, meets every demand here, and recovery is likely to take place promptly. In cases connected with abuses of sexual intercourse, unless the physician assume the unwelcome task of teaching husband and wife the physiology of the sexual act, and it be then indulged in with moderation and to the mutual pleasure and gratification of both, relapses are likely to occur. Regarding the other conditions mentioned, little need be said, but any organic disease of the sexual organs, bladder, rectum, etc., should at once receive its appropriate treatment.

DEVELOPMENTAL PLUS OVERSTIMULATION NEURASTHENIA.

Either the developmental or the overstimulation element may be the chief factor in a neurasthenia in which both are concerned. The degree of nerve strain necessary to precipitate an attack of neurasthenia is in inverse ratio to the degree of developmental weakness. Just how much is due to insufficient nervous vitality and how much to the abuse of what vitality there is in any given case is a delicate matter to determine, and for the purpose of treatment an approximate estimate must be made.

In those cases in which loss of weight, dyspepsia, headache, neuralgia and other symptoms indicating a failure of nutrition accompany a history of recent nervous overstrain, the rest cure is the best thing, preliminary to subsequent treatment to develop nerve vitality as indicated above under the first class. On the other hand, with patients who have succumbed to a slight overtaxation of the nervous system, the overstimulation element may be disregarded altogether, and treatment for the development of nerve force instituted at once, and it is with this class that a sea voyage or a sojourn among the mountains proves most beneficial.

INTRALARYNGEAL INSUFFLATION.

FOR THE RELIEF OF ACUTE SURGICAL PNEUMOTHORAX.
ITS HISTORY AND METHODS WITH A DESCRIPTION
OF THE LATEST DEVICES FOR THIS PURPOSE.

BY RUDOLPH MATAS, M.D.
NEW ORLEANS, LA.

(Concluded from page 1375.)

HISTORY OF PULMONARY INSUFFLATION AS APPLIED TO
THE SURGERY OF THE CHEST.

It is difficult, if not impossible, to ascertain to whom belongs the credit of first suggesting the value of pulmonary insufflation in thoracic surgery. It is probable that the same thought occurred to many observers who were interested in the same problem simultaneously. As indicated by the preceding review of the evidence, it is plain that no originality can be claimed for the procedure itself, or even for the appliances used, since we see that the fundamental ideas have been thoroughly exhausted by a large number of investigators who during the eighteenth century developed the practice by successive contributions until it reached its maturity at the present time. In its surgical phases the thought of inflating the lungs to counteract the evil effects of

pneumothorax must have forced itself upon the attention of many of the practical surgeons of the modern period—the period of the Listerian renaissance—in which the feverish activity of the enterprising operators in quest of new fields of splanchnic conquest found itself blocked by this apparently insurmountable barrier in the thorax. They must have realized that while all the other conditions for success were ripe for the invasion of the chest this one great desideratum was still lacking.

In trying to discover when and where this suggestion originated, or where it was at least first put on record, we find that most of the references cluster about the period embraced from 1872 to the present time. Pean, the distinguished Parisian surgeon, is reported to have appreciated the importance of increasing the intrabronchial pressure in intrathoracic operations. In one instance in which he resected a portion of the sternum for the removal of a mediastinal growth he operated in a chamber much like a diving-bell, within which a pressure of two atmospheres was maintained. The operation presented great difficulties, and the patient died on the second day. I can find no reference to this case, but I quote it from H. Milton, of Cairo. (*The Lancet*, London, March 27, 1897.) Délorme, in a discussion at the Société de Chirurgie, Feb. 16, 1897, referred to M. Lambotte, a Belgian surgeon, as having advised, some time before him, the artificial inflation of the lung in surgical conditions. Délorme himself said that the need of an appliance to inflate the lungs had occurred to him when he first performed his operation of decortication and liberation of the imprisoned lung in chronic empyema. But the surprising manner in which the lung expanded spontaneously and filled the pleural cavity after it had been released from its confining shell of exudates, in his first case, and in another, operated upon by Lardy, of Constantinople, showed him that the expansion of the lung could be effected without the help of such appliances and by the efforts of nature alone. He believed that a sufficient increase in the intrabronchial pressure is obtained by the closure of the glottis in the paroxysms of cough that occur in the course of the operation. But that nature's unaided efforts are uncertain and can not be trusted under such circumstances is proved by other operators who, in more than twenty-seven instances of the same kind, have adopted Délorme's procedure. Cases of this class in which the lung is forced into activity after a long period of inaction, and when ample opportunity is given to the organism to accommodate itself to a crippled respiratory function, are not apposite to the acute conditions here considered, as in these the desideratum is to obtain a certain means of preventing acute pneumothorax in surgical operations. But it is to Tuffier and Quénu, with their associates, Hallion and Longuet, and to Doyen and to H. Milton, that we owe the chief debt of recognition for their scientific demonstration of the value of artificial inflation of the lung through the larynx for the prevention and relief of surgical pneumothorax. Tuffier and Hallion reported their first experiments to the Société de Biologie, November 21, 1896, and Tuffier read a paper on the same subject in the Société de Chirurgie in February, 1897 (*Bulletin et Mem. Société de Chirurgie*, February and March, 1897). The great merit of these observers is that they obtained the desired result by insufflating the lung through an intralaryngeal tube, and that they secured the necessary data by which to regulate the intrabronchial pressure with scientific accuracy.

*Read at the meeting of the Southern Surgical and Gynecological Association, held at New Orleans, November, 1899.

Coincidentally with Tuffier and Hallion's experiments with intubation, Quénu and Longuet undertook an extensive series of researches chiefly with the view of ascertaining the best means of securing pleural adhesions. Realizing all the difficulties which attended this procedure whenever it was attempted after collapse of the lung had taken place, they independently began to experiment with insufflation of the lungs by means of a cylinder of compressed air connected to a canula tied to the trachea. They also tried the simpler plan of making the animal breathe in an atmosphere of compressed air by enclosing the head in an apparatus somewhat like a diver's suit. Notwithstanding the manifest imperfections of their methods, as compared with those of Tuffier and Hallion, they convinced themselves of the enormous advantages of any procedure that will force the lung to remain in contact with the chest wall. They also observed the facility and safety with which the lung can be explored; and, in addition, the tendency to spontaneous hemostasis displayed by the lung when it becomes herniated in the parietal wound under these conditions. In conclusion, they state their conviction that it is in this direction that further efforts must be made if the surgery of the chest is to make further advances. Following closely on the studies made in France, Mr. H. Milton, of the Medical School of Cairo, Egypt, published an article on mediastinal surgery in *The Lancet*, London, March 27, 1897, pp. 1872-75, in which he describes an original procedure for the free exploration of the anterior mediastinal organs. He demonstrated in this communication not only that the mediastinal contents are accessible to the surgeon, but that, by tracheal insufflation with a bellows communicating in the trachea through a canula, the dangers of surgical pneumothorax could be overcome. This operation, called by him "the median normal thoracic incision," consists in a long incision which extends from the cricoid cartilage to the xiphoid appendix in the median line. He saws the sternum in half, and each half is forcibly retracted, leaving an open space between the bones four or five centimeters broad, which permits easy exposure and exploration of the trachea, the vessels at the root of the heart, innominate artery and veins, pericardium, bronchi, lungs and pleura. He first tried his procedure on a goat. In the course of the operation the pleura was torn, and fatal pulmonary collapse would have followed had he not resorted to direct insufflation through the tracheal canula, thus immediately distending the lungs and maintaining artificial respiration. He then closed the pleural rent, and the animal recovered without signs of very serious disturbance. Satisfied with this result, he operated on an Egyptian fellah, who had tuberculosis of the sternum and mediastinal glands. The patient recovered. He demonstrated by this case that even after the total suppression of costal respiration, which must follow the excision of the sternum, the diaphragm is quite sufficient for the needs of pulmonary respiration. Milton's merit consists not only in demonstrating the technical practicability of opening the anterior mediastinum as a route to surgical intervention in the human subject, but in the fact that he was one of the first, if not the first, to operate on a human patient with a thorough knowledge and appreciation of the value of insufflation in preventing the accidents of pneumothorax.

The experimental work done in France by Tuffier and Quénu was limited to dogs and other animals, and was done with imperfect instruments, but the practical.

ever-ready mechanical genius of Dr. Doyen, of Rheims, now of Paris, promptly grasped the possibilities of the method, and we now owe to him the first finished model of an intubating and insufflating apparatus for the systematic application of this treatment as a preventive of pneumothorax.

This apparatus was first described in his admirable treatise, "Technique Chirurgicale," pp. 129-133, which was published in 1897, and subsequently in a short article, "La Chirurgie du poulmon," which appeared in the *Revue de Therapeutique Medico-Chirurgicale*, Jan. 15, 1898, Vol. xlv. We presume that his invention was the result of independent studies on the subject, as he does not mention the researches of his contemporaries in his work. His apparatus consists in a set of intubation cannulas which fit into the glottis and are introduced by a special forceps.

These tubes have a close resemblance to the O'Dwyer tubes for intubation in diphtheria (he does not mention O'Dwyer, however), and are connected with a hand-bellows of his own device, which may be used either as an insufflator or an aspirator. The bellows is a double chamber which automatically injects and aspirates when closed or opened, by means of the vertical movements of the handles. One of the chambers receives air or oxygen, and the other the expired or aspirated air from the patient. It is not easy to describe the mechanical details, but the accompanying figure will give a clear idea of its appearance.

From all this we see that Tuffier and Hallion, Quénu, Longuet, Doyen and Milton were working at the same problem at about the same time; that is, in the course of three years they all arrived at the same conclusions independently of each other.

My personal experience in thoracic cases and the evidence I had gathered in the course of animal experimentation had long ago impressed me with the importance of acute pneumothorax as one of the most formidable bars to the successful issue of intrathoracic operations, and kept me alert for all practical suggestions to counteract it. But it was not until 1897, when I read an account of Tuffier and Hallion's experiments as reported to the Société de Biologie, November 21, 1896, that I realized that thoracic surgery was on the eve of a revolutionary innovation.

I was particularly impressed with the experiments on a dog in whose larynx Tuffier inserted through the mouth a long copper tube attached to a bellows. Artificial respiration being thus established, the pleura was freely incised through an intercostal space, and the edges of the wound were kept apart to allow air to enter freely. The pleural cavity was then illuminated with a small incandescent lamp, and it then became an easy matter to perform operations on the esophagus and pneumogastric nerve, etc., without interfering with the respiration. This and other dogs similarly treated survived several months without suffering serious disturbances. About this time I received a copy of the medical and surgical reports of the Presbyterian Hospital of New York for 1896, which contained a brief but excellent article on the use of the Fell-O'Dwyer apparatus for the treatment of opium narcosis in other non-surgical conditions in which prolonged artificial respiration was necessary to overcome the failure of the respiration. (See Fig. 5.) The reading of this article, together with the repeated demonstration of its unflinching and almost marvellous efficiency in similar cases, at the hands of our colleague, Dr. J. D. Bloom, at the Charity Hospital, immediately suggested to my mind a solution

of the difficult problem that had so long interested me. The suggestion grew upon me, but I had no favorable opportunity in which to try the apparatus. Still, I felt so confident in its reliability and future importance in advancing the interests of intrathoracic surgery that I made pulmonary insufflation with the Fell-O'Dwyer apparatus one of the main topics of my address as chairman of the section on surgery at the meeting of the Louisiana State Medical Society, held May 10, 1898.

The suggestions then made fortunately fell on fertile soil, and I am gratified at the thought that their correctness should have been so brilliantly demonstrated by my colleague, Dr. Parham, whose interesting and brilliant case of resection of the chest walls for sarcoma served as a basis for the exhaustive and learned monograph which he contributed last year with so much credit to himself and to the proceedings of this Association.¹

quired is: 1. A properly shaped tube which will fit in the larynx while it is steadily held in place by the hand of the operator. 2. A tubular attachment leading to a bellows which will furnish the requisite pneumatic power to distend the lungs. As stated by O'Dwyer in his commentary upon the original Fell apparatus, all that is required is to get air into the lungs and give it sufficient room to expand and time to escape; the power generated and stored up in overcoming the resistance to inspiration being amply sufficient to carry on expiration. This is precisely what Chaussier, Depaul, Marc, Gairal, Ribemont and a host of others practically ascertained long ago. Since no mechanical assistance is required for expiration, all complex pumps and bellows which alternately inflate and aspirate the lungs are superfluous and, if anything, disadvantageous. It is only in certain conditions that an occasional sustained aspiration may be serviceable in facilitating the expulsion of mucus, water or foreign bodies that may be present in the trachea, but these conditions are rare since the strong expiratory efforts which follow a forced inspiration usually accomplish all that is required without artificial assistance. No instrument of precision is needed in practice to measure the exact amount of air pressure that is required to distend the lungs. All that is required in practice is to observe the effect of the insufflation on the patient himself: the elevation of the ribs, filling of the intercostal spaces and bulging of the epigastrium. These tell us immediately when insufflation is doing its work. The depression of the ribs, sinking of the epigastrium and hollowing of the intercostal spaces tell us exactly when and to what extent expiration has occurred. It is only important that the apparatus should be provided with a bellows or an air-pump large enough to insufflate the amount of air that is required to fill up the lungs with one continuous movement. It is also important that the intralaryngeal canula should be large, for the free and unobstructed expulsion of the expired air. This is exactly what the apparatus devised by George H. Fell, of Buffalo, and modified by O'Dwyer will accomplish. The apparatus originally presented by Dr. Fell at the International Congress held in Washington, September 7, 1893, consisted simply of a hand bellows connected to a tube inserted in the trachea; this apparatus he modified himself by substituting for the tracheotomy tube a face mask which fitted closely over the nose and mouth; the air was thus forced into the larynx through the natural passages, and the expired air was allowed to escape externally by a side outlet in the injecting tube, the outlet being opened or closed by the finger of the operator. (See Fig. 9.) The disadvantages and uncertainties of the oro-nasal method have been so thoroughly pointed out by all observers from the most ancient times to the present that we need not insist upon them. Hence, we find that in cases in which the simple oro-nasal method is not satisfactory, Fell resorts to the tracheotomy. The additional dangers of tracheotomy led O'Dwyer to so completely modify Fell's appliance that the apparatus at present sold by manufacturers as the Fell-O'Dwyer apparatus is in reality an original instrument solely in virtue of O'Dwyer's modification. O'Dwyer's improvement consists in a long intubation canula that is fitted with a conical tip so graduated in size that it will fit almost any larynx. There are several laryngeal tips to fit the larynx according to ages. The conical tip is so designed that it will readily wedge itself into the glottis, and prevent air from escaping between it and the laryngeal walls. The proximal end

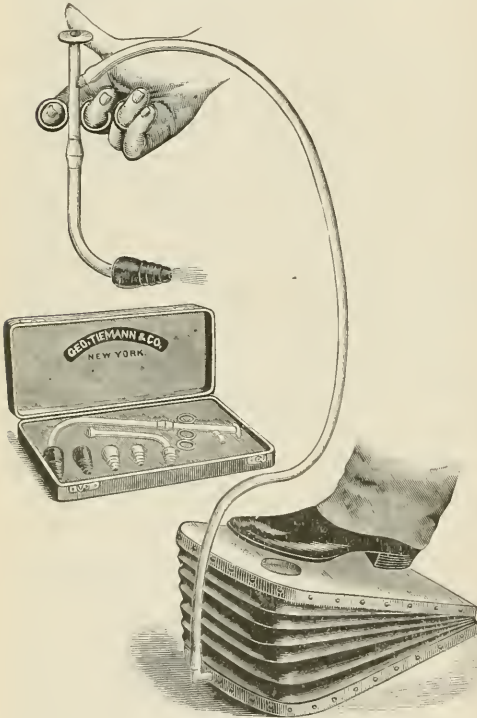


FIG. 5.

The original Fell-O'Dwyer apparatus as used in the Presbyterian Hospital of New York. (From "Medical and Surgical Reports of the Presbyterian Hospital," for 1896. See article by Dr. W. P. Northrup, p. 132.)

THE TECHNIQUE OF PULMONARY INSUFFLATION AS APPLIED IN THORACIC SURGERY.

The history of artificial respiration by insufflating the lung through an intraglottic canula would scarcely be complete without some reference to the technique of its application in the most recent phase of its development—thoracic surgery. Fortunately this is elementary in its simplicity, and needs but little experience for its successful application in practice. All that is re-

1. Thoracic Resection for Tumors Growing from the Honey Wall of the Chest, by F. W. Parham, M.D. Transactions Southern Surgical and Gynecological Association, vol. xl., 1899.

at the handle is practically bifurcated, one branch receiving the ingoing air from the bellows, the other branch, stopped by the operator's thumb (which acts as a valve), serves as an exit for the air. (See Fig. 5.) While I have shown in the historical part of this paper that the O'Dwyer apparatus as it is known at present has been anticipated in its individual constituent parts as well as in the principles of its action by many experimenters, it must be recognized that for simplicity and

bite of the patient. (The Doyen connecting tube is made of rubber, and can be easily compressed between the jaws.) As a whole, therefore, it is difficult to conceive any contrivance better adapted for its purpose than the O'Dwyer instrument.

Since its introduction in the Charity Hospital, Dr. Bloom has found it advantageous to modify the accessory or inflating part of the apparatus by several additions which deserve mention, as they save unnecessary exertion on the part of the operator and diminish the strain on the bellows. These consist in the addition of a long lever, which is used as a treadle to compress the bellows with the foot, and in the addition of a metallic cylinder which is fitted with absorbent cotton to filter the air as it passes from the bellows to the patient. (See Fig. 10, Dr. Bloom's modification of the Fell-O'Dwyer apparatus.)

In constructing an insufflating apparatus for my own use it also occurred to me that the original O'Dwyer apparatus could be advantageously modified for surgical purposes. As originally designed, the Fell-O'Dwyer

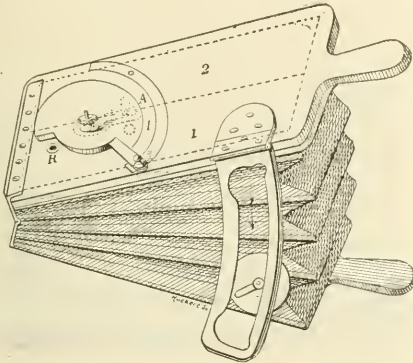


FIG. 6.

Doyen's compound automatic band-bellows for insufflation and aspiration of air in and out of the lungs. (From Doyen's "Technique Chirurgicale," p. 123.)

efficiency it has no rival. It is also quite original in some details of importance, more especially in the form of the tips, which are admirably adapted to fit the larynx of all patients and all ages and in the control of the outlet, which is opened and closed by the thumb of the operator, thus dispensing with all mechanical valvular arrangements.

O'Dwyer's instrument possesses several advantages over the apparatus designed by Doyen (see Figs. 6, 7 and 8): First, in the greater ease of its introduction; second, in the better adaptation to the various sizes of the glottic aperture through its graduated conical tips;

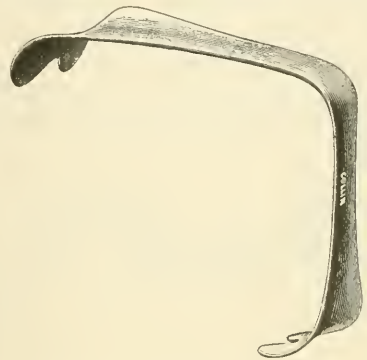


FIG. 8.

Doyen's tongue retractor for the application of intralaryngeal incubation. (Fig. 44, p. 123, "Technique Chirurgicale.")

apparatus was intended solely for non-surgical conditions, principally for the treatment of opium narcosis. Consequently no provision was made by the originators for the maintenance of anesthesia while artificial respiration was being applied. I have, therefore, altered the laryngeal canula by furnishing a branch and stopcock, which are connected to a rubber tube and funnel. The funnel is covered with a flannel screen, and is used as an inhaler, exactly as in the Trendelenburg canula.

The idea of administering anesthetics by intubation directly into the larynx is also a suggestion that has occurred to several surgeons. Junker, I believe, at one time referred to it, and illustrates an apparatus for the purpose, attached to his inhaler. Doyen uses a tube and funnel attached to his intubating canula, but has made no provision for this necessity in his insufflating apparatus. Our fellow and colleague, Dr. Souchon, in 1895, while experimenting with various methods of anesthesia in nasopharyngeal practice, tried to administer chloroform through an intubating tube, but owing to the imperfection of the instrument and other difficulties he did not persist in this direction. The advantage of combining an anesthetic apparatus which can be readily controlled, together with an intralaryngeal tampon canula and insufflating apparatus, can be easily realized by anyone who has given any thought to this difficult and formidable phase of surgery. I have also modified

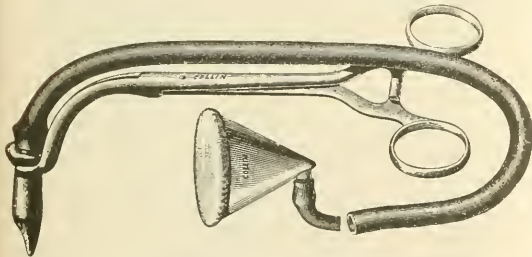


FIG. 7.

O'Dwyer's intralaryngeal tube and rubber connections, with funnel attached, for laryngeal tamponade and chloroform anesthesia. The cut shows the special forceps used to introduce the tube. The intubating canula may be used for direct air insufflation. (From Doyen's "Technique Chirurgicale," Fig. 43, p. 123.)

third, in the fact that it is a continuous resisting metallic instrument from the glottis to the handle, and requires no auxiliary forceps for its introduction; fourth, in the fact that it can be used as a tractor which favors the elevation of the larynx and steadies the tongue; fifth, in the fact that it can remain *in situ* and still permit of normal respiration or of artificial respiration when this is required; sixth, in the security that it furnishes against accidental obstruction by the

the O'Dwyer instrument by altering the shape of the handle; in the apparatus here shown (see Fig. 11, author's modification of the Fell-O'Dwyer apparatus), the handle is shaped like that of a pistol; this shape permits of easy traction on the larynx and root of the tongue, a matter of no small consequence in amputations and operations on this organ, which is very desirable to bring the vascular and less accessible regions of the base as near the line of the teeth as possible. In addition to this I have added a registering mercurial manometer which will gauge the actual amount of pressure required to inflate the lungs. While this is not essential, the addition of a gauge transforms the original empirical apparatus into an instrument of precision which will be helpful when the instrument is to be handled by unskilled or inexperienced persons. It is important that the operator should always remember that the safety of insufflation of the lungs rests largely upon the manner in which it is applied, and that violence, undue haste and excessive pressure are liable to defeat the very purposes for which the instrument is intended. Tuffer and Hallion demonstrated in their experiments that a pressure of 6 mm. mercury is all that is required to overcome the elasticity of the lung and equalize the air-pressure. They also determined that an intrabronchial pressure equal to 33 mm. mercury arrested respiration. Hence the importance of thorough instruction in these matters and the value of

palate, nose and nasopharynx, in which Kocher's pharyngeal tamponade is indicated, can be performed without risk of suffocation from the entrance of blood in the larynx, and without resorting to Rose's position.

Anyone who has attempted the removal of a vascular fibroma of the pharyngeal vault, or has tried the total extirpation of the tongue, will readily appreciate the value of an apparatus that will permit of easy respiration while the larynx is securely plugged.

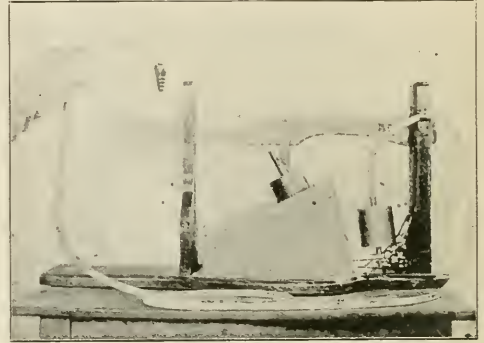


FIG. 10.

Dr. J. D. Bloom's modification of the Fell-O'Dwyer apparatus as used in the Charity Hospital of New Orleans. The following points can be readily noticed in the illustration: 1. Bellows for insufflating air. 2. Cylinder and tube over inlet of bellows. The tube may be attached to an oxygen gas bag or cylinder, in cases of asphyxia in which it is desirable to supply pure or diluted oxygen directly to lungs. 3. Cylinder filled with absorbent cotton to filter the air after it has escaped from the bellows. 4. Rubber tubing connecting bellows with intralaryngeal tube. 5. Intralaryngeal tube and handle. (Original O'Dwyer instrument.) 6. Treadle or lever operated by the foot to compress bellows. May also be used as a hand-lever.

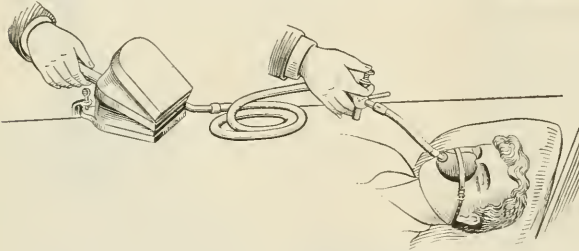


FIG. 9.

The original Fell apparatus for artificial respiration. (From Truax's "Mechanics of Surgery," p. 215.)

This shows the face shield and air central valve. In many cases of simple narcosis this apparatus will suffice, but for surgical insufflation of the lungs the intraglottic intubation attachment of O'Dwyer is indispensable. The hand-bellows devised by Fell, with hose and valve, may be used with the O'Dwyer intubator.

a manometer for teaching purposes. I have also modified the apparatus so that it is provided with one aspirating as well as insufflating valve. While the aspirating valve is rarely used, it may occasionally find application in cases of excessive clogging of the larynx with mucus, food, foreign matter, and other substances that may threaten life by their presence. Furthermore, the aspirating valve may be utilized to insufflate oxygen pure or mixed with atmospheric air.

In summing up the peculiarities of the apparatus that I have the pleasure of exhibiting to you I would call attention to the following facts:

The original O'Dwyer canula, while retaining its intralaryngeal portion unchanged, is modified so that it may be utilized: 1, as a respirator; 2, as a tampon canula; 3, as an anesthetizer; 4, as a tractor of the larynx and tongue; 5, as an insufflator; 6, as an aspirator. I need not emphasize the value of an intralaryngeal apparatus that, while allowing of anesthesia and artificial respiration, will also act as a laryngeal plug. In this way the complicating operation of tracheotomy is eliminated, and extensive operations on the tongue.

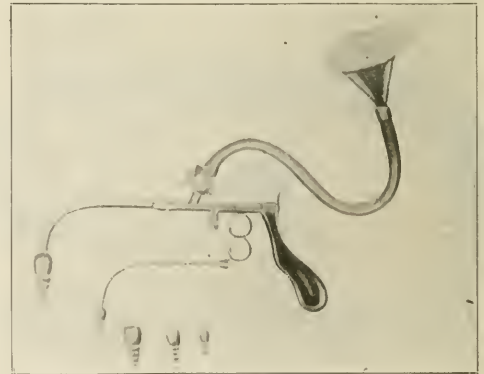


FIG. 11.

The author's modification of O'Dwyer's intubating apparatus for surgical cases in which artificial respiration or pulmonary insufflation may be required without anesthesia. The stopcock controls the supply of the anesthetic without interfering with the passage of air furnished by the bellows or air pump.

While I fully recognize the comparative rarity of the cases in which intralaryngeal tamponade is required, and I am the first to admit that with the help of a modi-

fied or mixed morphin-chloroform anesthesia and Rose's position, the majority of oropharyngeal operations can be performed without the aid of an intubating apparatus, I believe that there are occasions in the practice of every active surgeon in which such an apparatus as I have shown you will prove a veritable Godsend.²

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Therapeutics.

Correction.—In the item on "Pruritus Ani," in THE JOURNAL of May 26 (p. 1330), the word "varicosity" should be substituted for "pruritus" in the seventh line.

Carbonated Saline Baths in Renal Disease.

At the Twenty-first Congress of Balneology, held recently at Frankfort-on-the-Main, Leber (*Berliner Klin. Woch.*, April 2, 1900, p. 310) stated that, heretofore, in the treatment of chronic diseases of the kidney—contracted kidney—the greatest stress has been laid on reduction in the amount of albumin eliminated, and to this end, in addition to other dietetic measures, only white meat prepared in an unirritating manner and large quantities of fluid in the form of milk and alkaline waters were prescribed. In consequence of the monotony of the diet the appetite of the patient was not stimulated, and on the other hand, in consequence of the generous administration of the fluid, there was increased danger of relaxation of the heart, which is likely to occur even under the most favorable conditions in cases of contracted kidney. In order to avert the latter, and the greatest, danger, it has become customary within recent years to diminish and carefully regulate the amount of fluid given and to send the patients to resorts at which the carbonated saline baths employed in the treatment of diseases of the heart are available, and where all other forms of heart-exercises are employed.

Leber has treated a number of cases of renal disease according to these principles, particularly since two new springs have been sunk within two years at Hamburg, and which, in the amounts of saline matter and carbon dioxide that they contain, compare favorably with the best of the springs of like character. The cases included, with a few exceptions in which the compensation of the heart was still preserved, principally patients with contracted kidney already suffering from symptoms of cardiac asthma and dilatation of the heart. Keeping in mind the peculiar conditions of vascular pressure in cases of contracted kidney, in accordance with which an increase of the blood-pressure is present and a reduction in the blood-pressure takes place in conjunction with derangement of compensation, and in cases of obesity, most rigorous individualization is required with regard to the amount of saline matter and of carbon dioxide present in the water and of the temperature of the bath. In this way diminution in the area of cardiac dulness

was effected, with an improvement in the pulse as regards strength, regularity and frequency. As a further adjuvant in the treatment, sponging with tepid or cool water and systematic exercises were employed, the first only in a few cases in order to stimulate the peripheral and relieve the internal circulation, and the latter in all cases, although many authorities consider the systematic exercises contraindicated in cases of chronic nephritis and arteriosclerosis. Proper respiration during the exercises is of the greatest importance, and in some cases systematic respiratory exercises should at first take the place of all others.

For Hay-Fever.

- R. Zinci phosphidi gr. 1/16
- Quinina sulphatis gr. ii
- Ext. belladonna gr. 1/8
- M. Sig. One pill before each meal.

—Wells: *Medical Record*.

Sore Nipples.

- R. Balsam Peru
- Tinct. arnica, ãã 3ss
- Ol. amygdali express
- Aqua calcis, ãã 3ss
- M. Sig. Shake well, and apply to inflamed nipples with a camel's hair brush after cleansing them with borax and water.

—Scarff.

Treatment of Dysentery.

Gastinel has obtained excellent results from the rectal injection of potassium permanganate in dysentery, says the *Therapeutic Gazette*. He employs the drug in the strength of eight grains to the quart. Half of this quantity is given at a dose, and is allowed to remain in the bowel from half a minute to two minutes. The water is either cold or warm, according to the needs of the case. For the removal of large quantities of mucus in the bowel he employs an injection of a pint of water in which is dissolved thirty grains of sodium bicarbonate. This is followed by a permanganate injection, and after that has been given the patient is made to lie down and rest for at least half an hour, in order to secure immobilization of the intestine. It is claimed that by this treatment the pain and restlessness are diminished. In many cases it is only necessary to inject one or two ounces of fluid. Often it is wise to give a small dose of calomel for a time, to increase the hepatic activity. When children receive this treatment, one or two grains of permanganate to the quart of water is sufficient.

Hypodermic Use of Orthoform.

Dr. Florentino A. Loza says that the formula used in the military hospital at Buenos Ayres, for associating the analgetic action of orthoform with calomel, used hypodermically in syphilis, is as follows:

- R. Ol. of vaseline gr. 150
- Calomel gr. 67½
- Orthoform gr. 12
- M. Sig. From fifteen to thirty drops of this preparation have been used without signs of intolerance or intoxication.—*N. Y. Med. Jour.*

Varicose Ulcers.

Carl Beck uses a gelatin zinc cast in the treatment of varicose ulcers. The composition of the paste is as follows:

- R. Zinci oxidii 20 parts
- Gelatini 80 parts
- Glycerini 20 parts
- Aque q. s. ad 200 parts

—Med. Rev.

Pulmonary Emphysema.

- For twenty days in each month give with each meal:
- R. Potassi iodidi 10j
 - Aque, q. s. ad 300j
 - M. Sig. Dose teaspoonful.
- During the remaining ten days:
- R. Sodii arsenatis 10
 - Aque 300j
 - M. Sig. Teaspoonful.

Every eight days at bedtime take 10 to 15 gm. of aloes in a pill. Drink milk with meals and exclude tobacco and alcohol. If possible take compressed-air baths.

—*Jour. de Méd. de Paris*.

2. Since the reading of this paper and the exhibition of my apparatus before the Association, I have experimented with the view of substituting an air-pump operated by hand for the foot-bellows of the Fell-O'Dwver apparatus. The action of the pneumatic pump can be regulated with the ease and nicety of an instrument of precision, and, when combined with a manometer and aspirating valve, is more suitable as a permanent instrument for hospital use, where the frequent calls made upon the apparatus are not as likely to impair its efficiency as is the case with the ordinary bellows. This last model has not yet been completed, and is, therefore, not illustrated in this paper.

Alcoholism.

- R. Spts. ammon. aromat. ʒii
- Tinct. camphore. ʒiiss
- Tinct. hyoscyami. ʒiiss
- Spts. lavandule comp. q. s. ad. ʒii
- M. Sig. Teaspoonful every hour or two until relieved.
- Aitken.
- R. Zinci oxid. gr. xvi
- M. Div. in pil. No. xii. Sig. One pill three times a day.
- Morris.
- R. Zinci oxid. ʒi
- Piperine ʒi
- M. et. ft. pil. No. xx. Sig. One pill three or four times a day. (In chronic form.)
- Chapman.
- R. Tinct. capsici ʒi
- Tinct. zingiber. aa. ʒi
- Tinct. valeriana ammon. ʒi
- Tinct. gentiana co. aa. ʒi
- M. Sig. Take a desertspoonful in teacupful of hot tea three or four times a day.
- Gerhard.

Gonorrheal Epididymitis.

- In addition to local applications and rest in bed, the following, taken internally, acts most delightfully:
- R. Tinct. pulsatilla. gtt. xlviij
 - Syr. zingiberis ʒi
 - Aque, q. s. ad. ʒiii
 - M. Sig. A teaspoonful every hour or two.

Med. Fortnightly.

Care of Mouth, Throat and Nose in Typhoid Fever.

The nasal cavities and mouth should be washed out regularly and carefully with a weak solution of boric acid. If the patient is able to gargle, the following may be used to advantage:

- R. Salol gr. lxxx
- Tinct. benzoina. gtt. xxx
- Spt. mentha pip. ʒviii
- M. Sig. One teaspoonful in a glass of water as a gargle. Cleanse the tongue and gums frequently by means of a bit of absorbent cotton held in forceps, and wet with boroglycerin (10 per cent.). Introduce several drops of menthol vaselin (5 per cent.) or boric-vaselin (10 per cent.) into each nostril.

Ichthyol in Renal Tuberculosis.

Goldberg, in the *Berl. Klin. Woch.*, refers to Palet's statistics, and shows that of 136 cases of nephrectomy done for renal tuberculosis, 51, that is 40 per cent., died, and that only one-third of those operated on lived over one year. This is due to infection of other organs. He recommends ichthyol internally.

- R. Ichthyoli sulpho-ammoniac. ʒi
- Aque dest, aa. ʒ20

M.

Ten to seventy drops in water three times a day after eating. The larger the dose the sooner the curative action. Besides causing a general improvement, the local action was good—the hemorrhages ceased and the suppuration diminished, as did also the tenesmus and pain. It may be given for years.—*Ther. d. Gegenw.*

Pultaceous Sore Throat in Children.

For pultaceous sore throat in children, Dr. E. Monmarson presents the following, which is said to be very efficacious:

- R. Calcium permanganate gr. i-iii
- Aque dest. ʒv

M. Sig. For external use.

The throat is washed out with a very warm boric lotion every three hours during the day, and once or twice during the night. After each washing out the affected parts are painted with the above solution, care being taken to detach the false membranes, but without undue force.

On the second day there is said to be manifest improvement, and, in the majority of cases, the disease is said to be aborted; the use of an exclusively milk diet and the administration of a few doses of antipyrin completing the cure.

For Mumps.

- R. Ichthyol
- Plumbi iodidi, aa. gr. xlv
- Ammon. chlorid. gr. xxx
- Lard ʒi
- M. Sig. Apply to swollen glands three times daily.

Medicolegal.

Presumption As to Boy Under Fourteen.—The Supreme Court of Georgia holds, *Bird vs. State*, that if, in the trial of a boy charged with the offense of assault with intent to rape, it be shown that the accused is under the age of fourteen years, a presumption arises that he is physically incapable of committing the crime; and, where there is no proof to rebut such presumption, a verdict of guilty is contrary to the evidence and to law.

Statute Relative to Rape Constitutional.—The Supreme Court of Washington holds that the statute of that state making carnal knowledge of a female under the age of 18 years the crime of rape is valid, and a proper exercise of legislative power. It also holds, in the case of *State vs. Phelps*, that the authorities relative to the common law crime of rape are not applicable to the crime designated in the statute, so that it is sufficient if the information conforms to the terms of the statute.

Motive in Malpractice Case.—The Wisconsin statutory provision that no action for personal injuries shall be maintained unless notice in writing of the injury, stating the time and place of its occurrence shall be served on the person causing the injury, within one year after such time, the Supreme Court of Wisconsin holds, in *Meisenheimer vs. Kellog*, is in the nature of a statute of limitations, and does not make the giving of the specified notice a condition precedent to a cause of action for malpractice. One of the technical consequences of this is, as brought out in this case, that, being a statute of limitation an objection that the notice was not given must be taken either by answer or demurrer, or it is waived, and the court even doubts whether the objection can be taken by demurrer, under the present Wisconsin statute regulating the grounds of demurrer.

Concealed Venereal Disease in Wife.—In *Vondal vs. Vondal*, a suit brought by a husband for the annulment of a marriage, the Supreme Judicial Court of Massachusetts has overruled exceptions to a decree for the wife and denying the husband the relief sought. It says, in explanation, that, although, at the time of her marriage, the woman was afflicted with syphilis, and knew of her disease, and concealed it from the man to whom she was married, the disease at that time was probably not contagious and could have been so treated that it would not be communicated by contagion and so as probably to make her free from suffering any ill effects from the disease. It is to be presumed that she could bear children, although her offspring would probably have been affected by the disease. The marriage was followed by cohabitation for four months, and consummation must be presumed. In other words the court holds, as it itself states it, that the concealed existence of venereal disease of such a character in one of the parties to a marriage which has been consummated is not a sufficient ground for a decree of nullity of marriage.

Non-Expert Evidence on Insanity Not Curtailed.—Section 1870 of the California Code of Civil Procedure provides that evidence may be given of the "opinion of an intimate acquaintance respecting the mental sanity of a person, the reason for the opinion being given." Apparently resting on this, it was held, in the murder case of *People vs. Ellsworth*, where the sole defense was insanity, that acts and declarations of the defendant could not be shown by the testimony of an acquaintance unless counsel also asked the witness his opinion of the defendant's sanity or insanity; counsel for defendant at the time stating that he did not intend to ask questions of that kind of the witness. This ruling, the Supreme Court of California holds, was erroneous. Section 1870, it says, refers alone to cases where opinion evidence may be given, and in no way curtails the right of the defendant to show his acts, declarations, etc., as evidence tending to prove his insanity. Whether or not those acts and declarations are simulated, it adds, is a question of fact for the jury. Another point, which the supreme court

makes in this case, is that if fear that he was in great peril of his life working upon the defendant's mind in no degree partook of the character of a delusion, evidence of the fear, even if the latter was unfounded, was inadmissible as in any way tending to prove the defendant's insanity.

A Libel on Its Face.—A newspaper article, the Court of Appeals of New York holds, is libelous upon its face, where it charges a physician with a want of professional ability and integrity, and thus endangers the gain derived from his vocation. Such an article, it says, in *Krug vs. Pitass*, is one which, referring to a physician, as such, calls him a blockhead or fool, and appeals to all of the foreign-born population of a certain nationality in the city not to intrust themselves or their families to his professional care, when he so hates them that he would not help them if he could. These words, it says, have a direct relation to his business, and assail him in his capacity as a physician. They touch his profession, because they hold him out as unworthy of employment, and appeal to his old patients to no longer employ him. The reflection is not simply upon his character as a man, but upon his character as a physician, for it imputes a want of those qualifications which attract patronage, and are essential to the calling. It tends to undermine him in the confidence of the community, which is the foundation of professional success. Calling a physician, as such, a blockhead or fool, necessarily reflects upon his ability to practice medicine, and speaking of him as so influenced by hatred toward his patients that he would not heal them, necessarily reflects upon his integrity as a physician. Therefore, the court holds that such an article is actionable without proof of any damages, for the law imputes malice in its publication, and presumes that damages have been sustained from the bare act of publication. But while the physician so libeled is thus entitled to recover on account of implied malice, his damages, without further proof, it is held, will be limited to such an amount as will fairly compensate him for the actual injury sustained. In order to recover punitive damages also, it is necessary for him to furnish evidence of express malice, or malice in fact, as distinguished from malice implied.

Wants Clear Proof to Set Aside Will.—Article 1489 of the Revised Civil Code of Louisiana provides that "Doctors of physic, or surgeons, who have professionally attended a person during the sickness of which he dies, can not receive any benefit from donations inter vivos or mortis causa, made in their favor by the sick person during that sickness," etc. Article 1491 declares: "Every disposition made in favor of a person incapable of receiving shall be null and void, whether it be disguised under the form of an onerous contract, or he made under the name of persons interposed. The father and mother, the children and descendants, and the husband or the wife, shall be reputed persons interposed." But the Supreme Court of Louisiana holds, in the case of the Succession of Bidwell, that an attack made upon a will, on the ground of incapacity of the legatees to receive the benefit of bequests therein, made because they are the wife and children of the doctor who professionally attended the testatrix during the sickness of which she died, and are therefore reputed to have been interposed for him, can not be sustained, in the absence of satisfactory evidence being administered that the will was made during that sickness. For example, it was admitted that the provisions of the Code above quoted were applicable to this case, the only question being whether the decedent's will was made during the sickness of which she died. The will was made in 1890, and her death occurred in 1897. The contention was that for a great number of years previous to the making of the will, and continuously thereafter up to the time of her death, she suffered from heart disease, which resulted in her death, and that consequently she made the will during the sickness of which she died. This latter was even certified by the physician to have been phlebitis and heart disease. Nevertheless, the court comes to the conclusion, after making a very careful analysis of the evidence, that phlebitis, ensuing from an attack of la grippe suffered about three months previously and not the chronic heart disease, was the sickness of which she died, and, such being the case, it holds that the will was not invalid under the Code.

Current Medical Literature.

Titles not marked with an asterisk (*) are noted below.

New York Medical Journal, May 26.

- 1.—*Instruction of Hospital Corps, U. S. Army. William H. Wilson.
- 2.—*Septicæmia Among Young Chickens. Leo F. Hettger.
- 3.—*Report of Case of Hematuria Due to Renal Carcinoma, with Endovesical Photographs. Frederic Bierhoff.
- 4.—*Summer of Paris Jacket for Fott's Disease. R. T. Taylor. Smith H. McKim.
- 5.—*Application of Galvano-Cantery in Nose. (Concluded.) Beaman Douglass.
- 6.—*General Characteristics of Rhyz Fungi and Their Relation to Certain Bacteria. Ludvig Heikton.
- 7.—*Physical Training in School and Home. (Concluded.) Henry S. Pettit.
- 8.—*Dietetics of Convalescent Stage of Fevers. Adolph Rupp.
- 9.—*Treatment of Anal Chancroids. Martin A. H. Theilberg.

Philadelphia Medical Journal, May 26.

- 10.—*Rickets. John L. Morse.
- 11.—*Hospitals for Insane and Study of Mental Diseases. (*To be continued.*) Stewart Paton.
- 12.—*Intestinal Indigestion and Its Consequences. (Concluded.) Wm. H. Porter.
- 13.—*Syphilis: Special Pathology and Reclining Rest-Treatment in Constitutional Stage. Samuel H. Friend.
- 14.—*Friedreich's Disease with Report of Fatal Case. F. Savary Pearce. John M. Swan.
- 15.—*Clinical Notes on Case of Paranoia. Albert W. Ferris.

Medical Record (N. Y.), May 26.

- 16.—*Remarks on Some of the Conditions Simulating Appendicitis and Pyloric Inflammation. E. G. Janeway.
- 17.—*Contribution to Treatment of Rupture of Parturient Womb—With Critical Review of Vaginal Operation. A. V. Wendt.
- 18.—*Loss of Hair; Clinical Study Founded on Three Hundred Private Cases. George T. Jackson.
- 19.—*Cellular Specificity and Its Bearing on Neoplasms. B. H. Buxton.
- 20.—*Note on Treatment of Chronic Disease by Artificial Nausea. Bath. Birmingham May.

Boston Medical and Surgical Journal, May 24.

- 21.—*Some Thoughts of Medical Education. Frederic C. Shattuck.
- 22.—*Ideal Ration for Army in the Tropics. (Concluded.) Edward L. Munson.
- 23.—*Ischemic Paralysis and Contracture of Muscles. Augustus Charles Bernays.

Medical News (N. Y.), May 26.

- 24.—*Cystitis Papillomatosa. Frederic Bierhoff.
- 25.—*Medicinal and Non-Medicinal Remedies: With Points on Hydrotherapy, Diet and Massage in Certain Diseases Attended with High Temperature. Charles E. Page.
- 26.—*Organotherapy in Tabes and Other Nervous Diseases. Martin A. H. Theilberg.
- 27.—*New Method for Reroperitoneal Drainage of Pyosalpinx, with Report of Five Cases. Leon F. Garrigue.
- 28.—*Inaugural Address. Edward D. Fisher.
- 29.—*Three Cases of Subcutaneous Capillary Hemorrhage in Epilepsy. Charles J. Aldrich.

Cincinnati Lancet-Clinic, May 26.

- 30.—"Our Students and Our Teaching." Joseph Ransohoff.
- 31.—*Sudden Death. Louis Schwab.

Pediatrics (N. Y.), May 1.

- 32.—*Report of Case of Chronic Valvular Endocarditis and Acute Nephritis, Following Chorea. John M. Swan.
- 33.—*Abatement of Dental Caries in Public School Children. Arthur Devoe.
- 34.—*Fracture of Upper Third of Left Femur in Infant. Robert T. Gillmore.
- 35.—*Present Status of Our Knowledge of Action of Various Therapeutical Serums—With Some Remarks Concerning Use of Fane's Antipneumonic Serum in Children. Antonio Fanoni.
- 36.—*Case of Amnesia. Philip F. Barbour.
- 37.—*Case of Peliosis Rheumatica Caused by Traumatism. Louis Fischer.

American Practitioner and News (Louisville, Ky.), April 15.

- 38.—*Report of Some Cases of Foreign Bodies in Eye: Their Detection and Management. J. Morrison Ray.
- 39.—*That Patient Who Is "Always With Us." Giffard Knox.

Railway Surgeon (Chicago), May 1.

- 40.—*Some Pets of a Country Doctor's Armamentarium. E. Steiger.
- 41.—*Value of Manipulation in Some Surgical Conditions. Samuel Bell.
- 42.—*Important Step Needed in Railroad Hygiene. R. F. Harper.

Journal of Boston Society of Medical Sciences, April.

- 43.—*Histology of Acute Lobar Pneumonia. Joseph H. Pratt.
- 44.—*Relation of Age, Physique and Preliminary Training to Class Rank in Pathology. George E. Nagrath.
- 45.—*Report on Examination for Diptheria Bacilli of Cultures From Four Hundred and Seventy-five Healthy Individuals. F. P. Denny.
- 46.—*Case of Multiple Myeloma. James H. Wright.
- 47.—*Additional Observation on Morphology of Digestive Tract of Cat. Franklin Dexter.
- 48.—*Few Experiments Upon Effect of Low Temperatures and Freezing of Typhoid Bacilli. Wm. Hollack Park.

Indiana Medical Journal (Indianapolis), May.

- 49.—*Treatment of Diseases of the Stomach. (*To be continued.*) Alois B. Graham.

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- 50.—*Epilepsy, Rickets and Lymphatic Constitution. A. P. Ohlmacher.
 51.—Some Early Pathologic Changes in Ganglion Cells, with Report of a Case. Maud B. Martin.
 52.—Epilepsy with Retrograde Amnesia. Edward Cowles.
 53.—Stigmata of Degenaration. Walter Channing.
 54.—Revision of Insanity Law of Virginia. William Francis Drewry.
 55.—How to Deal with Insane. Edward C. Runge.
 56.—Etiology of Progressive Paralysis. R. v. Kraft-Ebing.
 57.—*Care of Recent Case of Insanity. C. B. Burr.
 58.—Position of Study of Psychopathology in Pathological Department of Michigan State Asylums for Insane. Theo. Kilgmann.
 59.—Semlannal Critical Digest of Some of the Literature on Epilepsy. L. Pierce Clark.

Cleveland Journal of Medicine, April.

- 60.—*Intussusception in Child of Seven Months; Operation and Recovery. F. S. Clark and F. E. Bouts.
 61.—Treatment Preparatory for Parturition. O. T. Maynard.
 62.—Current Thoughts on Etiology and Treatment of Pneumonia. T. H. Brannan.
 63.—*New Growth of Tonsil—Syphilitic or Malignant? Howard E. Smith.
 64.—*Primary Epithelioma of Tonsil. John M. Ingersoll.
 65.—Comments of Eye-Testing in Cleveland Public Schools. Leigh K. Baker.
 66.—Anastomosing Appendix. R. J. Wenner.

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- 67.—Inaugural Address Before the American Neurological Association. Edward D. Fisher.
 68.—Tumor of Superior Parietal Convolution, Accurately Localized and Removed by Operation. Chas. K. Mills and W. W. Keen. With Pathologic Report on Nature of Growth. W. G. Spiller.
 69.—*Case of Amaurotic Family Idiocy. Hugh T. Patrick.
 70.—*Case of Amaurotic Family Idiocy. Sydney Kub.
 71.—*Appearances of Fundus Oculi. Chas. H. Beard.
 72.—Raynaud's Disease in Insane. J. E. Courtney.
 73.—Two Cases of Muscular Atrophy of Peroneal Type. Given Campbell.

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- 74.—Cancer of Rectum in Female, with Report of Case. Wallace K. Oakes.
 75.—Abortion, Its Cause and Treatment. C. W. Price.
 76.—Observations on Obstetrics. J. P. O'Neill.
 77.—Care of Eyes of New-Born. J. F. Hill.
 78.—Climatic Treatment of Tuberculosis. George M. Randall.

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- 79.—Relations of Ametropia to Affections of Eye and Nervous System. E. E. Holt.
 80.—"Running" Ears of Childhood. Plea for Their More Careful Attention. H. T. Clough.
 81.—Neurotic. Wm. B. Small.
 82.—Masse-Therapeutics. E. H. Judkins.
 83.—Gunshot Wound of Abdomen with Recovery. H. B. Palmer.

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- 84.—*Spontaneous Luxation of Lens, and Zonular Cataract. M. F. Weymann.
 85.—Foreign Body—Piece of Gunlock Imbedded in Frontal Sinus for Six and a Half Years—Removal. H. Bert Ellis.
 86.—Fibers from Lamina Cribrosa Extending Out from Optic Disc Over Retina. Frank C. Todd.
 87.—Hysterical Blindness with Report of a Case. George S. Melroy.
 88.—*Unusual Complication Occurring After an Operation for Orbital Lipoma. H. V. Würdemann.
 89.—Simplified Method of Testing with Trial Prisms. Frederick H. Verhoeft.

Canada Lancet (Toronto), April.

90. Spiniotomy. Colln A. Campbell.
 91.—Troping and Neurotomy for Case of Infantile Palsy. J. T. Fotheringham.
 92.—Case of Intestinal Perforation in Typhoid Fever. Operation. Death. G. N. Fish.
 93.—Tinea Versicolor. N. K. Aronstam.

Annals of Gynecology and Pediatrics (Boston), May.

- 94.—*Vaginal Route. O. Beverly Campbell.

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- 95.—*Clinical Studies in Epilepsy. L. Pierce Clark.
 96.—On Absorption of Proteids. P. A. Levene and I. Levin.
 97.—Embryochemical Studies. P. A. Levene.
 98.—*Sequence of Changes in Optic Chiasm Produced by Acromegalia, as Exemplified in Three Cases. Ward A. Holden.

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- 99.—*Ischemic Paralysis and Contracture of Muscles. Augustus C. Bernays.
 100.—*Pathology of Pneumonia. Robert Luedeking.
 101.—Facts of Inheritance. J. Arthur Thompson.
 102.—Some Recent Eye Cases. James M. Ball.
 103.—Analytic Diagnosis of Abdominal Tumors. Byron Robinson.
 104.—Surgical Treatment of Inguinal Hernia, and Varicocele on Same Side. Robert E. Wilson.

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- 105.—Palliative Treatment of Carcinoma Uteri. Herman J. Boldt.
 106.—Total Clitotomy. M. F. Weymann.
 107.—New Application of Undulating Current in Gynecology. G. Apostoll.

Quarterly Journal of Inebriety (Hartford, Conn.), April.

- 108.—*Children of the Female Inebriate. Wm. C. Sullivan.
 109.—Are the Uses of Tobacco Detrimental to Mankind? T. H. Marable.
 110.—Morphinism. Louise C. Robinsonitch.

- 111.—Alcohol and Alcoholism and Its Relations to Medical Profession. Charles Mæfic.

Pacific Medical Journal (San Francisco), May.

- 112.—*Few Practical Points in Management of Labor. Wm. J. G. Dawson.
 113.—*Early Diagnosis of Cancer of Stomach with Case. Frank Rattan.
 114.—Gynecologic Electro-therapy. George Adam.
Alabama Medical and Surgical Age (Birmingham), April.
 115.—Legal Status of Medicine in Alabama. H. A. Moody.
 116.—Hepatic Abscess. Mack Rogers.
 117.—*Peliosis Rheumatica and Report of Case. H. S. Ward.
 118.—*Principles of Obstetrical Management. C. C. Jones.
 119.—Valedictory Address Before the Birmingham Medical College. Wm. W. Duncan.

Chicago Medical Recorder, May.

- 120.—*Early Diagnosis of Pulmonary Tuberculosis. George W. Webster.
 121.—*Varieties of Appendicitis and Importance of Their Recognition in Furnishing the Indications for Proper Treatment. Wm. D. Middleton.
 122.—Case of Chronic Suppuration Involving the Frontal, Maxillary, and Sphenoidal Sinuses on One Side of the Head, with Necrosis of the Bone. George E. Shambaugh.
 123.—*Hot Air Treatment for Nervous and Joint Affections. Harold N. Moyer.
 124.—Case of Double Cryptorchidism, Complicated with Scarlet Fever. Clinical History. Edward H. Ochsner.
 125.—Case of Double Pyloroplasty with Intestinal Resection Jacob Frank.

Medical Times (Philadelphia), May.

- 126.—Review of Potence and Impotence. Physiology, Pathology and Other Embarrassments of Procreative Powers. Review of Aphrodisiacs of Past and Present. Sexual Hygiene, in Married and Single Life, etc., etc., "Fecondite" (Zola) and "Krautzer Sonata" (Tolstoy). (Continued.) John J. Caldwell.
 127.—Radical or Tentative Treatment of Piles. Thomas H. Manley.
 128.—Etiology of Skin Diseases. W. R. Inge Dalton.
 129.—Report of Case of Pott's Disease, with Wood-Plaster Jacket, Exhibited Before the Orthopedics Section of N. Y. Academy of Medicine. Edward A. Tracy.

Medical and Surgical Monitor (Indianapolis), May 15.

- 130.—Pachymeningitis: Report of Case and Autopsy. Samuel E. Earp and John T. Scott.
 131.—Intestinal Diseases of Children. William T. Newton.
 132.—The Practitioner. W. H. Link.

Canada Lancet (Toronto), May.

- 133.—Sick and Wounded in the War and How They Are Cared For. Wm. Natress.
 134.—*Case of Perforating Gastric Ulcer with Infection by Bacillus Aerogenes Capsulatus; with Synopsis of Literature on Infection by This Organism. Charles A. Page.
 135.—Neurasthenia. D. Campbell Meyers.

Kansas City Medical Record, May.

- 136.—Importance of Accurate Primary and Consecutive Examinations After Fracture. Thomas H. Manley.
 137.—Cure of Old Sinusitis. Herman E. Pearce.
 138.—Chronic Endocarditis. H. Jerard.
 139.—Removal of Foreign Bodies from Nose and Ear. Chas. E. Clark.

Medical Examiner and Practitioner (N.Y.), May.

- 140.—*Diseases of Throat and Nose in Relation to Life Expectancy. W. E. Casselberry.
 141.—*Early Diagnosis of Pulmonary Tuberculosis. George W. Webster.

Charlotte Medical Journal, April.

- 142.—Pneumotherapy in Diseases of Respiratory Tract. James Sawyer.
 143.—Malaria-Mosquito. J. A. Reagan.
 144.—Treatment of Endometritis. J. D. Smith.
 145.—Genital Hemorrhage. Wiler Krusen.
 146.—Empyema of Bone after Labor. Frank C. Hammond.
 147.—Puerperal Infection. C. H. Long.
 148.—Treatment of Tuberculosis Based Upon Results from Previous Pathological Examinations of Blood Sputum and Urine of Patients. L. H. Warner.
 149.—Financial Side of Practice of Medicine. W. J. Weaver.
 150.—Consumption and Its Treatment. E. E. Liggett.
 151.—Effects of Alcohol in Health and Disease. C. Teal.
 152.—Fracture of Skull at Vertex, with Series of Cases. Clinton B. Herick.

Occidental Medical Times (San Francisco), May.

- 153.—Address Before the Medical Society of the State of California. George Chismore.
 154.—Address Before the San Joaquin Valley Medical Society. E. C. Dunn.
 155.—*Prevention and Treatment of Infectious Diseases of the Cornea. Wm. Ellery Briggs.
 156.—Faulty Educational Methods as a Factor in Production of Insanity and Other Functional Neuroses. J. W. Robertson.
 157.—*Injuries to the Eyes Due to Sunstroke. A. B. McKee.

Medical Bulletin (Philadelphia), May.

- 158.—Pempigism. John V. Shoemaker.
 159.—Galvanism—Food Priming—Food Causation of Catarract; Cancer; Diabetes and Locomotor Ataxia. Ephraim Cutter and John A. Cutter.
 160.—Two Complicated Breech Presentations. L. Napoleon Roston.

Atlanta Journal-Record of Medicine, May.

- 161.—Climate of Porto Rico. Charles J. Proben.
 162.—Four Cases of Penetrating Wounds of Abdomen with Visceral Lesions, and Wounds of Entrance Above the Umbilicus. Hugh M. Taylor.

- 163.— Fermentative Disorders of Alimentary Canal of Infants. L. G. Frazier.
 164.— Address Before American Laryngological, Rhinological and Otolological Society. J. A. Stucky.
 165.— Medical Treatment of Inebriety. T. D. Crothers.
 166.— Treatment of Inflammation. W. F. Church.
Medical Sentinel (Portland, Ore.), May.
 167.— Personal Experience with Puerperal Eclampsia. J. F. Watt.
 168.—*Report of Case of Sulphonal Poisoning. Amelia Zeigler.
Medical Times (N.Y.), May.
 169.— Treatment of Pathologic Conditions of Female Generative Organs in Pelvis by Surgery per Vaginum. William H. Wathen.
 170.— Catarrhal Pneumonia. W. N. Bryant.
 171.— Modern Treatment of Scarlatina. F. P. Henry.
 172.— Treatment of Acute Articular Rheumatism in Mount Sinai Hospital. L. A. S. Bodine.
 173.—*Diseases of Larynx. Emma E. Musson.
Austin Flint Medical Journal (Hason City, Iowa), May.
 174.— Physiologic Rest as Therapeutic Measure in Certain Functional and Organic Nervous Diseases. C. Eugene Riggs.
 175.— Tumors, Malignant and Benign. D. W. Finlayson.

AMERICAN.

1. **Army Nurses' Instructions.**—Wilson gives an account of the training received by the United States Army hospital corps at Washington, D. C., and San Francisco. The men are selected because of their intelligence or former experience in nursing, and are drilled in the work of stretcher-bearers and hospital nurses. The instructions as to diet are given by a graduate female nurse. The results thus far have been extremely satisfactory.

2. **Septicemia in Chickens.**—Rettger describes an epidemic, occurring among young chickens two or three weeks old, which was due to a bacillus found in the blood, an actively mobile, non-liquefying, non-chromogenic, aerobic, and facultative anaerobic bacillus with slightly rounded ends. Grown on agar it is 2 microns in length, .03 to .05 micron broad, and usually occurs single. In bouillon the size may vary. It is non-spore-producing. On agar plates small white colonies appear in twenty-four hours. On potato the development is very slow. The bacillus does not produce indol, phenol, nor cresol. Its maximum temperature (moist) is 55 to 57 C. for the exposure of fifteen minutes, its optimum temperature is 35 to 37 C. The action of the more common disinfectants is as follows: A solution of corrosive sublimate, 1 to 60,000, kills it in two hours; one of carbolic acid, 1 to 220, kills it in two hours; solution of carbolic acid, 2.5 per cent. and soft soap, 1.5 per cent., 1 to 6, kills it in two hours. Inoculation experiments produce the disease, which is undoubtedly a sort of septicemia and apparently does not attack grown chickens.

3. **Hematuria.**—Bierhoff reports a case due to carcinoma, discovered by the cystoscope, which illustrates the unreliability of physical symptoms in the determination of the source of bleeding in vesical hemorrhage, and the value of the cystoscope for this purpose, as well as the freedom from danger when it is properly employed.

5. **Galvanocautery of the Nose.**—Douglas continues his article on the application of the galvanocautery to the nose. He shows the danger from partial destruction of tissue, leaving an uncauterized center which may produce septic processes, and mentions the importance of using such an electrode as will entirely destroy the slough. He cautions against the use of the cautery for such regions as the uvula, the faucial pillar, arytenoid region, glosso-epiglottic fold, pyriform sinus, and the region of the chorda muscularis, as an edema may be started which will be a serious matter. After complete healing, the structural changes caused by cauterization are the replacement of the physiologic tissue by means of connective tissue. He lays down as the first general indications that it be used on soft tissues and not on hard forms, such as cartilage, periosteum and bony structures. It will accomplish its best results on tissues composed of round cells and will not act so favorably on connective tissue. It is best used on tissue where the blood-vessels are to be destroyed, those that are the seat of chronic congestion rather than those which have gone on to a subsequent marked hypertrophy or a polypoid form of inflammation. He does not believe in treating the nasal septum, excepting the erectile tissue at the tuberculum septi in the upper half where it is the seat of vascular engorgement. In the turbinated bodies, it is limited to cauterization of hypertrophic masses in

special localities and under particular conditions. The best results are obtained when the hypertrophy is accompanied by congestion and distension of the erectile tissue. On hypertrophied posterior tips which contract well under cocaine, the cautery is especially indicated. The particular turbinated localities where it is safe to use the cautery are the inner and under surfaces of the inferior turbinate together with its inner and posterior ends, also the posterior ends of the middle turbinate, and sometimes the flabby hypertrophy of the anterior tip of the middle turbinate body, if an examination proves that it does not contain an accessory anterior ethmoidal cell. The cautery should never be used with polyps and it is not advisable in nasal hemorrhage except where it is non-surgical. In nasal ulcerations, if non-syphilitic or non-malignant, it may be used to stimulate healing, but must be used repeatedly and always at periods of about two weeks. It should never be used with malignant growths. In round-celled structures which are hypertrophied, such as adenoids, hypertrophied tonsils, enlargement of the lingual follicles at the base of the tongue, follicular pharyngitis and cellular infiltration in laryngeal tissue, it produces its most brilliant results without danger.

6. **The Ray Fungi.**—Hektoen gives a full description of the ray fungi according to the lights of modern literature, and discusses the question as to their relation to certain bacteria, especially those of tuberculosis and diphtheria. He finds that the usual designations—bacillus, bacteria, and bacteriologic—are not adequate to represent correctly and scientifically the exact situation, as has been emphasized by Hneppé.

7. **Physical Training in School and Home.**—Pettit concludes his article with a description of the methods of the Adelphi College, and urges the use of proper training begun early. It is important to teach the parents as to the necessity of the case.

8. **Dietetics of Convalescent Stage of Fevers.**—The nutrition of the convalescence following the febrile state is discussed by Tapp, who notices the value of carbohydrates and vegetable foods, and the necessity of paying attention to the tastes of the individual patients. Other particulars noticed were the regulation of the temperature, the baths, massage, electricity and the physician's advice as to alcoholic and sexual indulgence.

10. **Rickets.**—Morse's article describes the conditions of rickets, with their characteristic skeletal and muscular changes, and skin, glandular, respiratory and circulatory disturbances, etc. He considers improper food the most important etiologic factor, though hygienic conditions are not underestimated. As regards life, the prognosis is good. The treatment should be largely dietetic, low in carbohydrates, and high in fats and proteids, and the high fats are especially important, the best form being that found in milk. When the digestion will stand it, cod-liver oil should be given and the child should have the greatest possible amount of fresh air and sunshine. If a change of climate is possible the seashore is preferable to the country. Salt baths, massage and rubbing are useful. While there is no specific for rickets, phosphorus has been strongly recommended, but he himself has seen no benefit from its use. The anemia is best treated by iron. Symptoms and complications should receive proper treatment as they arrive. The best plan to prevent deformity is to discourage the formation; to keep the child from sitting up, standing or walking while the bones are yet soft. Postural treatment will do something for deformities of the spine, and manipulation for those of the extremities. Mechanical treatment is of little use after the child is over 2 or 2½ years of age. Many slight deformities, however, disappear with growth.

12. **Intestinal Indigestion.**—Porter continues his article on intestinal indigestion by first showing that the stomach is not primarily affected, though it may be difficult to exclude it in chronic cases. The liver is inactive; the diarrhea is more or less irritating; indican and excessive uric acid are the two most common urinary symptoms, the excess of acid producing bladder irritation. The constant absorption of toxic compounds from the alimentary canal causes liver disturbances and the central nervous system is poorly nourished and unduly irri-

tated. Hence there may be various cerebral symptoms, headache, insomnia and mental disturbances. The nonparasitic skin affections are in a large measure only the symptoms of intestinal indigestion. He has found a pronounced degeneration of the cardiac muscle present in a number of cases. The prognosis of these troubles is good if they are recognized early. The principal thing in the treatment is regulation of the diet, and the tastes of the patient can not be considered in this, as in many instances it is necessary for it to be limited to two or three articles of food, such as milk, barley gruel or broth. The patients may think they are getting worse, because of the loss of flesh while the process of normal digestion is being established. It may be necessary to cut out the fats or sugar of milk, and this may be accomplished in the former instance by ordering an exclusive skimmed-milk or buttermilk diet, and in the latter by ordering an exclusive diet of kumyss, zoolak, kefir or sumal, in which case a little alcohol is advisable to keep up the animal heat. It is an important point to know that all animal foodstuffs contain but little of lecithin and hemoglobin forming substances and that some form of vegetable food must be used in order to furnish enough nucleo-albumins. He excludes a number of things, however, that are often advised, such as cooked or raw fruits, sweets and pastry of all kinds, onions, turnips, parsnips, potatoes, carrots, celery, radishes, cabbage, egg and oyster plant, corn, etc., rich gravies and soups of all kinds, and gives a reason for each of these exclusions. The use of a little dilute hydrochloric acid may be of assistance to the digestion, and he also advises a few grains of inspissated oxgall three times a day before eating. When the liver is performing its functions abnormally and the tissues are stained with bile, mercurials are of value. Constipation should be met with some laxative that acts according to the normal plan of Nature. He advises strychnin and caffeine for intensifying nerve-innervation.

13. **Syphilis.**—Friend concludes that, without regard to system, organ or tissues affected, and irrespective of the period of syphilitic infection, all specific lesions begin in the arteries; that the special pathology of syphilis is in a disease of the arterial walls, and that this disease bears the same relation to syphilis as does the affection of Peyer's glands in the intestine to typhoid fever; the disease of the skin in smallpox, etc. On the basis of this theory, he thinks that "reclining rest" is the proper routine treatment during the first part of the constitutional stage of this disease, as the ambulatory treatment produces aggravation of arterial symptoms.

16. **Conditions Simulating Appendicitis.**—Among these, Janeway recognizes neuralgia, affecting the lower abdominal nerves of the right side, and certain conditions of the kidney, such as renal colic, intermittent hydronephrosis and movable kidney. Cholecystitis also has been found as a cause of the trouble, and certain conditions in the intestinal tract, such as ulceration or narrowing of the hepatic flexure of the colon. Typhoid fever complications have led to an operation for appendicitis, as have also those connected with follicular tonsillitis. Still other conditions mentioned are abscess of the ovary, retained menstrual fluid, retroperitoneal abscess and hypochondria.

17. **Rupture of the Uterus.**—Wendel remarks that rupture of the uterus is considered a very rare accident, but it probably occurs much more commonly than is supposed. He reports several cases and considers the methods for its prevention. His résumé is that in threatened rupture, delivery should be accomplished at once by the method which does not increase the excessive intrauterine tension, and delivery by the natural passages is permitted only if it does not aggravate the existing injury. If the true conjugate diameter measures less than 8 cm., a completely intraperitoneal fetus should be delivered by abdominal section, but if it exceeds this, the uterus should be removed by vaginal hysterectomy and the child delivered by the feet in the natural way. If the child is alive after the death of the mother, post-mortem section should be performed. The uterine tamponade is useful only as a dressing to prevent intestinal prolapse, or to retain repositied loops of intestine within the abdomen until the case can be operated on. Conservative surgery risks subsequent rupture and should not be

chosen unless it is expressly desired by the patient or immediate relatives. Vaginal suture is objectionable from the possibility of overlooking the bleeding arteries in the parametrium. When laparotomy is required, the uterus is to be removed by supra-vaginal amputation with extra- or intra-peritoneal treatment of the stump according to the needs of the case or the ability of the operator. Vaginal hysterectomy is the elective procedure in all cases. It should be supplemented by abdominal section whenever necessary.

18. **Loss of Hair.**—From a study of 300 cases which are analyzed, Jackson concludes that loss of hair is more common in men than in women, and in married than unmarried people. He believes that the majority of those losing their hair, follow indoor occupations, which associated with worry or nerve strain, is a predisposing, if not the determining, cause of baldness. The great majority of cases begin before the 30th year. In women the loss of hair takes the form of general thinning, while in men the whole top of the head is commonly affected. As to the cause outside of febrile disease, he thinks heredity is first, and dandruff one of the most common exciting causes. In absolute baldness when the scalp is atrophied and bound down there is little use in trying to do anything. Massage is one of the best methods of stimulating the scalp, and this is done best by a skilful masseur, but the patient can do much by pinching up the scalp between the ends of the fingers. His own method of treatment is attention to the general condition of the patient. When this is good, the patient is given a little sulphur ointment with the directions to use it once a day for three days and then wash the hair and scalp. Immediately after this the hair is dried and an ointment is applied and repeated every other day for ten days. The scalp is then washed again and the ointment continued two or three times a week until the dandruff is controlled, the washing being repeated from time to time. If the patient will not use ointment his resort is to a lotion of resorcin, at first 3 and afterward 5 and 10 per cent. strength, morning and night. If the sulphur is used in the form of what his druggists calls "sulphur cream," it is not so troublesome, being used but twice a week or so. In cases of loss of hair without any apparent trouble with the scalp, massage is the best treatment.

20. **Artificial Nauheim Baths.**—Mayer describes his method of making artificial Nauheim baths with acid sulphate sodium and bicarbonate of sodium. He uses six or eight cakes, two ounces each, of the former, and two pounds of the latter to the bath; or the saline mixture of sodium chlorid, 30 pounds, potassium chlorid, 10 ounces; granular calcium chlorid, 30 ounces; magnesium chlorid, 8 ounces, thoroughly mixed and kept in a moist-proof tin box until needed. He first uses 3 pounds of the above with bicarbonate until it is thoroughly effervescing. He relates his own experience with the baths, and thinks the artificial like the natural ones, together with the resisting exercises, are the most efficacious and lasting remedy for chronic disease of the heart.

22. **Army Ration in the Tropics.**—In his concluding article, Munson says that fats are needed less in the tropics, and that over-stimulation of the liver is a result of their ingestion to an undue extent. The ratio of fats to carbohydrates must be reduced from about 1 to 5.5 to 1 to 10 at least. The ingestion of carbohydrates in a greater quantity than is required is much less injurious than an excess of proteids or fats, though it also has its disadvantages. He does not, however, believe in a very great reduction and would allow about 350 grains of carbon not including the carbon required in the dietation of urea, for energy. He publishes several tables of dietaries suitable for active and garrison duty, the mean of which gives carbon 355 grams and the proportion of nitrogen to carbon 1 to 20. The rotation of these diets, which is given in detail, would probably meet all the indications as they arise. The changes that are advisable are made chiefly in the line of reduction in the quantity of food; sugar and starches only being slightly augmented, but their increase is small compared with the considerable reduction of nitrogen and fatty material. Many of the components of the present ration require no change, being not only admirably selected, but also properly

proportioned. See also abstract in *THE JOURNAL* of June 2, ¶ 1, p. 1435.

23.—This article has appeared elsewhere; see abstract in *THE JOURNAL* of June 2, ¶ 100, p. 1439; also see title 99, in this issue.

24. **Cystitis Papillomatosa.**—This condition is a form of cystitis, characterized by the usual symptoms of either catarrhal or suppurative forms—frequency of urination with more or less pain and tenesmus, the urine passed being clear or turbid, as bleeding does not occur spontaneously. The seat of the disorder is at the trigone, which it usually covers, and it may involve the urethra. Its villi, or papillae, spring from an inflamed base and are discrete. When in doubt as to the condition, Bierhoff uses the ureter cystoscope, armed with a catheter, which is laid on the inflamed surface; the window of the ureter cystoscope lying directly over and close to it, the catheter will at once sink into the mass of papillae or pass between them if this condition exists. He reports several cases and discusses the differential diagnosis; the treatment is merely mentioned.

25. **Medicinal and Non-Medicinal Remedies.**—Page alludes to the tendency to overtreat disease, and thinks there is too much said about the treatment with drugs alone and that we should lay special stress on other methods. If he were restricted to only one method he would adopt hydrotherapy for the treatment of all diseases, and drugs alone would be his last choice. He says it is a fault of our medical education that we give so little attention to hydrotherapy and massage, and that these are in their way even more important therapeutically than drugs.

26. **Organotherapy.**—Thelberg remarks on the theories of organotherapy, with special reference to testicular extent. He notices briefly some of the literature and describes two cases, one of tabes and one of paralysis agitans, in which spermin appeared to have a very good effect.

27.—See abstract in *THE JOURNAL* of February 10, p. 361.

31. **Sudden Death.**—The conditions of sudden death are noticed by Schwab, who says he is inclined to follow Brouardel in his opinion that toxins from disordered kidneys are more important in this regard than heart disease, which is so commonly given as the cause, especially in alcoholic cases. Sometimes a slight trauma may be the cause, and there may be unrecognized conditions of great gravity during life which will account for the unexplained fatalities in operations and under other circumstances.

33. **Dental Caries in Children.**—DeVee urges more care on the part of the physician as to this matter. He believes that medical inspection of schools should practically include attention to the children's teeth.

35. **Therapeutic Serums.**—Fanoni has used Pane's anti-pneumonic serum in eighteen cases of pneumonia, four of which were in children under 3 years of age. The serum, when injected early enough and in sufficient quantity, if not deteriorated by age, quickly produces a lowering of the temperature and improvement and hastens resolution. The quantity used by him is 40 c.c. of No. 2 daily. He has used Marmorek's serum with partial success in two cases of puerperal infection. Another that he has found of value is Maragliano's anti-tuberculous serum, which he used in his private practice and thinks is the only scientific remedy we possess for the treatment of this disease. It will give valuable help in incipient cases where there is no mixed infection. Patients, after its use, sometimes become immune to very large doses of tuberculin—ten times more than the initial dose ordinarily given.

44. **Relation of Age, Physique and Preliminary Training to Class Rank in Medical Students.**—McGrath has examined the students of Harvard Medical College to ascertain the standing in scholarship according to age, weight and preliminary training. He found that students varying widely in the grade of scholarship present no marked difference in weight, though the lower grades average slightly heavier than the

others, but vary widely in age and preparation. Students differing widely in age differ little in weight, and to a great extent in preparation and ability in scholarship. Those varying to a marked degree in weight show little difference in scholarship or preparation. The most important factor in the scholarship appears to be the preliminary training and, to some extent, the age.

45. **Diphtheria Bacilli in Healthy Individuals.**—In cultures from the mouths of 285 healthy individuals at the Brookline Board of Health's laboratory there were found but 7 with the bacillus of diphtheria, 4 of these were adults who had some connection or association with an epidemic of diphtheria, and the other 3 were school children, 2 of these from a class where there had been a slight outbreak, and the other from a child who had no known connection with any case of diphtheria. All of these individuals were perfectly healthy. In 190 healthy boys in a municipal school for truants there had been a slight epidemic involving 10 of the pupils just before the cultures were made, and in 16 of these the diphtheria bacilli were found. The conclusions of the whole research are summed up by Denny as follows: Diphtheria bacilli are seldom found—except where there has been great exposure—in the throats of healthy individuals, living under good hygienic conditions. A large number of persons may be infected by healthy individuals who have the bacilli in their throats. The condition of institute-life, which favors the growth of virulent bacilli in healthy throats is the living together of a large number of persons in a limited air-space.

48. **Influence of Cold on Typhoid Bacilli.**—Prudden had shown that water in freezing becomes partially purified, and more recently Sedgwick pointed out that this purification excludes nearly 90 per cent. of the bacilli. Prudden found in one week that 80 per cent. of the typhoid bacilli were killed in frozen water; in ten weeks, 9 per cent.; and in fifteen weeks, 99.9 per cent. About 99 per cent. were killed in two weeks with repeated freezing and thawing. Park has repeated Prudden and Sedgwick's experiments and found that in one-half of a week, 42 per cent. were left; in one week, 14 per cent.; in two weeks 7.5 per cent.; in three weeks .4 per cent.; in five weeks, .11 per cent.; and in twelve weeks only .05 per cent. He has not as yet carried his experiments beyond twelve weeks, and can not say when all living bacilli would cease to exist in the specimens of ice from the most resisting cultures. In twelve weeks the bacilli in the ice from 9 sources were all dead. No one of the twenty cultures made were more resistant than Prudden's test culture. When typhoid bacilli are in feces, freezing does not have so much effect. Thus typhoid and colen bacilli, originally 37,000 to a loopful of feces, were still 12,000 at the end of five weeks' exposure to a temperature ranging daily between zero and 28 F. Fecal material from typhoid patients that is thrown out without disinfection in winter and frozen might easily stay infected until spring and the bacilli be carried a considerable distance after thawing. It is a difficult matter to say how long ice from infected water remains dangerous, and Park thinks we should discourage its use from possible infected waters unless it has been frozen for at least five months. After midsummer, he thinks we could rule out ice infection almost absolutely. He made an experiment to see the effect of low temperatures, which he thinks has been somewhat exaggerated. Ten tubes containing 10 specimens of ice infected with typhoid bacilli from different sources, after being frozen two weeks, were put in an ice-box at 52 F. for two weeks, and 10 duplicate tubes were left at 10 to 20 degrees. There were less left living at the end of seven weeks of those at 52 than in those left frozen at 10 to 20 degrees. Again, typhoid bacilli placed in liquid air for three hours showed a large percentage still living. At a temperature of 70 F. typhoid bacilli in filtered water frequently held their own or increased for a few days and, at the end of five weeks, 2 out of 10 cultures still contained 50 per cent. of their number. He was not able to confirm Prudden's experiments showing that dry cold is less injurious than moist cold.

50.—See editorial in *THE JOURNAL* of May 26, p. 1348.

55. **How to Deal with the Insane.**—Runge's paper discusses a number of subjects, including the detention in asylums, which he says is not a hardship for the majority of those thus confined. He also states that he has never found cases of illegal detention. The incompetence of jurors who sit on cases of insanity is also referred to, as well as the well-worn subject of medical expert testimony, and the present methods condemned.

57. **Care of Recent Cases of Insanity.**—According to Burr, the hospital treatment of recent cases of insanity by rest in bed and constant attendance of a trained nurse is most advisable. Friends and relatives should be excluded, as a rule. Special attention should be given to excretions, more particularly those of the bowels. The application of ice-caps and cold packs may be of use, but he has had little experience with the latter, though it was of distinct service in a case of mania. He condemns remedies directed to subduing the patient, as it is not curative to restrain the activity by means of drugs. Sleep should be secured, if possible without drugs, but if necessary, hydrate of chloral or other hypnotics may be employed. He does not exclude the use of exercise by the bed treatment, and thinks that tonic remedies are advisable, as are also stimulants in the exhaustive conditions. He has never had much confidence in cannabis indica in the depressed states, and for various reasons never prescribes opiates. Electricity, in the form of electric massage, is especially mentioned, and also what he calls "the salt glow," which consists in a sort of salt bath with rubbing. Special directions are given as to diet and methods to induce patients to eat. Artificial feeding may be employed as a final resource, but special care should be taken to avoid accidents. He does not advise change of scene for the neurosthenic and depressed patients; travel has a very narrow range of usefulness.

60.—See abstract in THE JOURNAL of March 10, p. 623.

63.—See abstract in THE JOURNAL of March 24, p. 749.

64.—Ibid., April 21, p. 1005.

69 and 70. **Amaurotic Family Idiocy.**—Patrick reports a case of amaurotic family idiocy, which is of interest because it did not occur in a Jew, as is usually the rule. Another case is reported by Kuh, who thinks that the conditions indicate something more than simple arrest of development; there appears to be a distinctly retrogressive and destructive change.

71. **The Fundus Oculi in Amaurotic Idiocy.**—This, as described by Beard, is characteristic and unique. The disc is unusually clear, though there is no pronounced atrophy of the optic nerves, but the really characteristic features observed are around the yellow spot which is the center of a liver-colored disc. This is surrounded by a zone of grayish white, which extends for at least two disc diameters, horizontally and somewhat less vertically, gradually fading away into the normal red-orange of the eye ground. The livid disc is clear-cut and distinct, is larger than the fovea, marking all that space which is devoid of the ganglion cells. Another more distinguishing feature is the character of the white zone surrounding the center, which is nearly white at the circumference of the liver-colored disc, then gradually thins away to nothing.

84. **Luxation of Lens and Zonular Cataract.**—Weyman, from his observation and experience, concludes that in the vast majority of cases spontaneous lenticular dislocation is due to the same causes that produce zonular cataract. Zonular cataractous degeneration is only one of the congenital defects—myopia, weakness of the zonula of Zinn, etc. All or most of these may be present when the cataract is lacking and the spontaneous luxation of the lens surrounded by its capsule does not, of necessity, nor usually, develop a cloudy zone. If such is found, it should not be attributed to the dislocation for a lens disturbed in its trophic relations usually degenerates locally at the point of capsular injury or irritation, or totally. Riordon and Jaeger have reported cases of capsular dislocation retaining perfect transparency for many years after. Luxation into the anterior chamber should be attended to at once as it is likely to cause injury to the cornea and iritis. Though extraction is the ideal proceeding, it should be abandoned in favor of reduction into the vitreous in the presence of the following condi-

tions: 1. When the other eye is practically unserviceable and the extraction unduly dangerous. 2. When the lens has, without irritation, before resided back of the pupil. With a loose iris, he believes dissection the best and safest plan.

85. **Unusual Complications Following Operation for Orbital Lipoma.**—Würdemann reports a case in which, after removal of the orbital lipoma, there was total traumatic ophthalmoplegia externa, with partial atrophy of the optic nerve, due to pressure of a hematoma of the orbit following operation.

94. **Vaginal Route for Pelvic Operations.**—As to the method of operating in pelvic disorders. Campbell prefers the vaginal route in most cases and suggests a modification of Trendelenburg's position as of advantage in this. In the ordinary position, the possibility of infection of the abdomen from drippings from the pelvis is to be considered. He, therefore, has arranged that after the patient has been in the Trendelenburg position and remained there eight or ten minutes, she is then drawn six inches higher on the table, the pelvis now resting on a level plane six inches wide. The intestines will have gravitated before the patient was moved, and in the modified position the operator works downward in the pelvis and the pus is more easily removed, with less danger of its gaining entrance to the peritoneal cavity.

95. **Studies in Epilepsy.**—*Exhaustion-Paralysis in Epilepsy*—By this Clark means that occurring as a result of convulsive attacks. He reviews the literature thoroughly and gives his personal observations, concluding: 1. The theory of exhaustion-paralysis is conclusively proved by physiologic experimentation and especially by pathologic data derived from the observation of phenomena in epilepsy. 2. Exhaustion-paralysis is localized to parts participating in the local spasms, or confined to those parts most convulsed in general seizures. Although there may appear to be exceptions to this general rule, such cases will always be found to follow it, if carefully observed. 3. The temporary paralysis may become permanent and exists as a true hemiplegia with organic changes of a varied nature. 4. It is not necessary to invoke any other state than exhaustion to explain the temporary paralysis in epilepsy. 5. Temporary exhaustion-paralysis is essentially an exhaustion of cerebral centers, and the apparent severity of muscular convulsions is not a fair index to the amount of paralysis that may follow. 6. True exhaustion cases independent of infantile palsy affections are not common. The differential diagnosis of the two lesions or states is extremely difficult but most important, because the exhaustion cases, independent of organic lesions, help to bridge over the wide breach existing between so-called Jacksonian epilepsy and idiopathic epilepsy. 7. Researches on the disorders of motility, which partake of the nature of exhaustive phenomena following convulsions, as seen in epileptics, seem to suggest some noteworthy points; among them, that the degenerative process of exhaustion-paralysis, as manifested in epilepsy, is closely allied to that of ordinary paralytic states. Due allowance should be made for the fact that the epileptic brain is, in the majority of cases, much incapacitated. We should not charge to the epileptic as a cause more than that which may be due to previous disability of the motor centers. He alludes to the suggestion of epileptic paralytic foci in the brain and supports it by the fact of the localized areas and the minute patches of softening or sclerosis so often found. He calls attention to the inadequacy of treatment by passive movement or massage in epileptic paralysis. *Parainoclonus Multiplex and Epilepsy.*—Clark's second paper reports a case with a discussion of the literature of parainoclonus, which he thinks is the only one thus associated that has been reported by English or American observers. He considers it rather surprising that we do not see this condition more frequently associated with epilepsy. *Hypertrophic Infantile Cerebral Palsy and Epilepsy.*—He also reports two cases of infantile cerebral palsy and phocomelus, and rejects the theory of atetosis causing the condition, though he offers none to take its place.

98. **Changes in the Optic Chiasm Produced by Acromegalia.**—Holden describes the results of the examinations of three cases of distorted chiasm in acromegaly, and notes the

gross changes that may occur in this condition as follows: The posterior portion of the chiasm is compressed by the pituitary body. Following this, the posterior and middle portions of the chiasm are flattened and forced upward, and thus separated from the anterior portion, which is protected by the bone beneath it. Later, with this tilting upward of the chiasm posteriorly and the forcing forward of the anterior wall of the pituitary fossa, the anterior portion of the chiasm is encroached on by the pituitary body and arched directly forward. Finally the chiasm may be severed completely. He has studied the atrophy of the optic nerves in these cases and points out the changes which should occur in the visual field. In the cases of acromegaly in the literature, visual disturbance has been noted in about one-half of them and in the other 50 per cent. there has been concentric contraction of the visual field with diminution of central acuteness of vision, and in somewhat less than one-half, bitemporal hemianopsia, absolute or for colors only, with or without some contraction of the nasal halves of the field; in six cases there has been homonymous hemianopsia, absolute or for colors, only, and in one case there was found binasal hemianopsia. The type of the contraction of the field may change with enlargement of the pituitary body. Homonymous hemianopsia from pressure on one tract will become complete with involvement of the chiasm, and the bitemporal hemianopsia may also lose the nasal field in a similar way. The visual disturbances in acromegaly usually appear late in the disease though there is no rule as to their course.

99.—See ¶ 23, above.

108. **Children of the Female Inebriate.**—From a study of the subject, Sullivan concludes that maternal inebriety is a condition peculiarly noxious to the normal development of the offspring. While its influences, measured by the test of infant mortality, are to a considerable extent through deterioration of the *milieu*, in a large number of cases it also depends on the primary action of the poison. The reality of this last is shown by the tendency to still-births and abortions, by the frequency of epilepsy in the surviving children, by the prevalent mode of death and by the effects of modifications of the intoxication. This primary action of alcohol is due, in part, to the effects of the poison on the maternal organisms; and, in part, to a direct toxic action on the embryo from excesses during pregnancy. The first of these modes is, by its nature, permanent with a tendency to increase; the second, while also tending to increase, is susceptible of modification. The tendency of the family with alcohol maternity is toward a type the inverse of the syphilitic family, thus the first-born children are normal, then come more or less defective ones who live beyond infancy, then those dying in infancy, and lastly still-births and abortions. The deviations from this type are probably due to oscillations in the tendency of the second mode of influence.

112.—See abstract in THE JOURNAL of May 5, p. 1129.

120.—See abstract in THE JOURNAL of May 12, p. 1195.

121. **Varieties of Appendicitis.**—Middleton divides cases of appendicitis into: 1. Catarrhal conditions confined practically to mild attacks which pass into a chronic form or into the secondary class. 2. The suppurative cases. 3. The perforative one, which is simply the continuation of the suppurative. 4. One that he calls the gangrenous form, which is proportionately rare and includes many of the fulminant cases. The chronic form is the condition associated with recurrent attacks. He believes operative interference the best method of managing these cases.

123 **Hot-Air Treatment.**—Moyer found the hot-air treatment of value in a number of nervous and joint affections. The apparatus as made in this country has not been satisfactory and he had one made to suit himself, which was readily and simply constructed of ordinary galvanized iron. The most useful temperature he found to be 350 F.; lower than this he did not get any of the alterative effects which are the chief characteristics of the treatment. The idiosyncrasy must be regarded, as some persons burn easily even with comparatively low temperatures. In a number of cases of joint trouble following rheumatism, traumatism and chronic synovitis with adhesions

in the joint, the results were exceedingly satisfactory but not much benefit was derived in arthritis deformans. He thinks the value of this treatment is most marked in those cases of peripheral neuritis accompanied with joint lesions, and that it will be of advantage in many cases of sciatica accompanied with the so-called bloodless stretching of the sciatic nerve.

134. **Bacillus Aerogenes Capsulatus.**—Page reports a case of perforating gastric ulcer with infection by this germ and discusses the literature of the subject. He thinks that it is probably a constant inhabitant of the alimentary tract and, in conditions of lowered resistance may produce serious trouble.

140.—See abstract in THE JOURNAL of May 12, p. 1194.

141.—See abstract in THE JOURNAL of May 12, p. 1195.

155. **Infectious Diseases of the Cornea.**—The practical points of Briggs' paper are brought out in the following: 1. All corneal infection, in the absence of constitutional disease, comes from without and gains entrance through some lesion of the epithelium. Every corneal wound should therefore be thoroughly cleansed with a mild antiseptic solution and an antiseptic compress applied. 2. Injuries of the cornea are especially dangerous in the presence of suppurative disease of the conjunctiva or lacrimal sac. Active measures must at once be taken to render the wound antiseptic and to prevent new infection. 3. When infection of a corneal wound has become established the active focus should be treated with stronger antiseptics. In grave cases the galvanocautery offers the most efficient means. 4. When patients complain of having "taken cold" in the eye, that organ should be carefully examined for foreign bodies and corneal abrasions, the most minute being readily detected by the introduction of fluorescein solution. Sulphate of zinc or other irritants should never be prescribed until the existence of a wound has been positively excluded.

157. **Eye Injuries Due to Sunstroke.**—McKee reports two cases of central scotoma, due to sunstroke associated with photophobia and pains. The pathologic conditions did not correspond to the severity of the symptom.

168. **Sulphonal Poisoning.**—Zeigler reports a case of a girl who took, as nearly as can be estimated, about 125 grains of sulphonal at one dose, at 10:30 p.m., April 27, and was seen the next morning, but, knowing that she had taken a hypnotic, was not disturbed until 11:30 p.m., when she again fell asleep and could not be awakened until 11 o'clock the next morning. When momentarily aroused, her mind was in a confused condition, frequency of respirations and pulse increasing, and anesthesia became complete, until finally artificial respiration was required. She was given strychnin, 1/50 gr., every three hours, and later, glonoin, 1/250 gr., two doses altogether. At 7:50 a.m., April 30, the third day after taking the dose, she awoke naturally, and while there was some ataxia for a short time she seemed completely well on the third day of her convalescence. The urine was scanty through the entire period, averaging but four ounces during the twenty-four hours, its specific gravity ranging from 1028 to 1034; no albumin; no sugar. Nourishment was given her by enemas during the three days of her trouble.

172.—See abstract in THE JOURNAL of April 14, p. 934.

FOREIGN.

British Medical Journal, May 19.

Small-Bore Rifle Bullet Wound and the "Humanity" of the Present War. CLINTON T. DENT.—The writer reviews the experience of the present war in the Transvaal, and claims that the "humanity" of modern war must be tested by the question whether such septic disorders as pyemia, septicemia, gangrene, erysipelas, etc., are present or absent. These are preventable and thus far in the Transvaal War he has not seen them. He specially praises the commissariat and transport, but admits that the climate has been the strongest point in favor of the English in this war. Pure sunlight and air have done more for the wounded in this war than seems to be generally acknowledged, and if too much is trusted to this experience there may be a terrible awakening when a war has to be carried on under more unfavorable surroundings.

Plague in the Lower Animals. FRANK G. CLEMON.—The author finds that while dogs are probably liable to plague under natural conditions, they have not yet been proved to play much part in its spread. In inoculation cases they are found quite refractory. Cats fall under the same general head as dogs in this respect. They are very slightly susceptible either in nature or in the laboratory, and can not be considered as assisting in the spread of the disease. In view of their fondness for rats it is fortunate that this is the case. Jackals are said in China to contract plague, but positive proof seems to be wanting. Of the Ungulata, the horse appears to escape infection under the natural conditions; this being the animal employed in the preparation of curative plague serum, the symptoms produced by inoculation have been thoroughly described. It would seem that pigs have a low susceptibility to the virus, but are probably of little importance as agents in spreading the plague. The same may be said of sheep. Goats seem to be somewhat more susceptible and there has been an increased mortality among them in Bombay during the epidemic. Cattle are scarcely at all susceptible and play no part in the multiplication of the disorder. Birds are refractory. It can hardly be seriously claimed that plague is spread by any members of the group of reptiles or fishes. The only invertebrates observed or believed to carry the infection are insects, but whether their agency is as important as some have claimed must for the present be considered open to doubt.

The Lancet, May 19.

Modern Treatment of Diabetes Mellitus. ROBERT SAUNDY.—Under normal conditions the liver stores up in the form of glycogen, carbohydrate material, taken into the body as food, and by means of its regulating mechanism converts this into sugar and passes it into the circulation in such quantities as needed. Under abnormal conditions, the liver no longer stores up glycogen, but allows the whole of the carbohydrate food to pass at once into the circulation as sugar, while any stored glycogen is at once converted and discharged. These abnormal conditions may be produced by certain traumatism, shock, etc., especially by the puncture of the fourth ventricle. Claude Bernard's noted experiment. These facts, however, do not explain the pathology of diabetes, the disease in which the excretion of sugar goes on often without regard to the ingestion of carbohydrates or the amount of glycogen stored. Pavy has shown that the albuminous molecule splits off into a carbohydrate molecule from which sugar has formed, thus partially explaining the above fact, but we have to still postulate a further failure of the sugar-destroying function of the tissues in diabetes. It appears, therefore, that under interference of certain agencies the liver loses its power of storing up glycogen, the tissues, therefore, gorged with sugar, lose their power to consume that substance and glycosuria results. In the pathogenesis the nervous system undoubtedly takes part, and the author finds from his examinations that A. H. Smith's theory of anxiety producing this condition in undue frequency among railway employees has some support from facts. Pancreatic disease has also been known to produce diabetes, though this is not invariably the case. Its physiologic relation to the glycogenic function of the liver remains to be elucidated. The theory provisionally accepted is that the pancreas forms an internal secretion which prevents the discharge of glycogen from the liver. The relation of diabetes to a definite hepatic lesion is as yet not satisfactorily established, and the condition described by Hanot as "bronzed diabetes" is probably a peculiar form of cirrhosis associated with glycosuria rather than a complication of diabetes. Saundby considers it probable, however, that there is a class of cases to which the term "hepatic diabetes" could be provisionally applied. We must not be content to call every case of glycosuria, diabetes, and put it on routine treatment; our opinion must often be suspended and the case studied. He warns that the reduction of copper does not necessarily mean sugar. Unfortunately the cases are common enough in which the diagnosis is plain. The remainder of the paper is given to the subject of treatment, mainly dietetic, and he gives tables of diets, with their heat and carbohydrate equivalents. He does not believe in sending advanced cases to distant health resorts. Exercise must be very moderately indulged in, as fatigue is often fatal.

Summer Diarrhea, with Special Relation to Causation

and Prevention. F. J. WALDO.—Summer diarrhea in infants is held by Waldo to be probably due to multiple infection, though our knowledge in regard to this point is still very defective. He is inclined to think the disease is communicable under certain conditions, but it is hardly possible that the chief cause lies in the transmission direct from one patient to another, but rather in the existence of a common contagion. He considers contagion very likely due to street dust and mud, but there are many difficulties in the investigation of this subject.

Clinical Study of Causes of the First Sound of the Heart. ALEXANDER MORISON.—From a study of the question Morison concludes that the impulse given to the blood by the muscular action of the heart in it and in the vibrating structures containing it, gives rise to vibrations of a certain quality which result in that tone which is synchronous with the cardiac systoles usually called the first sound of the heart. The largest share in this result must be attributed to vibration in the blood itself, to produce which, at normal rate, valvular support of the vibrating blood-columns is necessary. This conclusion, based on clinical observation, is essentially the same as that of Leared, but Morison disagrees with him when he says that "the events which occur in the ventricles and at the arterial orifices have no more to do with the generation of the sounds than 'the vibration of a door [has] with the sound produced by the air [passing] through its keyhole.'" There is a difference, he says, in the noise made by a door slammed to and one pushed open. The former represents the second, the latter the first sound of the heart, and in both the character and distribution of the vibrations differ.

Some Cases Showing the Use of "Gas and Oxygen" as an Anesthetic in Certain Ophthalmic Operations. W. J. McBRIDE.—The author reports several cases of ophthalmic operations under the use of gas and oxygen, the advantages of which he states as follows: 1. The almost absolute safety of the mixture, which is the safest anesthetic known. 2. The rapid induction of anesthesia, the patient being under in less than two minutes. 3. The induction is without incident and the maintenance in the best cases is quite sleeplike; while full recovery occurs in less than two minutes. 4. The absence of after-effects, the patient being able to leave the room in a very few minutes. 5. The eyeball is fixed, the orbicularis muscle is relaxed and congestion can be entirely avoided by the allowance of sufficient oxygen, while there is no retching, sickness, cough, straining, or unconscious after-movements causing increased intra-ocular vascular tension. 6. The upright chair or semi-recumbent position on a couch can be conveniently and safely assumed. This method of anesthetization is, for several of the above given reasons, admirably adopted for consulting-room work.

Annales de Dermatologie (Paris), April.

Clinical and Bacteriologic Study of Impetigo. R. SABOURAUD.—The first division of this work was summarized in THE JOURNAL, April 28, p. 1062. In it Sabouraud announced that impetigo is the keystone of dermatology and that it has two fundamental varieties, the impetigo of Tlbury Fox and the impetigo of Bockhart. He then proceeded to establish that the former is the work of the streptococcus; now he states that the latter is due exclusively to the staphylococcus aureus. These two infections, the streptococci and the staphylococci, have each their immense train of immediate derivatives; the microbial origin remains the same, but they owe their different names to some detail in their seat or their structure. With their combinations and their mixed forms which disguise and transform them; with the superposed secondary infections which rapidly alter their special characteristics; with their "clinical manners" variable from one subject to another; with their chronic forms swamped in the multitude of eczematiform dermatites: . . . "the two infections, the staphylococci and the streptococci, are the center and the nucleus of cutaneous bacteriology." All study of microbial dermatology should commence with them, and in them is the key to the still unsolved general problems of dermatology. Each of these two infections has its acute, distinct and regular type. The impetigo of Bockhart is characterized by its periostio-follicular localization, its suppuration from the start, its comparatively difficult effraction, its desiccation and exfolia-

tion in the form of a scab which comprehends the dead lesion in its totality, and the peripilar cicatrix it leaves behind. Anatomically it is characterized by being crowded with leucocytes, by loosening the epidermis through which it forms, being centered by a hair and by showing more or less extensive necrosis of the skin in the depth of the lesion. The microbe is invariably the staphylococcus and it is always massed in the "cupola" of the pustule and in the follicular chimney around the hair. It is the same morbid entity, whether originating spontaneously or consecutive to a physical or chemical traumatism. The staphylococcus does not allow any other microbe to invade the lesions which it determines, unlike the streptococcus, which seems to welcome other micro-organisms. The chronic form is a pustular myriadic dermatitis while that of the phlyctenular impetigo of T. Fox is a dermatitis with exudation and later lichenization. "The coincidence of these two infections in varying proportions and with varying localizations, according to the regions involved and the individual case, generates the complexus on which the clinic has bestowed the name of "chronic eczema." The syndrome of chronic eczematization is in reality nothing but the simultaneous occurrence of the staphylococic and the streptococic infection. In their acute form each bears the seal of an affection derived from without and contagious. Each can be reinoculated indefinitely on the bearer and the persons in his environment. In their chronic form each obeys the inexorable law that a cutaneous affection of extraneous origin becomes progressively acclimated to the bearer. In this stage they assume an apparently endogenous form and become torpid and permanent. No infection is more distinctly exogenous, in fact, more autonomous, more typical, more cyclic, more limited in its acute form. None is more permanent, more endogenous in appearance, more incorporated into the individual, nor more confused in the maze of its local complications and secondary infections after it has once assumed the chronic form.

Bulletin de l'Academie de Medecine (Paris), May 1 and 8.

Cure of Myopia Without Operation. PANAS.—A young student was exhibited five years ago by Panas, as an example of the fine results attained by removing the crystalline lens in the treatment of myopia. There were no lesions in the choroid, but the myopia had been 13 and 22 D. After the operation he only required glasses for +1D., to neutralize his post-operative astigmatism. Six months later progressive lesions appeared in the choroid, terminating in complete detachment of the retina and total blindness in both eyes. Panas believes that similar accidents are more common than would be supposed from the published statistics, as they occur so late. He also calls attention to the appearance of the choroid lesions consecutive to the operation. For these reasons he has been particularly interested in an observation related by Betteureau of Roubaix, which he quotes in full. A lad of 14, with progressively increasing myopia, 4 and 5 D., was treated for five months with repeated instillations of a pilocarpin collyrium, supplemented by a compressing cotton bandage applied at night. With no interruption in his studies, the myopia diminished with this simple treatment to 3.50 and 2.75 D., explainable by the decreased anteroposterior axis of the eyeball under the influence of the myotic and the compression.

Bulletin Medical (Paris), April 28.

Symphsectomy Without Immobilization. G. FIEUX.—After extracting the child, the sutured wound is varnished with a double coat of traumaticin, with no other dressing but the usual abdominal bandage. Reunion is perfect and the patient able to be up on the sixteenth day; two thus treated recovered rapidly with no after-effects, and Fieux now proposes in future operations to leave a small gap to facilitate future deliveries, as he has established that the pelvis and its contents will not suffer.

Semaine Medicale (Paris), May 10.

Diagnosis of Rabies. VAN GEUCHTEN.—It is evident, from the experiences related, that experimental rabies differs from the natural not only in the symptoms and course, but also in the intensity of the lesions it induces. This explains the contradictory testimony of Nocard, Babes and others in regard to the ganglionic lesions described by Van Geuchten (see THE JOURNAL, May 26, p. 1368), which are only specific for natural rabies and not pronounced until an advanced stage.

He considers the symptoms presented by the rabid animal merely the consequence of the ganglionic lesions, and the disposition to bite, a manifestation of the nervous agitation resulting from the turgescence and incipient proliferation of the pericellular capsule. He insists on a more vigorous campaign against vagrant dogs, and recommends that one suspected of rabies—who has bitten a person—should not be killed at once, but the disease be allowed to run its brief course in order to confirm the diagnosis. In future the diagnosis of rabies can be made from the ganglionic lesions, and inoculations will only be needed in case of negative histologic findings.

Technique and Results of Subarachnoid. Cocain Anesthesia. T. TUFFIER.—Sixty-three operations have been performed by Tuffier or his assistants, on the perineum, rectum, abdomen, urogenital organs and inferior members, including vaginal hysterectomy, nephrectomy, excision of the rectum, etc., with anesthesia that was induced exclusively by a fresh, sterile, 2 per cent. solution of cocain injected into the subarachnoid space at the fifth lumbar vertebra, on a line level with the margin of the iliac crests. In four to ten minutes the patient feels a prickling, tingling and numbness in the feet and legs, and then the operation can be commenced at once, as sensibility to pain and heat is abolished, although sensibility to contact is retained. The analgesia is complete, absolute, and may extend to the axillae. In one case the patient lifted the stump after amputation of the thigh, to facilitate ligating the vessels. Another listened to the sawing of his femur, but remarked that he could not tell whether it was his leg or the leg of the table that was being sawed. Another, after her kidney had been removed, inquired when the operation was going to begin. Very few consent to be blindfolded. This analgesia lasts from sixty to ninety minutes. The position does not affect the sensibility. No serious accidents have occurred; there was merely a sensation of oppression in the epigastrium, a little nausea and vomiting, sometimes at the time of the injection, but usually not until after a few hours, then it is slight and yields at once to the ingestion of ice. These accidents were noted fifty times in the sixty-three operations. Cephalalgia was more frequent, but was merely a slight heaviness in the head in two-thirds of the cases. In a few it was more severe and kept the patient awake all night, lasting for forty-eight hours. Sweat, dilation of the pupils, tremor of the limbs and acceleration of the pulse were also occasionally noted, but all without the slightest gravity, vanishing within an hour. The temperature also rose in 15 cases, without operative complications, in 1 to 40 C., but returned to normal by the next day, and in 4 a chill for a few minutes was also noted. The patients were between 12 and 69 years of age, and 39 were men. Tuffier uses a special platinum needle, straight, 9 cm. long, the external diameter 11 mm. and the lumen 8 mm. It is strong so that it will not break if it comes in contact with the bone, and the tip is very short. The dose should not exceed .015 mg. of cocain. The technique is much the same as for lumbar puncture. The needle is inserted about 1 cm. from the median line of the spine, with the left forefinger on the apophysis as a guide. There is scarcely any resistance to the passage of the needle and the issue of a few drops of cerebrospinal fluid is the sign that the needle is in the right place. The patient should be warned that he is about to feel a prick and not to stir. Children and hysterics are liable to be afraid, and Tuffier rejects the method for them on this account. In case the anesthesia fails for any reason, the injection does not counterindicate resorting to general anesthesia at once. He changed to ether several times in his early experience, noting merely in such cases that the usual period of agitation was diminished.

Archiv f. Exp. Path. (Leipsic), March 22.

Alcohol and the Work of the Muscles. J. C. T. SCHEFFER.—The research reported by the Physiologic Laboratory at Utrecht confirms the results of others, that ingestion of a moderate quantity of alcohol—10 gm. in 90 gm. of water—first increases the amount of work accomplished by the muscles and then lowers it below normal. Experiments on frogs under the influence of curare—and thus the entire peripheral motor apparatus excluded—showed that the alcohol had no influence on the work of the muscles in these circumstances and consequently that it is not dynamogenic. It seems to be a true stimulant

for the peripheral motor nervous system, increasing its excitability for a while, but this period is always followed by a depression of reaction.

Alterations in Blood After Infusion of Salt Solution. R. MANGUS.—The dilution was the only constant change noted in the composition of the blood in numerous experiments on dogs injected with salt solution of varying concentration. This suggests that the dilution is the essential factor in the diuresis which it induces, but does not explain the fact that the diuresis ceases while the dilution is still at its height.

Archiv f. Path. Anat. (Berlin), April 28.

Psamomma. R. VIRCHOW.—When Virchow first described the psamomma, he was careful to discriminate between the sand-containing epithelial and connective-tissue tumors, and reserved the term "psamomma" for the latter variety exclusively. He protests against applying it to canceroids and endotheliomata, and emphasizes again that the sand formation is a concretion which requires an infiltration of calcareous salts as the preliminary. The sand bodies are not organic formations but merely physical concretions. The nature of the tumor containing them is not determined by the structure of the sand bodies, but by the nature of the pre-existing tissue. He also suggests that the existence of pachymeningitis arenosa supports the assumption of an irritative process in the etiology, which applies also to peritonitis arenosa.

Beitrag z. Klin. Chir. (Tubingen), January and March.

Carcinoma of the Penis. H. KUETTNER.—From observation of sixty cases at von Bruns' clinic, the writer concludes that the neoplasm must be considered malignant if the subject is young, if there are hemorrhages from the urethra or ulcerated tumor, if the carcinoma has a rapid local growth, if the corpora cavernosa is invaded, or if, with a still small primary tumor, the inguinal glands are suspiciously enlarged. Carcinoma of the penis affords more favorable conditions for successful ablation than does any other region; 59.46 per cent. of the 37 followed to date are permanently cured. In 73 per cent. the neoplasm had existed for one to four years and it was not deemed necessary to extirpate the glands. Of the 22 patients cured, 9 died three to three and one-half years after operation, of heart or lung troubles; 1 succumbed nine years later to a carcinoma of the stomach, and 1 had a cancer of the lip two years after operation, which was also successfully extirpated; 3 are still in good health twenty years after operation, and also 2 others, now over 80, who were operated on ten years ago. When recurrence occurred, it usually followed the operation within a few weeks. The glands in the vicinity must be extirpated in case of a malignant tumor.

Inflammation in Hernia Without Strangulation. G. DE FRANCISCO.—Czerny remarks that taxis may be more dangerous than an operation in some cases of an empty but inflamed hernial sac. He always operates promptly in such cases, and with invariably satisfactory results. There were adhesions, an abscess, an inflamed rupture of the intestine, of the omentum or appendix, in all except six out of his fifty-nine cases, reviewed in this communication.

Tincture of Soap for Disinfecting Hands. HANEL.—Further tests with spiritus saponis (P. G.) have confirmed its efficacy in the disinfection of the hands. It renders them as free from germs as it is possible to have them with our present methods, while it has no injurious effect on the skin.

Berliner Klinische Wochenschrift, April 30 and May 7.

Treatment of Infected Wounds with Hydrogen Dioxid. VON BRUNS.—To prevent the rapid deterioration of hydrogen dioxid, an acid is added, which is so high priced that it has rendered the dioxid unsuitable for general surgical use. Bruns announces that an absolutely pure, highly concentrated hydrogen dioxid is now made under his directions; it will keep several months, and as the most effective and harmless disinfectant for the treatment of infected wounds. It has a specific bactericidal effect on anaerobes, but merely attenuates the virulence of other micro-organisms. Its chief efficacy is due to its remarkable cleansing of the wound, and its stimulating effect on the tissues. The nascent oxygen forms a foam which mechanically loosens the germ-laden secretions, the coagulated blood and particles of dead tissue and brings them all up out

of the wound with it. By this means the wound is cleansed throughout in the most gentle and at the same time most effective manner, while reaction is also promoted. Bruns applies it in a 1 per cent. solution, for irrigation, and on moist compresses. The Germans determine the percentage of solutions by weight, the French by volume; in the new hydrogen dioxid 30 per cent. by weight is equivalent to 100 per cent. by volume.

Resection of the Rectum. W. LEVY.—In order to retain the important muscles of the sphincter and levator ani, Levy, in removing a malignant growth in the rectum, reaches it through the sacrum, dividing the bone across at the lower edge of the fourth sacral foramina. The results have been extremely satisfactory in a patient thus operated on 1½ years ago to remove a carcinoma high in the rectum. The union of the stump was faultless, not even narrowing the lumen. Continence is absolutely normal, not disturbed in any way.

Hydrotherapy as Prophylaxis and Cure of Tuberculosis. W. WINTERITZ.—With the free use of scientific hydrotherapy, Winteritz has cured 80 per cent. of all chronic, afebrile cases of tuberculosis in his extensive experience. In "florid" phthisis he has arrested the affection or obtained comparative cure in 32 per cent., and even in the incurable cases, this treatment always gives relief and awakens hope. He urges in the prophylaxis of the disease to increase the resisting power of all threatened with it by having arrangements for cold spongings, pourings, and douches in all tenements and factories. Next in importance are "catarrh sanatoria," with facilities for alternating hot and cold, steam, CO₂ and light baths for the poor. He would also have "house sanatoria" in all hospitals, with arrangements for cold and CO₂ douches, with trained attendants for cold frictions and stimulating thorax packs. He also insists that all sanatoria for consumptives should have a simple contrivance in every sleeping room for these douches, which are most effective when taken directly from the warmth of the bed. He has devised a contrivance for this CO₂ bath, which is transportable and requires no water service. It is a water-proof box, like a steamer trunk, with extension sides, two cylinders stand beside it on the floor, one filled with water, the other with liquefied carbonic acid gas, which forces the water at a certain pressure, under control, through a jointed pipe for a general or local douche as desired, until the last drop of water is exhausted. The water thus saturated with CO₂ has an agreeable, mechanically stimulating effect on the skin. In his experience with 400 cases of tuberculosis, he has noted that, in 90 per cent. of married couples, the sound husband or wife fails to contract the disease although constantly exposed to contagion.

Centralblatt f. Chirurgie (Leipzig), May 12.

No More Danger in Trephining. S. VON STEIN.—With the improved instrument described, Stein is able to operate so rapidly that he has made five openings in the skull of the cadaver in twenty minutes, without the slightest injury to the dura, and his experience on man is very nearly as conclusive. A basket protector, as he calls it, fits over the cutter, a thumb-screw fastening it tight near the upper end. The lower end flares out into a ring which fits against the skull, when the hole has been drilled deep enough. The protector turns with the drill until the desired depth is reached, when the ring pressing against the skull prevents it from entering farther. This drill is then changed for another with a more abruptly sloping cutting point, but with a round button at the extreme tip. The protector is then adjusted to allow the cutter to enter a little deeper, and as the cutter turns, the button at the tip pushes the dura down out of the way of the cutting edge. All possibility of injury is thus obviated and the operator can proceed rapidly and with complete confidence.

Centralblatt f. Gynekologie (Leipzig), April 7 to May 5.

To Relieve Cancer of the Uterus. O. KUETTNER.—In case of an inoperable cancer of the uterus, Kuestner opens a passage into the rectum for the fetid discharges, and thus places them under the control of the sphincter ani. The neoplasm is cleaned with scissors and the hot iron and a wad of gauze is dipped in alcohol and placed over it, a thread left hanging from the wad. A transverse incision is then made in the rectal wall, establishing extensive communication between the rectum

and the vagina, and the thread is pulled out through the anus. The vestibulum is closed with sutures, and the fourth day the alcohol wad is removed by means of the thread. The procedure is simple and harmless, but rubber gloves should be worn by the operator, and the communication inspected occasionally to see that it is kept open.

Rapid Hysterectomy. D. STAPLER.—The clamps devised by Stapler fit over the broad ligament from the top to the bottom of the uterus, and are slightly curved to follow its outline. A thumb-screw in the handle holds the two long blades firmly together with an even pressure throughout. The ligament is then cut on the side toward the uterus and the organ thus shells out whole and unopened, without any loss of blood.

Relative Size of Sternum and Conjugata. J. KURZ.—The length of the sternum and conjugata vera, measured on 150 patients in Chrobak's clinic, showed a surprising relation between them, in both normal and rachitic skeletons. In 93 per cent. the difference was less than 1 cm., and in the rest it was 1 cm., or a few mm. more.

Retrostrictural Edema. G. KOLISCHER.—Our Chicago confrère calls attention to the strictures in the female urethra which may be congenital, or, at least, occur without preceding pregnancy or venereal disease, usually in virgins. Edema forms behind them, extending into the bladder and causing cystitis. Cystoscopy and internal urethrotomy will cure the trouble.

Artificial Premature Delivery. W. GRUDEW.—In a plea for systematic, artificial, premature delivery, in the place of Cesarean section or symphyseotomy—which are always more or less serious matters for the future working capacity of the mother and still show considerable mortality—Grusdew relates his experience with a patient who has now five healthy children, and is, herself, well and strong, and yet her deformed pelvis rendered natural delivery impossible. It was induced artificially between the thirty-fourth and thirty-sixth week on nine separate occasions, always at her home and without complications. He comments on the coincidence that labor commenced spontaneously with the ninth time, at the date of the previous premature deliveries, indicating that the organ had become accustomed to delivery at this stage.

Centralblatt f. Inn. Med. (Leipzig), May 5.

Limits of Normal Temperature. MARX.—The writer has been investigating the normal temperature of himself, his friends and 200 patients with afebrile affections, at the Berlin Institute for Infectious Diseases. He found the normal temperature 36 to 37 C. instead of the higher figures given in the text-books.

Therapie der Gegenwart (Berlin), March.

Local Application of Tetanus and Diphtheria Antitoxin. E. BEHRING.—Recent experiments on animals have demonstrated the importance of the direct contact of tetanus antitoxin with the infected and toxin-containing tissues, and Behring lays great stress on the advantages of direct application to the point of infection and vicinity. He recommends using the antitoxin in the uterus, or at least in the vagina, in case of puerperal tetanus, and in the peritoneum, with tetanus neonatorum. A dilution of 1:10 to 1:100 is sufficient for the purpose. He also advocates the local application of diphtheria antitoxin, spraying the nasopharynx with diluted antitoxin as an adjuvant to the injections.

Continuous Small Doses of Digitalis.—The necropsy of a middle-aged man showed cor bovinum, moderate stenosis of the ostium aorticum, aneurysmal enlargement of the aorta and arteriosclerosis of coronaries and kidneys. Notwithstanding these lesions, he had been kept in good health for a number of years by the daily ingestion of .1 to .16 gm. of digitalis powder. These small doses enabled his heart to perform its task satisfactorily, and yet he had taken only 305.29 gm. in eight years. He died suddenly in the midst of apparent good health, during some unusual physical exertion.

Solubility of Uric Acid. HIS.—According to the view advanced by His, uric acid is not an acid at all, and its solubility depends on the physical conditions of the medium. Introducing new molecules into the medium, sodium bicarbonate for

instance, the solubility of the uric acid diminishes in direct proportion to the number of molecules added.

Psychotherapy of Pains. H. OPPENHEIM.—When the pains are of hysteric, hypochondriac, psychogenic origin and localized in one extremity, Oppenheim cures them with a course of systematic training by diverting the attention. The patient holds a watch to his ear and listens intently to the ticking, while the painful region is lightly touched, or the painful and a sound region are alternated, followed by pinchings, prickings, etc. A stage is soon reached when the patient finds that by diverting his attention he will cease to perceive the pains. This method of treatment requires patience, but its success in several cases of pseudoischias, etc., has fully determined its efficacy.

Therapeutische Monatschrift (Berlin), April.

Covering for the Feet. ZEUTCH.—All concede that our present methods of dressing the feet are unhygienic, and Zuetch proposes a remedy which will absorb the moisture of the foot and ventilate the shoe at the same time. This desirable result is accomplished by wearing an inner sole of two layers of blotting paper, and underneath them a layer of curled horsehair. The blotting paper absorbs the moisture from the foot and the upper layer will always be found dry; the pressure of the foot on the horsehair crushes it flat, but it resumes its former curl as soon as the foot is lifted, thus creating a vacuum which aspirates air to fill it.

Muenchener Medicinische Wochenschrift, May 15.

Immunization. VON DUNGERN.—If the *Seitenketten* theory of immunization is correct, the immune body and the complement will be found quantitatively independent of each other, which has proved to be the case. It has also been found that the same group of red corpuscles which enters into combination with the immune body in hemolysis serves too for the production of the immune body. When the groups of erythrocytes which produce the reaction of immunization are already saturated with immune bodies, injection of blood thus saturated produces no immune bodies in the animal. This shows that these erythrocytes can not be bound by the *Seitenketten* of the cells—absolutely similar to the immune bodies—and this again confirms the theory. It is further established by the fact that the cells with these complex *Seitenketten* are enabled to draw out complements from the blood serum by the presence of the complementophile groups. Dungen therefore concludes from these facts, which he claims to have established, that the globulinoid and bactericidal immunization reaction—like the closely allied antitoxic reaction—is due to a chemical process, the course of which can best be explained by the *Seitenketten* theory.

Inflammation and Adhesion of Serous Membranes. G. MUSCATELLO.—The writer modifies the statements of Heinz on this subject, reported in THE JOURNAL, of March 17, p. 683. He establishes that the loss of the peritoneal epithelium is not sufficient alone to induce adhesions, and also that when the chief condition for the formation of adhesions is present, i. e., the formation of a fibrinous exudate, the presence of the epithelium does not prevent the growing together of the two surfaces. The lifting up, throwing off and degeneration of the epithelium are in fact the consequences of the fibrinous exudation.

Training of the Partially Deaf and Dumb. BEZOLD.—By a new and ingenious arrangement of tuning-forks, Bezold has constructed an apparatus for testing the hearing capacity; it has revealed unsuspected partial hearing powers in a number of supposed totally deaf mutes. He urges that all such should be trained in separate institutions, not with those totally deaf, as they only learn to speak like the latter and forget the little they had learned from hearing spoken language before their entrance. Spoken language becomes like a foreign tongue to them under present conditions, and the little they succeed in hearing soon becomes absolutely unintelligible to them, when it might be the basis of almost normal speech.

THE TITLE of *Sanitätsrat* was recently conferred on a German confrère, Dr. Steffan, and 300 marks exacted for "stamp tax." He stoutly refuses to pay this tax, declaring that he had not solicited the title and prefers to keep his cash, and the authorities are in something of a quandary.

Societies.

COMING MEETINGS.

Medical Association of Delaware, Rehoboth, June 12.
 Massachusetts Medical Society, Boston, June 12-13.
 Oregon State Medical Society, Portland, June 26-27.
 Colorado State Medical Society, Denver, June 13.
 Maine Medical Association, Portland, June 13-15.
 South Dakota State Medical Society, Aberdeen, June 14.
 Indian Territory Medical Association, Wagoner, June 19-20.
 Wisconsin State Medical Society, Milwaukee, June 20.
 Third District Branch of the New York State Medical Association, Binghamton, N. Y., June 21.
 Second District Branch of the New York State Medical Association, Schenectady, N. Y., June 28.

DELAWARE COUNTY MEDICAL SOCIETY.—The fiftieth anniversary of this Society was held at Chester, Pa., May 25. In honor of his fifty years practice of medicine, Dr. W. B. Ulrich was presented with a loving-cup.

SUSSEX COUNTY MEDICAL SOCIETY.—The officers elected at the annual meeting of this Society, held May 15, in Newton, N. J., were: president, Morgan D. Hughes; vice-president, Chas. M. Downing; secretary, Sidney B. Shaley; treasurer, E. Morrison.

BALTIMORE COUNTY MEDICAL ASSOCIATION.—At the annual meeting of this Association, which was held in Baltimore, May 17, the following officers were elected: president, H. Burton Stevenson; vice-president, W. E. P. Wyse; recording secretary, R. Percy Smith; corresponding secretary, R. G. Massenbun.

TOLEDO MEDICAL ASSOCIATION.—The last regular session of this Society until after the summer months was held in Toledo, Ohio, May 25. The principal feature of the meeting was the paper by Professor Nancere, of Ann Arbor, on "Actual Experience with Modern Military Projectiles vs. Theory."

NORTH DAKOTA MEDICAL SOCIETY.—The thirteenth annual meeting of this Society was held in Grand Forks, May 25. The election of officers resulted as follows: president, H. J. Rowe, Casselton; first vice-president, H. D. Quarry, Grand Forks; second vice-president, W. H. Bobinstab, New Salem; secretary, Paul Sorkness, Fargo; treasurer, J. A. Rankin, Jamestown. The next meeting will be in Fargo.

CHICAGO ACADEMY OF MEDICINE.—The tenth anniversary of the Chicago Academy of Medicine was celebrated by a banquet at the Palmer House, May 25. About fifty physicians were present. Dr. W. A. Evans acted as toast-master and responses were made by Drs. Harold Moyer, W. L. Ballenger, W. Cuthbertson, H. T. Byford, E. S. Talbot, G. Fütterer, W. L. Baum, S. N. Hallberg and J. G. Kiernan.

CLINTON COUNTY MEDICAL SOCIETY.—At the twenty-fourth annual meeting of this Society, which was held in Clinton, Ill., May 18, the following officers were elected: president, W. P. Gordon, Carlyle; vice-president, T. Gaffner, Trenton; secretary, M. Broening, Carlyle; treasurer, P. H. Leibrock, New Memphis. Board of examiners: Drs. T. Gaffner, J. G. Vogt, A. W. Carter, J. W. Thompson and S. H. Wilcox.

MEDICAL ASSOCIATION OF MONTANA.—The twenty-first annual meeting of this Association was held in Butte, May 16-18. Nine new members were admitted, and the following officers elected: president, A. F. Longway, Great Falls; first vice-president, T. J. McKenzie, Anaconda; second vice-president, Louis Bernhein, Butte; secretary, B. C. Brooks, Helena; corresponding secretary and historian, J. F. Spelman, Anaconda; treasurer, George H. Barbour, Helena.

CONNECTICUT MEDICAL ASSOCIATION.—The 108th annual meeting of this Association was held in New Haven, May 23 and 24. Twenty-nine new members were added, making a total membership of 676. It was voted to recommend to the general assembly that a hospital be founded for tuberculous patients. The following officers were elected: president, Henry B. Almy, Norwich; vice-president, John H. Grammiss, New Haven; secretary, E. N. Wordin, Bridgeport; assistant secretary, H. S. Miles, Bridgeport; treasurer, W. W. Knight, Hartford.

NORTH CAROLINA STATE MEDICAL ASSOCIATION.—The forty-seventh annual meeting of this Association was held in Tarboro, May 22-23. Durham was selected as the place of meeting in May, 1901. The following officers were elected for the ensuing year: president, J. M. Baker, Tarboro; first vice-president, M. H. Fletcher, Asheville; second vice-president, David Stanton, High Point; secretary, G. W. Pressley, Charlotte; treasurer, G. T. Sykes.

INDIANA STATE MEDICAL SOCIETY.—The fifty-first annual meeting of this Society was held in Anderson, May 24-25. The following officers were elected for the ensuing year: president, G. W. McCaskey, Ft. Wayne; secretary, F. C. Heath, Indianapolis; assistant secretary, J. B. Berterling, South Bend; treasurer, A. E. Bulson, Ft. Wayne. There were over 200 members in attendance. South Bend was chosen as the meeting-place for next year's session.

MISSOURI MEDICAL ASSOCIATION.—The forty-third annual meeting of this Association was held in Mexico, May 15-18. The following officers were chosen: president, U. S. Wright, Fayette; first vice-president, D. C. Gore, Marshall; second vice-president, J. R. Fritts, Mexico; third vice-president, R. S. Kelso, Joplin; fourth vice-president, Thomas Chowning, Hannibal; fifth vice-president, F. E. Murphy, Kansas City; recording secretary, B. C. Hyde, Kansas City; corresponding secretary, C. R. Dudley, St. Louis; treasurer, J. F. Welch, Salisbury. The next meeting will be in Jefferson City, May 21-23, 1901.

Kentucky State Medical Society.

Forty-fifth Annual Meeting, Georgetown, May 9-16, 1900.

President, Dr. William Bailey.

NEPHRITIS CONSIDERED AS A CONVENTIONALISM.

DR. U. V. WILLIAMS, Frankfort, read a paper on this subject, in which he stated that the kidneys are the scavengers of the body, and a correct diagnosis of pathologic conditions is often difficult; that but little can be done in organic disease, where the chronic form is very severe and grave; and that the various distinctions in literature are of little value. The beginning of disease of the kidney is often uric-acid diathesis, and all constitutional inflammation of mucous membranes is due to tuberculosis, diphtheria and specific diseases. The use of ice produces arterial pressure, and contracts the pulmonary vessels and the large ones of the chylolipoetic system. Its general use invites nephritis. Cardiac and renal lesions are intimately connected. The great use of sugar is also a factor in production of nephritis.

RENAL INSUFFICIENCY.

DR. JOHN G. CECIL, Louisville, considered this subject. He said that a free blood-supply is essential to the proper performance of the function of the kidney; and that the blood must be of normal composition, the uriferous tubules of normal size and unobstructed. The causes of renal insufficiency are functional, due to congestion from infectious disease and toxic poisons, and organic, due to structural change. The demands of modern progressive medicine are only satisfied by constant, persistent, and perpetual interrogation of the kidney function. In treatment of organic disease give rest, no diuretics, food and drink, clothing, exercise, hydrotherapy, mercury, strontium, and digitalis.

NEPHRITIS, ITS FREQUENCY AND IMPORTANCE OF EARLY DIAGNOSIS.

DR. J. A. HUMPHREY, Henderson, stated that the student of medicine is easily confused by various classifications, and that a simple nosology is a crying need. Nephritis is an inflammation of the kidney, interstitial and parenchymatous; pus may form. He had seen many cases this winter. An epidemic of cerebrospinal meningitis was accompanied by an epidemic of la grippe. The bacillus of Pfeiffer caused, as a complication to la grippe, diarrhea, pneumonia, heart inflammations; and might also nephritis. It is a primary and not a secondary invasion.

DR. LOUIS FRANK, Louisville, in speaking of causation of acute nephritis disagreed with Dr. Humphrey's theory, as to its being due to the bacillus of Pfeiffer. In the kidney we have a different structure from that of the lung, meninges and liver,

and micro-organisms acting on the former would end in formation of pus and destruction of tissue. Trouble in the kidney comes from elimination of toxic products: elimination is the key-note, not the disease itself.

DR. J. A. HUMPHREY stated that he was convinced his idea was well founded: That the structure of the kidney differed from other organs did not argue that the kidney should be the exception to the general rule of an organism being the cause of the inflammation. The frequency of la grippe coupled with the frequency of nephritis shows a connection between the conditions.

FEBRILE PUERPERIUM.

DR. HENRY E. TULEY, Louisville, read a paper entitled "What Is the Significance of a Febrile Puerperium?" He said that the maximum temperature compatible with the normal is 100 degrees, and that there is a normal chill and temperature, post-partum, from 101 to 104 degrees. This rise is complete at the end of the first twelve hours, and has reached the normal, below 100, at the end of twenty-four. On the occurrence of fever the diagnosis is assisted by a consideration of other symptoms, pulse, lochia, facial expression, state of the bladder, breasts and after-pain. The following diseased conditions were mentioned as responsible for rise in temperature: sepsis, auto-intoxication from the bowel, malaria, mastitis, typhoid fever, epidemic la grippe, tuberculosis, the exanthemata, eclampsia, erysipelas, pneumonia, rheumatism. There is no such condition as milk-fever, and so prone is a sepsis to occur that one should keep this constantly in mind, and arrive at a diagnosis by exclusion.

DR. ISAAC J. TOWNES, Beach Grove, reported seven cases of puerperal fever, three of them his own, two in the practice of other doctors, and two in nurses; three died. He believed it epidemic.

DR. R. C. MCHORD, Lebanon, considered Dr. Tuley's paper timely. He said that sepsis is reprehensible in almost every instance; and that it is a disgrace to the medical profession that midwives are allowed to practice in this enlightened day. Frequent examinations during the progress of a case are unnecessary. He uses a post-partum douche as routine practice, and believes that all patients should be thoroughly examined afterward and all wounds repaired.

DR. W. B. GOSSETT, Louisville, said that the term "puerperal fever" should be dropped, and the word "infection" used; that there are three forms—sæpemia, septiæmia, pyæmia; and that no pathogenic organisms are normal in the uterus. He said he would not use an ante-partum douche unless most especially indicated; and there is no need of the post-partum douche. He gives ergot in all cases.

DR. F. L. LAPSLEY, Paris, said that intestinal intoxication is frequent, and that temperature of 100 and 101 disappears after catharsis; that true puerperal infection is due to causes from without. Ergot is an old remedy but is best displaced by quinin and strychnia, that gives the same and better results. He urges all women to get up after the first few hours for emptying of the bladder.

DR. J. L. ATKINSON, Campbellville, stated that the high rate of mortality in puerperal sepsis is caused by the inefficiency of treatment, and that most febrile conditions are due to sepsis.

DR. D. A. SIMMONS, Adairsville, in speaking of local treatment, said that there is too much interference with the body of the uterus, that the general treatment is very unsatisfactory, that douching is not good, that the use of the St. Cyr curette is better.

CANCER OF THE BREAST.

DR. JAS. H. LETCHER, Henderson, read a paper entitled "Early Diagnosis and Complete Removal of Cancer of Breast." He quoted Williams' statistics, and said that mortality from cancer is greatly increased, that it is $4\frac{1}{2}$ times greater now than it was a century ago; and that it is probably of parasitic origin. In suspected cases, give the patient advantage of doubt by thorough excision of all the glands. There is hope in the first operation. About 40 per cent. of tumors of the breast are cancerous, and often not seen until there is systemic infection. Tuberculosis, mastitis, and cancer should be

differentiated; if chronic mastitis extends beyond the climacteric, amputate dangerous portion, upper and inner.

LITHOLAPAXY.

DR. A. H. BAECLAY, Lexington, read a paper entitled, "Litholapaxy with Report of Cases." He prefers litholapaxy to lithotomy unless a combined operation is used—because convalescence is shorter, and there is small mortality, especially in the extremes of life. A child's urethra permits considerable dilatation; he reported five cases, the method used, when the patient is free from inflammatory condition of the bladder and urethra. He uses an alkaline solution or boric acid irrigation prior to and at the beginning of operation; when the kidney is free from trouble, eight ounces of fluid in the adult, four to six in a child, injected through an evacuating tube. Frequent introduction causes a swelling of the mucous membrane. Washing is continued until all fragments are removed; eight ounces of boric acid is left in the bladder, and patient kept in bed four days. Contraindications are tight stricture, organic disease of the bladder, sacculated bladder and encysted stone.

SOME COUNTRY SURGERY.

DR. ARTHUR T. McCORMACK, Bowling Green, read a paper on this subject and reported cases, among them one of traumatic obliteration of the cavity of the uterus, due to craniotomy following labor lasting a week, seen four years subsequently.

INFLAMMATION OF MIDDLE EAR.

DR. A. O. PEINOST, Louisville, read a paper entitled "Inflammation of Middle Ear in Infants and Children." He referred to the muco-purulent fluid found in the middle-ear cavity of the the new-born, which is believed to be physiologic. In exanthematous fevers, the mucous membrane may be infected by circulation, but in a greater number it is through the tube; low vitality plays a part; it runs a benign course; pain is not frequent, the only evidence is the placing of the hand and restlessness; there is normal or slight rise of temperature. The spontaneous escape of pus is not common in children; the inspection of the drum tells little: if the tube is glued, the drum protrudes; the tendency is not great for inflammation to spread through the mastoid cells. Loss of appetite, emaciation, weakness, general marasmus, and digestive symptoms are so prominent that the ear is not thought of. The ears of children should be frequently examined. Ice or hot bags, or paracentesis, will keep it open when there is spontaneous rupture; chronic acid crystals are best for this; and there should be frequent removal of escaping pus by boric acid solution. If the mastoid process is infected, open at once. The prognosis of otitis in infants and children is uncertain.

"SURGICAL FANATICISM."

DR. AP. MORGAN VANCE, Louisville, read a paper entitled "Too Much Enthusiasm in Surgery; Welfare of Patient Should Be First Law." The operations mentioned as unjustifiable were the Kraske operation, for cancer of the breast with great involvement; following the lymphatics along the arteries in cancer of the uterus; buried suture of silver wire; Edebohl's examination of the kidney through the lumbar incision; prophylactic removal of the normal appendix to prevent appendicitis; circumcision, as an operation should never be done in the new-born except where good reason exists; ligation of abdominal aorta—twelve cases were found in literature with twelve deaths; forcible correction of Pott's disease; operation on Gasserian ganglion.

DR. A. J. SLATON, Leitchfield, stated that prophylactic removal of the appendix is out of the question, but all male children eight days old should be circumcised.

DR. P. B. SCOTT, Louisville, referred to the removal of the mammary gland in malignant disease, and said that it is difficult to assure a patient that the mammary tumors will not return, though under modern technique, they will not appear in the affected part.

DR. J. G. SHERRILL, Louisville, said that every conscientious surgeon would concur in these statements by Dr. Vance, for the profession is injured by operations which give no permanent benefit; and that the recommendation to excise the appendix is not justifiable. It is too often heard from the laity: "the operation was a success, the patient died."

DR. H. E. TULEY, Louisville, mentioned as an instance of

unjustifiable surgery in obstetrics, the treatment which was recommended by a Canadian, to make a digital exploration in all women after the completion of the third stage of labor, for the finding of any possible retained placental tissue.

CLUBFOOT.

DR. BEN. F. PARRISH, Midway, read a paper on this subject, in which he stated that all cases of congenital clubfoot can be cured; that the spastic variety is easy of diagnosis; and that the cause of the congenital form is speculative. When correcting it, the normal position should be assumed and kept long enough to improve nutrition. It is inadvisable to do this by a bandage; the pain can be prevented by paregoric. He mentioned Sayre's classification of contracted and contracture tendon, and said that the tendon should be severed in the latter form, but no opium should be given if there should be no pain. The dressing should be changed in two weeks, and any deformity remaining, corrected. The paralytic form is difficult to help, but the tendon grafting has good result.

(To be continued.)

Fourth District Branch New York State Medical Association.

Sixteenth Annual Meeting, Buffalo, May 8, 1900.

President William H. Thornton, M.D., Buffalo, in the chair.
CONTINUATION OF THE EYE.

DR. ALVIN A. HUBBELL, Buffalo, read a paper in which he detailed the histories of two cases of contusion of the eye, in one of which anteversion of a portion of the iris took place, and in the other, retroflexion of the whole iris. The third case was one of the removal of a piece of iron from the interior of the eyeball. Of the cases of contusion, the first was a boy 14 years of age, who had been injured in the eye by a bullet, about one-fourth of an inch in diameter, discharged from a Flobert air-rifle. This was on Aug. 28, 1898, and on the following day the case was brought to him for examination. The boy stated that the ball had struck the eye and dropped on the ground, and he had picked it up. Examination showed no evidence of penetration of the eyeball. The pupil was distorted, and the iris was torn from the inner side and turned over so that the posterior surface was turned forward. At first glance, it appeared to be crowded to one side, and the vitreous humor protruding. After keeping the case under observation for some time the capsule of the lens was seen to be broken, and, in due time, the crystalline lens was entirely absorbed. The anteversion of the iris had remained permanent, but the eyesight had been preserved, just as it would have been after the removal of a cataract. Such an injury is exceedingly rare, the most peculiar feature being the anteversion of the segment of the iris.

RETROVERSION OF IRIS.

The second case was one of retroversion of the iris; its sphincter having become ruptured, the iris was turned backward. Where the whole extent of the iris is involved, there is usually also a rupture of the suspensory ligament of the lens, and when the entire iris is turned backward, the lens is dislocated into the vitreous humor, and the iris lies on the ciliary body. In this case there was a retroflexion of the entire iris, so that the whole width of the cornea appeared as a black space. The patient was a German, 55 years of age, who had come under observation on May 26, 1899. Fifteen days previously, he had fallen from a wagon, striking the left side of the face against the pavement. When first seen, the cornea was hazy, and the aqueous chamber was filled with blood. The tension of the eyeball was considerably diminished. The blood was gradually absorbed, and by June 10 had entirely disappeared. Probably there never was any hemorrhage into the ball except in its anterior portion. No vestige of the iris could be seen and in the anterior part of the eye was a quantity of dark colored debris, which floated about in masses or shreds that seemed to be attached to the ciliary body. These were gradually absorbed, and in a few weeks the patient was able to count fingers. On June 23, with a strong cataract glass, vision was 6/60 at a distance of twenty feet; the opacities had disappeared, and no portion of the crystalline lens could be found by him or by several other ophthalmologists. The

fundus of the eye presented no pathologic appearance. In February of the present year his vision was half the normal.

REMOVAL OF FOREIGN BODY.

The next case reported was one of the removal of a foreign body from the eyeball, eighteen years after the injury. The patient was a sailor, 26 years of age, who had been for many years on vessels as an engineer. On Nov. 23, 1881, while making some repairs, a piece of iron penetrated his left eye. He went at once to Paris, and was examined by De Wecker, a world-renowned oculist. The opinion was expressed that there was no foreign body. Since that time the eye had remained more or less weak, and from time to time there had been attacks of inflammation. When first seen by Dr. Hubbell, in November, 1897, the left eye was normal in size and tension, and midway between the center and the outer margin was a brownish scar, and its surface appeared ulcerated. After dilatation with atropin, portions of the lens capsule could be seen apparently separated at one or two points. After a few days' observation, the inflammation subsided, but a similar attack occurred in March, 1899. According to his history, in 1892 there had been a severe inflammation in the uninjured eye, and at this time, and on a subsequent occasion of this kind, the inflammation of this eye had been preceded by tenderness of the uninjured one. Last fall a foreign body had been discovered in the old scar, and it had been found quite adherent. The electromagnet did not attract it at all, so, after incision of the parts, the foreign body was removed. It proved to be a piece of cast-iron, about 3 mm. long, oxidized, and almost spongy in texture. In ten days this eye was practically well. The piece of iron was too near the optical axis to injure the ciliary body. Two days after the operation the right eye became somewhat reddened and painful, and required treatment for several weeks. During the long retention of the foreign body the lens had become absorbed, and there had been at least two attacks of severe iritis of a sympathetic character in the other eye. This is apparently one of the very few cases of sympathetic ophthalmia in which recovery has taken place.

DR. ARTHUR G. BENNETT said that the case of retroversion of the iris is proved by the literature to be decidedly unique. The iris is not uncommonly torn from the periphery, but this turning of it is exceedingly rare. He had himself removed a piece of steel that had been retained in the cornea for six years, without any further inconvenience than sensitiveness to bright light. The man had come under observation without any knowledge of the existence of this foreign body in the cornea, and had sought relief for what was supposed to be merely eye-strain.

DR. A. A. HUBBELL said that he had never been able to dismiss the idea that the man with retroversion of the iris had struck his eye against some small body on the pavement, and that this body had rolled out of the way and had not been observed, so that it had been thought the injury was entirely the result of coming in contact with the pavement. However, there had been no external evidences of injury from such a body.

GOITER.

DR. E. J. MEYER, Buffalo, read a paper on this subject. He said that goiter occurs: 1, sporadically; 2, endemically; 3, epidemically; and 4, as a prominent feature of Basedow's disease. He said also that goiter was endemic in certain portions of New York State, in Detroit, Mich., and in lower portions of Canada at one time. In the region of Kingston, Ont., the disease is very prevalent, even certain strains of dogs and horses being goiterous. Munson found 1323 cases among the Indians of this country, and was impressed with the racial tendency to this disease. His conclusions were that the disease does not seem to be caused by high altitudes nor by water containing a large proportion of lime salts. Its development is favored by an excessively nitrogenous diet, and hereditary influence is strongly marked. The tumors among the Indians are smaller than among the whites. Often districts where goiter is frequent are separated by narrow limits from districts free from the disease. The water of certain streams have been known to almost invariably lead to the development of goiter in those drinking it. In Kocher's opinion, whenever a child develops cretinism, it will be found that the parents

have had goiter; and as he believes that the organic constituents of the drinking water are responsible for it, he recommends that the water be boiled.

The disease is quite prevalent in certain portions of Michigan; in Otsego county it is reported that one-fourth of the children born there, and reaching maturity, have goiter. Morris, of Hamilton, England, reports having seen fifty-five cases in a population of 15,000. Marsh attributes endemic goiter to infection, basing this opinion on its production in persons drinking the water of certain streams, and its disappearance after the introduction of better drainage. Epidemic goiter has been met with chiefly in certain parts of Europe; within a month after the arrival of troops in an infected region, 30 or 40 per cent. had developed it. The organisms found in this affection, by Klebs, seem to show that only under certain conditions do they cause the disease. It may develop in unexpected situations by what are called accessory glands. Virchow divides goiter into: 1, hypertrophy of the gland—a comparatively rare form; 2, fetal adenoma; 3, gelatinous or interacious goiter, appearing usually in the later periods of life. It is in this form that cysts are commonly found. Virchow also recognizes follicular, fibrous and vascular forms. In the so-called aneurysmal goiter the arteries are chiefly involved; and in the more common varieties, the veins are generally enlarged. Special varieties result from changes and degenerations in these three forms, and the most common form of this malignant degeneration is round-celled sarcoma.

In this country the physician is most commonly consulted in cases of goiter because of the disfigurement, though pressure on the esophagus, or on the vessels of the neck may demand relief, as may also the profound changes of nutrition described under the names myxedema and cretinism. It is not safe to remove the entire gland because of the danger of myxedema, for 12 per cent. of all cases in which total extirpation is done develop tetany, which, though not fatal, requires the constant administration of the thyroid extract. Kocher removes the thyroid regardless of the danger of tetany or myxedema, fearing the occurrence of malignancy. For the relief of dyspnea the removal of one-half of the thyroid will often prove sufficient.

A case of Graves' disease on which he operated in December, 1899, was next considered. The patient presented the ordinary symptoms of that disease, and the thyroid gland was about the size of a Florida orange. He removed half of it. But by the administration of twenty grains of thyroid extract daily for several days most of her former symptoms could be made to return.

DR. DE LANCEY ROCHESTER said that it is useless to speak of the various forms as having a common etiology, for many of the cases reported seem to indicate a distinctly infectious origin. The development of goiter in school children has little or nothing to do with the position of the head at that time of life, as some have suggested. He was glad that the removal of the entire goiter in Basedow's disease had not been recommended—indeed, each individual disease should be carefully studied before advising even the removal of a portion of the goiter; and if the tachycardia develop before the goiter, one could not look for much benefit from such an operation. The section of the sympathetic is a method likely to yield good results so far as the goiter and the tachycardia are concerned, but the profession still entertains misgivings as to the possibility of remote and unpleasant effects. He has had three sisters recover from goiter under the persistent use of tincture of aconite and iodid of iron, as recommended long ago by Flint. He began with three drops of the tincture of aconite, and gradually increased it, but did not go beyond a dose of eight drops, three times a day. One of these patients took the aconite for 1½ days, and the other for about six months before the desired results were secured. Both have now remained well for a period of about eight years. The iodid of iron seems to him the best form of iron to combat the marked anemia found in these patients.

(To be continued.)

Nebraska State Medical Society.

Thirtysecond Annual Meeting, Omaha, May 8-10.

President Dr. Robert McConaughy, York, in the chair.

HISTORY OF STATE SOCIETY.

DR. W. H. ORR, Lincoln, gave a report of the Society from the time of the first meeting in 1863. He mentioned the efforts made to secure medical legislation, that were not successful until 1881, and the Board of Health, that was not secured until 1891. He urged the members to join the AMERICAN MEDICAL ASSOCIATION.

NATURE OF ANTIPHLOGISTIC ACTION OF SALICYLATE OF SODIUM.

DR. HAROLD GIFFORD read a paper on this subject. He said that without regard to the absence or presence of rheumatism, it must now be acknowledged that this drug has a marked antiphlogistic action in all localized inflammatory conditions, involving moderate areas. One of the best illustrations is its action in sympathetic ophthalmia, an infectious disease arising from an unknown germ. Years ago he took the position that it so acted because it was a geruicide. The conclusions were based on the fact that large doses are necessary and most successful in those most tolerant of it. To test the question, he made most careful examination of the urine of several cases, and found that 95 per cent. of the salicylates eliminated passed out through the urine. He used a definite dose of 150 gr. daily for a patient weighing 150 pounds. The amount found in the urine plus 5 per cent., subtracted from the 150 gr., gives the amount retained in the system. Three patients showed an average of 17 gr. retained. This must be diffused through the 130 pounds of the soft tissues of a 150-pound man, a proportion of 1:52,529. He asked: will the drug, in this proportion check pathogenic germs in the test-tube? A slight check in the body may allow the body cells to gain the upper hand and do the rest. Unfortunately, it requires 1:1000, or 1:500, to check pus germs in the tube in a decided manner. Anthrax grew very sparingly in a 1:1000 test. This evidence is opposed to the conclusion that 150 gr. in fifteen hours has much direct effect on germ growth in the body. Of how this is affected in the body, Ultramar's theory gives the most plausible way. He thinks that the salicylate produces a local depletion by the general capillary dilatation it causes. In a small inflamed area, the arterioles are dilated to the maximum by the bacterial toxins; the action of the salicylate causes a general dilatation of the arterioles over the whole body; this lessens the amount of blood passed through the inflamed area and checks the bacterial growth there.

SEPTIC PERITONITIS.

DR. CHAS. C. ALLISON read a paper on "Septic Peritonitis, Studied from Its Major Points of Origin." He said that the prognosis is grave, and the possibility of recovery is denied when the entire peritoneum is involved. The major points of origin are the appendix, the Fallopian tubes, the gall-bladder, and the stomach and duodenum. Protective barriers develop; intestinal coils adhere, and the omentum assists in forming a wall. The most successful means of treatment is rest without food, enemas, and gentle laxatives. Safety is assured when local disturbances are past; when collapse, if present, has been recovered from; when pain is less severe; when the pulse, respiration, lessened muscular rigidity, temperature, and general aspect are in accord. The bed-side picture is the only safe guide. Sudden amelioration of pain may mean either gangrenous appendix, general peritonitis, or the formation of an abscess, hence all symptoms must be taken into account. Ectopic pregnancy must never be forgotten. It may be present and rupture infraperitoneally, and can occur during lactation. Paroxysmal pain and faintness are usually present in ectopic rupture and will point to this condition. Acute, gastric or duodenal ulcer is rare; the symptoms are overwhelming and the collapse is very rapid. Gastric ulcer ruptures on the anterior wall of the stomach in 90 per cent. of cases and on the posterior wall in 2 per cent. The symptoms of perforation are: acute pain; rapid collapse; rigidity of abdomen; subnormal temperature; leucocytosis; rapid respiration; and absence of liver dullness. Surgical measures only are available. Exploration, cleansing of the affected area and no more unless the general cavity is invaded, are demanded. When the abdominal cavity has been invaded, and much exudate is present, counter-opening is needed, with thorough irrigation.

PAROTIDITIS.

DR. H. P. HAMILTON made a plea for the consideration of this as an infectious disease by no means limited to the parotid gland. He gave the history of a few cases and his treatment, surgical in character.

LEUCOCYTOSIS IN SURGICAL DIAGNOSIS.

DR. J. P. LOBO read a paper on "Leucocytosis as a Factor in Surgical Diagnosis," in which he said that leucocytosis is now

being used to indicate the presence or absence of pus, or of any acute inflammation. "The number of leucocytes is not always in proportion to the amount of pus, but is, as a rule, to the virility of the infectious organisms." Thus, greater leucocytosis is present in a felon than in a pelvic abscess of large extent. The amount of the leucocytosis may also depend on the thoroughness of the walling off of the pus, or on the death of the germs. It is valuable in differentiating typhoid from appendicitis, also in confirming an opinion that one is dealing with a colic of any form, an intestinal obstruction, a pneumonia or a meningitis. After operations, it is valuable in showing the subsidence of extension of suppurative conditions. He gave the findings from four cases.

ECTOPIC GESTATION.

DR. W. O. HENRY considered this subject. He said that, having met with five cases during the last three months, he felt it highly necessary that greater care be taken in the diagnosis, as it is by no means so rare as has been thought. There are four varieties, the interstitial, the tubal, the ovarian, and the abdominal. The tubal is the most common, and while the ovarian variety has been denied, it does occur and is proved by the fact that a Graafian follicle is found at the base of it. The causes are still unknown, but the best theory is that it is due to obstruction. Medical attention is rarely called until rupture takes place; then the pain is ovarian: there are faintness, nausea and bearing down sensations; the cervix is soft; pulsation of uterine artery is plainly felt; a soft mass is felt in the vault; a very dark discharge comes from the uterus. If these conditions are neglected, temporary improvement may take place, but they will be repeated and death takes place often in rupture. He placed great stress on the very dark discharge. In the majority of cases vaginal puncture and drainage is the best plan; if this treatment is found inefficient he opens the abdomen. If there is great shock, normal salt solution must be used freely.

DR. A. F. JONAS said that he had seen an eminent laparotomist open the abdomen to remove a pus-tube and find an ectopic pregnancy. In his experience, the diagnosis was very difficult. If, as Lawson Tait asserted, the ovum develops in the Fallopian tube and ruptures in the twelfth week, if the ovum escapes between the folds of the broad ligament, we have the hemorrhage there, gradually dissecting the peritoneum away from the pelvic floor, and there is a tense, elastic tumor in the cul-de-sac, then vaginal section is the operation. If in the presence of the classic symptoms of ectopic pregnancy we have symptoms of rupture and no tumor in the cul-de-sac, then the ovum and hemorrhage are in the abdominal cavity and we must do an abdominal section. Kelly has made the abdominal section after he had done the vaginal, by reason of the fact that he was unable to control the hemorrhage.

TREATMENT OF PNEUMONIA.

DR. W. O. BRIDGES read a paper on this topic. He said that pneumonia is the most widespread of all the acute diseases. Specific treatment has long been sought, and the latest teaching is to rely on the expectant plan, meeting the indications as they arise. This yields as good results as heretofore and does less harm. The elder Flint took a long step forward when he took the position that it was an infectious fever. Two years ago he treated a case with the carbonate of guaiacol and secured good results. He was much interested in the recent article of A. H. Smith, which urged the use of guaiacol and the salicylates. Cassante and W. H. Thompson report very favorably on the use of the former. Licgel reports seventy-two cases treated with the salicylates, 120 gr. a day. His results were good. He said he himself had tried it in but eight cases the past winter, but his results were so good as to warrant calling attention to them. He used the drug constantly; in the early stages, 10 gr. every two hours, and strychnia in 1/20 gr. doses for short periods. He uses codein only for pain and delirium; and uses oxygen on the first sign of cyanosis. He is very careful to require the recumbent position, and an abundance of fresh air at a low temperature—55 to 65. He thinks that most so-called unresolved pneumonia is purulent pleurisy. He always uses the needle. He has seen many cases with bronchial breathing and yet there was a large cavity with much pus in it. He said

that but few unresolved pneumonias end in tuberculosis. He sends them to the high altitude of Colorado Springs, and they get well.

DR. W. R. LAVENDER laid great stress on the fact that the toxins produced during pneumonia cause great degeneration of the heart muscle and death.

Illinois State Medical Society.

Fiftieth Annual Meeting, Springfield, May 15-17, 1900.

(Concluded from p. 1416.)

HYPERTROPHY OF PHARYNGEAL TONSIL.

DR. EDWARD T. DICKERMAN, Chicago, read a paper in which he discussed hypertrophy of the pharyngeal tonsil, adenoid vegetations, and enlargement of the third tonsil. A table accompanied it, from which the following facts were gleaned: 1. Cases are found at all ages, from the youngest—aged 6 weeks—to the oldest—43 years of age—but that the disease is found most frequently in childhood; 40 per cent. were found in children between the ages of 5 and 10 years, and 31 per cent. between the ages of 10 and 15. 2. Sex plays but a small rôle, although there is a slight excess to the credit of the female. 3. Mouth-breathers numbered 431, mouth-breathers at night only 74, while 21 breathed freely through the nose. 4. In 78 per cent. a lymphatic tendency was expressed by the enlargement of the faucial tonsils to a pathologic size. 5. A very important fact noticed was the large percentage—72 per cent.—of cases with, or with histories of, aural complications. 6. Hemorrhage was never alarming, and in but one case was there a secondary one. 7. Recurrence occurred in but two cases, where the operation was done under an anesthetic, and a secondary operation was necessary in 14 cases where no anesthetic was used, but the results were not always as satisfactory in cases not anesthetized. 8. Anesthetics were used in 304 cases in the following manner: Chloroform, 201 times; ether, 64; bromid of ethyl, 34; nitrous oxid, 5. He prefers chloroform properly given, although in some cases ether is probably better, notwithstanding the nausea that generally results.

RECTAL DISEASES.

DR. J. R. PENNINGTON, Chicago, discussed the diagnosis of rectal diseases, and, in order to clearly elucidate the matter, he called attention to a few points in connection with the anatomy and histology of the structure of the rectum and sigmoid flexure. Some of the statements made were a radical departure from those generally believed and accepted by the profession, but abundant evidence was advanced in favor of his position, relative to certain anatomic and pathologic points.

HEMORRHOIDS.

DR. N. H. HENDERSON, Chicago, spoke on the treatment of hemorrhoids, and discussed a modification of the Whitehead operation, that he has used in operating on 400 cases.

CONDITION OF SCHOOL CHILDREN.

DR. E. A. EDLEN, Moline, read a paper on "Mental Overwork and Lack of Interest in Physical Development and Hygienic Care of School Children, a Menace to the Future of the Race." He said that the present system of education in public schools tends to develop the mind at the sacrifice of the bodily health and physical development. The school-teacher takes pride in developing the intellectual faculties and ignores the physical well-being of the child. No discrimination in favor of the weak or backward child is practiced, and subjects beyond the grasp of the intellectual faculties are studied, and the reason for backwardness and inability is seldom considered. School hours are too long and lessons are not made interesting. Children are unable to fix their attention on any subject for more than a short time, still they must sit quiet during hours at a time in an over-crowded room, in an uncomfortable position, trying to learn an unintelligible lesson—all in direct violation of Nature's laws. The multiplicity of subjects bewilders the youthful mind and causes great strain on the nervous system, with a resulting breakdown. The physical development of school children is ignored by the average board of education, although it is equally as important as mental cult-

ure. It must be considered or the future of the nation will be endangered.

SCIENTIFIC NEED OF LEGISLATION ENFORCING COUNTY REGISTRATION OF SYPHILITICS.

DR. JAS. E. COLEMAN, Canton, read a paper on this subject. He said that there is an alarming increase of venereal disease since the close of the Spanish-American War and that something must be done to prevent the spread of syphilis, for the extragenital chancre is abroad in the land and the public health is not safe. Nearly all contagious and infectious diseases are quarantined by the public, and venereal diseases are not mentioned, while they are more dangerous in their remote consequences than all the contagious ones combined. These facts should be recognized by legislators, and a law passed making compulsory the registration of syphilitics. It is the duty of the medical profession to insist on this.

STATE MEDICINE AND SANITATION.

DR. A. C. CORR, East St. Louis, presented a paper entitled "A Further Consideration of State Medicine and Sanitation." He said that the conditions requiring state medicine are the otherwise uncontrollable sanitation necessary to preserve and promote an average health among the citizens of the state. State medicine consists in state help to produce and preserve conditions of sanitation too great for the citizen of the lesser political divisions, such as township, city or county, to maintain, and is a legitimate outgrowth of our social and civil compact. It has limits with which all of us do not exactly agree, and an individual will differ with himself according to his mood. Sanitation and state medicine should be brought continuously before the people and legislative bodies; they should be well argued and forcibly presented so as to bring about a mature conclusion at as early a date as practicable. The question of public water-supply for potation and culinary purposes should be more thoroughly considered than it has been in the past. Limpid water, free of visible particles of sewage, should be provided by companies—corporations asking for the franchise.

STATE CARE OF CONSUMPTIVES.

DR. JOHN A. ROBISON, Chicago, read a paper on this subject, and said that the prevention of disease is one of the most important paternal duties of the state. Members of the medical profession should bring to bear upon legislators and state officers such influence as will fill them with a desire to institute such measures as experience has proved to be efficacious in the prevention and cure of this malady. These measures should be directed to two subjects: the prevention of the disease and its cure or the alleviation of its victims and their families.

SANITARIUM TREATMENT OF PULMONARY TUBERCULOSIS.

DR. FLORENCE W. HUNT, Chicago, contributed a paper on this subject, which in her absence was read by Dr. Moyer. The history of the sanitarium movement was discussed at considerable length, and attention called to the fact that it has been more actively and energetically advanced during the past ten years than has any other agency in the medical world. A brief summary of the movement was presented. Great Britain was given credit as a pioneer in the founding of special institutions for consumptives, the first chest hospital being established in London, in 1814. The United States was one of the first countries to build a sanitarium for the consumptive poor. To establish a sanitarium for consumptives in Illinois would be a readjustment of existing institutional conditions on a more economical basis, for by removing the consumptives the institutions would be rendered more efficient in the special aim for which they are designed.

RELATION OF THE PHYSICIAN TO THE PUBLIC SCHOOL.

DR. KATHARINE MILLER, Lincoln, read a paper on this subject in which she said that by virtue of the increasing recognition by the public of the need of proper sanitation in school-buildings, the physician has a closer relation to the schools than has the average citizen. This is emphasized as the public recognize that the professional training of the doctor fits him for the oversight of these things and makes him a skilled adviser. Aside from this, the spirit of the profession compels the phys-

ician's interest in these questions; and also in the subject of arrest and prevention of contagious diseases among children, the care of the body, including exercise and bathing, and examination as to defects in hearing and sight in their relation to mental development; all of which come within his province. Those who have studied these things must realize most clearly how much may be done for the rising generation by the supervision of the physician. To secure the opportunity for this, an enlightened public sentiment is needed and here the physician has a chance to use voice and pen to advantage in giving information.

Results are seen in the improved conditions of school-buildings, leading to better health of the children, the enforcement of vaccination, and the general enlightenment of the community as to the need and effects of school hygiene. As a matter of civic duty from those citizens specially fitted to render such service, physicians should interest themselves in school sanitation. They should be informed as to methods of heating, lighting and ventilating schoolrooms, occasions for quarantine, the effects of defective sight and hearing, needs of departments of cooking and manual training, school gymnasiums, amount of work to be required at various ages, and the adaptation of buildings, blackboards, etc., to the children's needs.

TREATMENT FOR TUBERCULOSIS.

DR. W. J. CHENOWETH, Decatur, read a paper on this subject with the axiom, "Remove the Cause and the Effect Will Cease." He said that assuming that the disease is the result of an attack by the tubercle bacillus on a susceptible lung, there is necessarily a combination of two factors, neither of which, if kept from the other, could have produced the disease. The result of the combination is evinced by an alteration of the organic and functional processes of the lung. The only conceivable method of relieving it is to render it unfit food for its enemy, which can be done only by bringing it up to a standard of health.

WHAT SHALL THE HARVEST BE?

DR. R. H. HENRY, Peotone, read a paper, with this as the subject, in which he said that all schools, private or public, should be under strict medical inspection—teachers and pupils alike. All tuberculous suspects should be tested with tuberculin, and school-buildings and premises should be thoroughly disinfected at the close of the school season and again at the beginning of each term, and floors should be scrubbed at least once a week with a disinfectant solution. There should be a medical health officer for each school, who with the board of directors, should constitute the school board of health. The teacher must know how to take pulse and temperature, and note the symptoms of the common ailments in children.

VALUE OF PEDICLED FLAPS IN INJURIES OF THE HAND.

DR. WM. SCHROEDER, Chicago, said that injuries of the hand which result in the destruction of skin and subcutaneous tissues, leaving the tendons and all or some of the bones and joints intact, may in many instances be repaired by judicious treatment. Amputations are frequently resorted to in contused, lacerated wounds of the hand, whereas burns are usually allowed to get well of their own accord, that is, plastic operations are not often performed. It is for such cases that he recommends the pedicled flap method; this he described in detail, giving as its advantages mobility, elasticity, and certainty of taking. Four interesting and instructive cases were reported in which the results obtained were excellent.

The following officers were elected for the ensuing year; president, George N. Kreider, Springfield; first vice-president, Weller Van Hook, Chicago; second vice-president, Denslow Lewis, Chicago; permanent secretary, E. W. Weis, Ottawa; assistant secretary, O. B. Will, Peoria; treasurer, E. J. Brown, Decatur. Officers of Section One: Chairman, Charles Dewey Center, Quincy; secretary, G. W. Nesbitt, Sycamore. Officers of Section Two: chairman, M. L. Harris, Chicago; secretary, W. F. Grinstead, Cairo. Officers of Section Three: chairman, Frank P. Norbury, Jacksonville; secretary, C. C. Carter, Rock Island. Peoria was selected as the place for holding the next annual meeting, May 21-23, 1901. The chairman of the committee on arrangements is J. D. Henry, Peoria.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

61 MARKET STREET, - CHICAGO.

SATURDAY, JUNE 2, 1900.

THE PRESIDENT'S ADDRESS.

The address of Professor Keen, published elsewhere in this issue, is an admirable example of what a presidential address should be, and ideally fulfils the requirements he himself has laid down for such an occasion. The condition and prospects of the ASSOCIATION, as he shows, were never better, but there should be no relaxation of endeavor to still further enlarge its extent and usefulness. The special points alluded to are such that their mention is timely, and we trust his suggestions will bear good fruit in the future. The recommendation that action be taken looking to an early completion of the Rush monument fund is one that should meet with general approval. There is the more reason for this, as he says, since as American physicians we should wish to not let an American patriot and statesman as well as physician go unhonored when a sect has obtained a site from Congress for an expensive statue of its idol, who has certainly no such claims on us as Americans. While we can not make a deity of any man in the regular profession, we ought, under the circumstances, not to neglect our illustrious fellow citizen and confrère.

The defeat of the Gallinger antivivisection bill, which was largely due to Dr. Keen's efforts, is a matter for general congratulation, and we will do ill if we do not, as an ASSOCIATION, follow his advice as regards future efforts of the kind. The public needs something from time to time to counteract the persistent slanders on the profession by the antivivisectionists, and owe much to Dr. Keen for what he has done in this direction. The laity generally will not believe that medical men are inhumane, but a small section are apparently obtuse to the higher humanity that regards human suffering, and they are persistent in their endeavors to spread their views. We all need to do what we can to inculcate correct ideas in this matter.

The chief subject discussed by Dr. Keen, however, is the endowment of medical education and scientific research, and there is hardly one that could have been chosen that is more timely and important. While, as he points out, every other branch of education has been liberally endowed, and scientific study in the less practical lines has been and is being largely aided from the public funds, medical education stands in this regard almost on the same ground as it did fifty years ago. Apart from a very few and usually partial endowments, medical education is still conducted mainly as a source of direct or indirect profit to the instructors, and scientific investigation is largely a matter of private enthusi-

asm and expense. Dr. Keen shows us what ought to be, and his utterances will, we trust, serve to aid in its achievement.

The ASSOCIATION is to be, we hope and believe, the chief instrumentality in this as in the earlier reforms in medical education. We have now a higher and more rational standard of medical education, and what we now need is to eliminate the "corporation for profit" element and make our schools what they ought to be. The endowment of professorships, of laboratories, and of research fellowships are direct means to this end. Dr. Keen has pointed out the ways and it rests with us to follow them.

CONCERNING THE REGENERATION OF NERVES.

Among those fundamental facts to which the neuron conception owes its adoption is the origin of the axis-cylinders as outgrowths from nerve-cells. Among the many investigators whose work has contributed to the proof of this are Ramon y Cajal, v. Kölliker, Retzius and v. Lenhossék. Considerable confusion, however, arose from the endeavor to adapt the processes of development to those of regeneration. This confusion was caused largely by the theories advanced by v. Bungner,¹ and his pupil, Wieting,² which assigned important rôles in regeneration to the cells of the sheath of Schwann.

The name "neuroblasts," applied by v. Bungner to the embryonic and proliferating cells that originate from Schwann's sheath after nerves are injured in diverse ways, carried with it the notion that the axis-cylinders were developed either from these cells directly or through their agency. Galeotti and Levi as well as P. Ziegler confirmed this belief, and Wieting not only corroborated it, but went a step further and declared that the myelin sheath likewise was regenerated from the cells of Schwann's sheath.

These opinions did not pass unchallenged. Stroebe and v. Notthaft soon correlated regeneration with development by insisting that new axis-cylinders are the product of an outgrowth from the old axis-cylinders at the proximal end of the severed nerve. The embryonic sheaths of Schwann became, according to Stroebe, "neurotized" by the sprouting axis-cylinders. During this time there naturally arose a diversity of views regarding the origin of the myelin sheath. The conceit advanced by Ranvier and Vignal, that myelin was formed from the cells of the nucleated sheath in a manner somewhat similar to the intracellular accumulation of fat, had obtained a foothold, for even v. Kölliker adopted it almost in its entirety in 1884 (*Grundriss der Entwicklungsgeschichte*). Stroebe, from his researches, concluded that myelin was formed about the young axis-cylinders as fast as they developed; Kölster and v. Notthaft, that the axis-cylinders are at first naked and only

¹ Ueber die Degeneration und Regenerations Vorgänge an Nerven nach Verletzungen. Ziegler's Beiträge, x.

² Zur Frage der Regeneration der peripherischen Nerven. Ziegler's Beiträge, xxiii

acquire a myelin sheath later; finally Wieting proclaimed the source of the myelin to be the new cells in Schwann's sheath.

Kölster,³ in a later work, has undertaken to decide this question. He found in the embryos of *Salmo trutta* (salmon) and *Sterna hirunda*, the ordinary sea tern, that the myelin sheath is present around the axis-cylinders of the developing anterior roots of the spinal nerves, long before there is any grouping about the nerves of those mesodermal cells destined to form Schwann's sheath. In the embryos of many animals, a delay in the production of myelin is observed; it is not formed until after the nucleated sheaths have enclosed the axis-cylinders; consequently the study of such embryos furnishes no definite data.

If the dictum ascribed to Galeotti and Levi, that "the mechanism of regeneration is the same for each tissue as its mode of development," be accepted, the results accruing from the work of Kölster have an important bearing on the processes of repair of nerves. Kölster concludes, after commenting on the absence of nucleated sheaths about the medullated nerves in the adult spinal cord, that the myelinic sheath is as truly ectodermic in its origin as is the axis-cylinder.

Recently Gurnitsch,⁴ while studying the development of primitive fibrillæ in young axis-cylinders, obtained a staining of the sheaths of Schwann at the commencement of their growths, at a period when they were not demonstrable by the ordinary staining methods. He found, by using Apathy's gold method, that soon after the sciatic nerve of the embryos of sheep becomes separated into secondary bundles, a network, which has its origin in the surrounding mesodermal cells, penetrates each bundle and divides it into compartments. Eventually this network surrounds each fiber and constitutes its nucleated sheath. Following this and at a later period, the endoneurium proper, which is to bind together the completely developed nerve fibers, is in its turn developed from the interfascicular connective tissue. The growth of Schwann's sheath was traced in both longitudinal and cross-sections of the embryonic sciatic nerves, and its exogenic mesodermal origin positively reaffirmed.

Whereas Kölster, by the use of Weigert's staining method, found the young axis-cylinders surrounded with myelin at a period when they were entirely unprovided with nucleated sheaths, Gurnitsch, in the sciatic nerves of sheep embryos, found the nucleated sheath formed first. Nevertheless, Gurnitsch came to the same conclusion that Kölster had before him, viz., that the nucleated sheath takes no part in the production of myelin. For he found that the myelin was deposited in minute droplets at places some distance from the cells of the nucleated sheath, and that its formation did not in

any degree keep pace with the development of the sheath of Schwann.

The results of these investigations illustrate that the advancement of embryology paves the way to a more complete understanding of changes that for us have a more special interest; for it certainly can be expected that future work will show still further that the reparative changes occurring in nerve fibers after injuries closely follow normal histogenesis.

CONTRIBUTIONS TO THE SCIENCE OF MEDICINE BY
THE PUPILS OF WILLIAM H. WELCH.

The pupils and friends of William H. Welch, professor of pathology, Johns Hopkins University, celebrated the twenty-fifth anniversary of his doctorate by presenting him with a copy of the volume bearing the titles at the head of this note. An event of this sort merits a little more than a passing word. In the first place, it is certainly gratifying to all interested in the progress of medicine in America that the custom of issuing a memorial volume—"Festschrift"—is coming into vogue. What better, more permanent, and more universally acceptable method is there by which to honor a great man or to commemorate an important event than the publication of an appropriate book? A memorial of this sort is imperishable in more than one sense: libraries the world over will hand these books down to remotest posterity and the influence of the results of the original work, embodied in such a book as the one issued in the honor of Professor Welch, is permanent because of the additions thus made to science; because of the stimulus and the encouragement given the various authors and all workers in the same fields. A glance at the superb and handsome volume before us is sufficient to emphasize the truth of these statements.

There are 1066 pages; 37 separate articles by as many different contributors; and the majority of the articles are beautifully illustrated. The illustrations, we are happy to note, are American productions, and it is surely not too much to state that the illustrations compare favorably with the best of similar nature from other lands, both as regards the originals and the reproduction. The subjects treated deal generally with pathology, anatomy, and embryology. All the articles embody original work in these lines, of the highest order of excellence. The volume is one of which we may be proud, because it shows clearly that scientific medicine in America has safely reached such a stage of originality and productiveness in the development that it can not but have a marked influence on the medical science of the world. And this volume will undoubtedly long constitute a high-water mark in the scientific work of the Johns Hopkins school.

It is worthy of note that the articles, though largely representing the influence of one center, yet are so diversified and broad in their character and scope that they can not be said to embody the teachings of any special

³ Beiträge zur Kenntnis der Histogenese der peripheren Nerven, etc. Ziegler's Beiträge, xxvi, 1899.

⁴ Die Histogenese der Schwannschen Scheide. Archiv für Anatomie und Physiologie, Anat. Abth., 1900.

"school" in the narrow sense that this word is sometimes used to indicate the championship of a special doctrine or theory. In fact, the freedom from the domination of any single theory has always been a strong characteristic of the work emanating from the pupils of Professor Welch, as would be expected when we consider the broad and unprejudiced nature of his teachings. The work of the authors not now connected with the Baltimore institution serves to indicate the fact that the spirit of original research thrives in numerous centers in the United States, and that the Johns Hopkins Hospital Medical School has had a hand in training many of our best investigators and teachers.

The simultaneous publication of three volumes of the same general character—the Pepper memorial volume, the one in honor of Welch, and that in commemoration of Jacobi's 70th birthday and previously noted in *THE JOURNAL* is sure to strengthen the good name of scientific medicine at and away from home. We may congratulate ourselves that we have so worthy objects for such great distinction, and that the wherewithal is forthcoming with which to carry out undertakings of this kind in such a magnificent manner. A high standard has been created; the occasions are most appropriate and worthy, and we hope that future efforts of this nature may be of equally high order.

THE ITALIAN SOCIETY FOR THE STUDY OF MALARIA.

The work of the Italian Society for the Study of Malaria has been noticed in these columns before;¹ the individual work of its distinguished members is familiar to all who are interested in malaria. The economic aspect of the malaria problem in Italy is of tremendous significance to that country, and in their efforts to solve it the zeal, ability, and the success of the Italian investigators, who have joined issues in this Society, have won the admiration of medical men all the world over.

The second annual report² of the president of the Society, Professor Celli, contains a succinct statement of the results of the year's work. Among the more important may be mentioned the demonstration that human malaria is undoubtedly carried and transmitted by a certain variety of mosquito, namely *Anopheles*, the distribution, habits, and biology of which have been thoroughly studied. Experiments have been made that show that human malaria is transmitted from man to man through this mosquito, and that malarial infections of certain animals are probably not transmissible to man.

The structure, the developmental cycles and the methods of reproduction of the malarial organisms in their human and their suctorial hosts have been quite clearly established. The epidemiology of malaria has been studied in the light of this new theory of its cause, the mosquito theory, and efforts made to determine the influence of atmospheric conditions, soil, water, and vege-

tation on the *Anopheles* and the spread of malaria. The mode of life of the laborer of the Roman Campagna has been studied in its relations to the disease. The epidemic year, with its recidivations, ends in June, but the new epidemic year begins in July from infections produced by the sting of the mosquito, which thus perpetuates the disease. Experiments have been carried out proving that quinin is without action on the sexual forms of the parasites, the forms that are most to be feared from the epidemiologic standpoint, and consequently it is hopeless to expect that this drug will exterminate the disease. Consequently, methods are now being sought that will destroy the mosquitoes or protect the skin from their bites; and at the same time others are engaged in studying immunity against malaria. It has been found that certain substances, such as methylene blue, produce immunity against experimental malaria. Mechanical protection of houses and of individuals against the entrance and the sting of mosquitoes has been accomplished to such an extent that during the coming malarial season more extensive prophylactic measures of this sort will be introduced on a large scale. Several popular works on malaria have been prepared under the auspices of the Society; the first volume of the scientific work accomplished by its members is being published; the more important results of this have already been published by the individual workers.

Enough has been said to show that this excellent Society is attacking the problem of malaria on a broad, scientific basis, and along all possible lines. In consideration of the small amount of money spent—about \$2200 (13,000 lire)—it would seem that the Society has good reason to feel satisfied with the results achieved and to look into the future with confidence.

HYPNOTISM AND MEDICINE.

In again calling attention to hypnotism we merely emphasize much that has already been said on the passing of a subject that yellow journalism and the advertising quack have relegated to a doubtful position. Absolute impersonality as to our views on hypnotism does not admit the disparagement of honest work that has for its object the breaking up of absurd notions on any subject and the consequent removal of obstacles to its advancement; but we confess that intelligent and lucid dissemination of psychologic medicine is needed in this country, where more than elsewhere perhaps, such knowledge has long been riotous or apathetic, and is presented either by enthusiastic ignorance or by a too confident conservatism. Much of this disintegrated and unsatisfactory condition complained of is owing to the obsolescent methods of the metaphysicians, who, being ignorant of neural morphology and physiology, do nothing to advance psychology. It is rather to those familiar with the newer methods and investigations of technical progress, having regard to the physiology of the sentient organism or the study of nerve function in general,

¹ *THE JOURNAL*, xxxii, April 8, 1899, p. 769.

² *Centralbl. f. Bakt., Abth. 1*, 1900, xxvii, 395.

based on observation and experiment, that we must look for advancement. Those informed in contemporary neurology see that we have entered on a new field already showing fertility in result.

Among many questions that suggest themselves in this relation we may ask: What becomes of the dipsomaniacs alleged to have been cured by hypnotism? We find but unsatisfactory answers in perusing the more recent hypnotic literature, which, by the way, is numerous and varied, there being in various languages nearly twelve hundred volumes on the subject, not to mention numberless pamphlets and journal articles. The work of Nils Posse, of Moll, and the papers of Dr. Bramwell, in *Brain* (Part iv, 1896), give about all that is known of the subject.

As to hypnotism in itself a variety of opinion exists; but it is a matter of surprise that it attracts so much attention, especially in this country, where the post-office department is embarrassed by the immense mail of the charlatans who advertise to teach it by correspondence, and where the question of hypnotism has ever entered into legal medicine. After long and careful investigation, by the schools at both Nancy and Paris, this matter was some years ago dropped by the best neurologists as unworthy of serious notice, and many articles on the "passing of hypnotism" appeared in the medical journals. Moreover, for curative purposes the use of hypnotism is very limited and rarely useful, some authorities declaring its application useless, and often injurious.

Hypnotism is discredited by our best neurologists. At a late meeting of the American Neurological Association, in Washington, D. C., there was a general agreement to this effect, when one of its oldest and most distinguished members, who has had more experience with suggestive therapeutics than any other man in the United States, declared that he had never seen a case cured by hypnotism, unaccompanied by other means, and that in his opinion hypnotism is of so little therapeutic value that it ought to be banished from medicine.

RHEUMATIC MYOCARDITIS.

It is a generally accepted fact, though at times perhaps it does not receive sufficient consideration, that the functional capability of the heart depends rather on the state of the myocardium than on the condition of the valvular apparatus. The effects of lesions of the valves, as manifested in obstruction or insufficiency, may be entirely neutralized or compensated for if the heart muscle be healthy, while on the other hand the most pronounced symptoms of circulatory failure may be present in the absence of any valvular defect if the myocardium be diseased.

The muscular wall of the heart may suffer in consequence of excessive physiologic demands on its powers, long continued or frequently repeated, or interference with its nutrient blood-supply, especially through the

coronary arteries, or as a result of toxic or infectious processes. Rheumatism is known to be a common cause of endocarditis, but it is not commonly recognized as being responsible for changes in the myocardium. The latter may be brought about in part as a result of the high temperature, and in part by the action of toxic substances generated in the course of the disease, without further reference to that which results by extension of the inflammatory process when endocarditis or pericarditis has been set up. Some observations on the influence of rheumatism in the etiology of myocarditis are recorded by Fisher,¹ and some illustrative cases are related. A large heart, weighing 21 ounces, obtained from the body of a man, 18 years old, exhibited in addition to old thickening of the segments of the aortic valve, numerous grayish spots of irregular shape on the inner surface of the left ventricle; these, on section, were found to extend through to the pericardial surface. The heart from a child, 4½ months old, and dead from bronchopneumonia, exhibited aortic valvular disease and obstruction, together with increase in the interstitial connective tissue of the heart muscle. In the heart from a boy, 12 years old, areas of myocardial degeneration and hyperplasia of the interstitial connective tissue were found in conjunction with mitral obstruction. The heart from another boy, 8 years old, exhibited after death, thickening of the aortic segments and of the cusps of the mitral valve, with recent vegetations on the aortic segments, and on microscopic examination myocarditis with vascular injection and hyperplasia of the interstitial connective tissue. In some of these cases rheumatism had definitely been present, but in others its previous presence was assumed from the existence of valvular lesions. Symptoms of myocarditis were also observed in a boy, 9 years old, following an attack of chorea and also in a girl of 8 years, following an attack of rheumatism. Tachycardia was seen in a girl of 4, and in a boy of 8 years, following an attack of rheumatism, and mild attacks of angina occurred in a young woman, following an attack of rheumatism.

THE PLAGUE.

The U. S. Treasury Department has published and is distributing a pamphlet of information about the bubonic plague, by Dr. Walter Wyman, supervising surgeon general of the U. S. Marine-Hospital Service. It is intended as a practical guide to the public and to sanitary authorities, and gives a very fair general idea of the disorder, its mode of infection and the approved methods of guarding against it. The instructions are reasonably full, and the pamphlet will be a serviceable guide to local officials, to be supplemented with all other useful data that may be obtainable. There are many questions of the plague not yet worked out, and it is fortunate that some of these are in regard to facts of immunity and lessened virulence in our race and under the conditions in which we live. There is ample ground, however, for all reasonable precautions, as the

1. *Bristol Medico-Chirurgical Jour.*, March, 1900, p. 16.

disease at its best is a formidable problem for sanitarians. Its obtaining a foothold in this country even locally would be a national misfortune.

THE GALASSI-GIFFORD PUPILARY REACTION.

Under the heading, "the Westphal-Piltz Pupillary Reflex," a contemporary¹ notices a phenomenon first described by Galassi and later independently discovered by Gifford, of Omaha. Galassi's observation was published only in society proceedings, so that it was easily overlooked, but Gifford's paper was published in a well-known special journal that ought to have been familiar to Westphal as well as to the distinguished ophthalmologist who edits our contemporary. In the latest issue of the *Archives of Ophthalmology*, where his original paper appeared, Gifford takes up the subject anew, doing full justice to Galassi's priority. He, however, himself noticed a little more than the Italian observer, and if we are to have a discoverer's name attached to the phenomenon it should be the Galassi, or the Galassi-Gifford, instead of the Westphal-Piltz reflex, for which term there is no warrant whatever except that it has the "made in Germany" stamp. We have noticed this matter before, but the occasion seems to call for its mention again.

VAUGHAN ON MILITARY TYPHOID FEVER.

The Oration on State Medicine, by Dr. Vaughan, in this week's JOURNAL, is one of interest as giving a summary of the forthcoming official report on the occurrence of typhoid fever among the troops in our late war. If the conflict was too brief or on too small a scale and too unequal to do much for the solution of many military problems it has given us some experiences that we can, if we are wise, use to our advantage should similar occasion rise in the future. The military typhoid in the camps is a part of the experience, and a very important one, causing, as it did, about 80 per cent. of the total mortality of the war. Dr. Vaughan shows that the chief sanitary sin was the pollution of camps and that for this as well as for their unsuitable selections the non-medical officers were largely if not solely responsible. Army surgeons can recommend, not direct, in such matters, and he makes the very suitable suggestion that in our national military school more attention be paid to instruction in army and general hygiene than has been given in the past. We would emphasize this and the necessary corollary that the officers of the state militias, who are likely to be more or less responsible in case of war, be similarly instructed. To allow the lessons, some of them very expensive ones, of the late war to go unheeded would be worse than foolish, it would be criminal, and the one here treated is one of the most important. The fact that typhoid fever is without exception a disease of armies is probably best explained, as is done by Vaughan, by the fact that we have it always with us and that collections of men under camp conditions especially favor its outbreak. The facts recently acquired as to the possible infectiousness of the urine for long periods after an attack explain very many of the puzzling questions of the disease. Dr. Vaughan's ad-

dress, and still more the completed report of which it is a summary, will be classic among the studies of this infection.

FORMALDEHYDE AND MILK

At a late meeting of the Chicago Medical Society the subject of infant feeding was the order of the evening, and the discussion developed some interesting points. Dr. A. R. Reynolds, health commissioner of the city, took strong grounds against the use of formaldehyde in milk, a custom which he thought was becoming general and productive of evil. The subject of dangerous food adulteration is one of the most practical and important with which we have to deal and the more universally used the food the greater its importance. Milk adulteration, therefore, takes first rank as a sanitary question, and while harmless adulterations such as water are often flippantly alluded to, one can not but be serious when there is even a suspicion that the fraud is not merely a financial one, but one that threatens life and health. Of late it is said that under such names as "freezine," "preservaline," etc., there has been extensive use of such drugs as boric acid and formaldehyde in treating milk so as to render it longer marketable. It is claimed also that they are employed in such quantity as to be prejudicial to health, especially of infants, who are naturally the most general if not the largest consumers of milk, and one health inspector is quoted as expressing the belief that during the last year "fully 1000 children have been killed in Chicago by 'doctored' milk." If this is true even to the extent of one-tenth of 1 per cent. it is a matter that can not receive too early attention. Experiment made abroad seem to indicate that formaldehyde and boric acid, the substances usually employed, are prejudicial to health, if taken even in small quantities. The question, however, can not be regarded as absolutely settled, for some authorities claim that there is a safer proportion in which they can be used to advantage and that thus employed they are less dangerous than the practices of Pasteurizing or sterilizing by heat, so commonly employed. This does not do away, however, with the danger from their use by irresponsible dealers; whether Annett or Liebreich and Moechel are right, it is best to be on the safe side; and until further investigation has established the exact amount that it is safe to use, and established a standard test for the same, our health boards are only doing their duty in looking into the subject and excluding milks thus treated from public use if there is any evidence or reasonable suspicion of their harmfulness.

Association News.

THE ATLANTIC CITY MEETING.—The fifty-first annual meeting of the AMERICAN MEDICAL ASSOCIATION, in session at Atlantic City, N. J., June 5-8, has proved to be one of the most successful in the ASSOCIATION'S history. The Sections were all well patronized and did excellent work. Registration up to the evening of June 6 (time of going to press), was over two thousand. The Senn Medal was awarded to Dr. F. Gregory Connell, of Chicago, and the ASSOCIATION Medal to Dr. A. L. Benc-

1. Phil. Med. Jour., May 26.

dict, of Buffalo, N. Y. The newly-elected officers are: president, Charles A. L. Reed, Cincinnati; vice-presidents, A. W. Calhoun, of Georgia; A. A. Woodhull, of Denver; Philip Marvel, of Atlantic City, and Wm. E. Quine, of Chicago. The newly-elected trustees are: J. M. Mathews, Louisville, Ky.; E. F. Ingals, Chicago; W. L. Rodman, Philadelphia, and M. F. Porter, Fort Wayne, Ind. At the 1901 meeting the Oration in Surgery will be delivered by Dr. John A. Wyeth, of New York City; the Oration in Medicine by N. S. Davis, Jr., of Chicago; the Oration in State Medicine by Dr. George M. Kober, of Washington, D.C.

Medical News.

OFFICIAL information has been received at the War Department, Washington, D.C., that the Government of the Straits Settlements, by a notification published April 5 last, proclaimed Manila an infected port, on account of the presence of bubonic plague.

AT THE recent session of the State and Provincial Boards of Health of North America, at Atlantic City, N. J., the following officers were chosen: president, Dr. C. O. Probst, Ohio; vice-president, Dr. Henry Mitchell, New Jersey; secretary, Dr. C. L. Swartz, Rhode Island; treasurer, Dr. J. A. Egan, Illinois.

A BANQUET was tendered Professor von Bergmann, of Berlin, recently, by 300 of his friends in the profession. Liebreich made the principal address, paying special homage to von Bergmann as a leader in the fight which physicians have to wage constantly to obtain their rights.

THE UNITED STATES postal officials arrested the officers of the so-called "Metropolitan Medical College" of Chicago, on June 4, and they are to have a hearing on the charge of fraudulent use of the mails on the 14th. This institution is the successor of the "Independent Medical College" and the "National Health University," previously commented on in THE JOURNAL, and is charged with the same iniquitous performance as its predecessors.

THE STUDY OF MALARIA.—A permanent committee on malaria has been appointed by the Paris Academy of Medicine, consisting of Laveran, Kelsch, Blanchard, Railluet and Vallin, "for the study of paludism." A resolution was adopted urging that a scientific mission be sent to Algeria to study the question of transmission of malaria by mosquitoes, and prophylactic measures. England now has two schools and two "expeditions;" Germany, one school and the Koch expedition; Italy has a society for the study of malaria (see editorial columns this week); Belgium has recently founded a laboratory in the Congo, and special courses for instruction in tropical diseases have been opened in Holland and in this country. France has been hitherto content with Laveran's discovery of the malarial parasite as her contribution to science in this line.

FREEDOM OF PORTO RICO FROM SMALLPOX.—The prevalence of smallpox in Porto Rico shortly after the occupation of the island by United States troops was such that the neighboring islands declared a quarantine of fifteen days against Ponce. The disease existed in every direction and the military authorities determined to take the cases in hand and if possible remedy the evil. A general vaccination of the population was ordered and systematically carried into effect, vaccin being pro-

vided from a farm established at Coamo Springs. The work was declared finished June 30, 1899. No announcement of the results of the vaccination has as yet been made, but in a letter recently received at the office of the Surgeon-General of the Army, Major J. Van R. Hoff, chief surgeon of the military department and president of the superior board of health, states that no death from smallpox has been reported from any part of the island during the past seven months.

QUARANTINE AGAINST EGYPTIAN PORTS.—In a communication dated May 8, the consul of the United States at Malta reported that every passenger arriving there from any Mediterranean port east of Gibraltar must, before being allowed to land, declare on oath before an inspector of marine police or other superior officers, that he has not been in Egypt within twelve days. This measure is rendered necessary owing to the spread of smallpox in Egypt, particularly at Cairo, and to an outbreak of plague which has been officially reported. Up to the present time it has been learned that there have been three cases of plague at Port Said and two at Suakin. A few days ago two cases of black smallpox were discovered at St. Julians, a suburb of Valletta, which were directly traceable to persons just arrived from Egypt. A person who was connected with a family at St. Julians, resided in a lodging house at Valletta and was attacked with the disease after the St. Julians discovery. The local government at once took heroic measures and the latter patient and all of the occupants of the house were removed to the government lazaretto. One of the St. Julians cases terminated in death. The local health authorities are fully up to date in their methods and, owing to their promptness in dealing with the above cases, there is no danger of a spread of the disease. Inasmuch as one or more of our vessels from Manila will be returning to the United States by way of the Suez Canal in a few weeks, it might be well to warn them in regard to holding communication with Egyptian ports, as, judging from the strict quarantine laws put in force at various Mediterranean ports last summer, it might prove awkward should they desire to put in at ports between Port Said and Gibraltar. There is a strong probability, from present indications, that even Aden will be quarantined.

PENNSYLVANIA.

BY THE will of Henry M. Curry, who died in Pittsburg a short time ago, \$20,000 has been given the Pittsburg Hospital for Children.

Philadelphia.

DR. THOMAS G. MORTON has taken a cottage at Cape May for the summer.

DR. HOWARD KAUCHER, of the Medico-Chirurgical College, and Dr. W. Pearson, of the Jefferson, have been appointed resident physicians of the Harrisburg Hospital.

THE ANNUAL commencement exercises of the Medico-Chirurgical College were held May 19, and fifty-nine graduates received diplomas.

A CASE of diphtheria has been reported in the Elwood Public School in the Twenty-second ward, and the building has been closed by the Board of Health in order that the proper preventive measures may be taken.

NOTICE has been given of the consolidation of the Mt. Sinai Hospital and the Franklin Free Dispensary at 236-238 Pine Street. This movement tends toward the establishment of a hospital for the downtown Jewish poor.

REQUESTS TO UNIVERSITY OF PENNSYLVANIA.

THE University has received a gift of \$20,000 from Mr. John G. Carruth, toward the dormitory fund. This being a memorial

to his daughter, the building will be known as the Carruth Memorial. Mr. Dundas Lippincott has also given \$20,000 as an endowment of a new house to perpetuate the memory of the father and son.

JEWISH HOSPITAL.

According to the annual report of the Jewish Hospital Association, the number of supporters is 1370; divided into four classes, viz.: 1000 members, 130 contributors, 190 patrons, and 50 friends. Last year there were 30,350 visits made to the Mathilde Adler Loeb Dispensary, and 25,065 prescriptions compounded. Within the past few days \$7500 has been given this department by Mr. August Loeb. During the past year, 901 patients have been treated in the hospital, an increase of 75 over the previous year; and 11,433 patients in the out-patient department; 60,624 days' support has been given those in the hospital and incurable wards, at an expense of \$41,166. The average cost per day was \$1.10. The total receipts were \$62,775.54, and the expense \$62,513.62. The Lucien Moss Home for Incurables showed receipts of \$261,393.75, and disbursements of \$255,054.67.

MR. W. B. SAUNDERS announces that he has associated with him in business Mr. F. L. Hopkins and Mr. T. F. Dagny. The former has been manager heretofore of the subscription, and the latter of the publication, department. The firm will hereafter be known as W. B. Saunders & Co.

ILLINOIS.

THE WOMEN of the hospital board in Champaign made \$700, May 26, by having the trolley lines in charge for that day, and providing various forms of amusement and entertainment in different parts of the city.

Chicago.

THE WESLEY Hospital passed into the hands of the Deacons' Society of the Methodist Episcopal Church, June 11.

DR. A. H. FERGUSON has just recovered from illness due to infection received during an operation for the removal of gangrene.

AT THE commencement exercises of the Training School for Nurses of the Mary Thompson Hospital, the address was made by Dr. Sarah H. Stevenson, and the diplomas were presented by Dr. Lucy Waite.

THE PHYSICIANS' Club of Chicago held a business meeting and banquet recently and elected the following officers: chairman, Wm. H. Wilder; secretary, L. Harrison Mettler; treasurer, L. Blake Baldwin; directors to fill vacancies, John M. Dodson, M. W. Bacon and John L. Porter.

MARYLAND.

Baltimore.

DR. J. ROYSTON GREEN has resigned the position of resident physician of the Hospital for Consumptives and will enter on private practice.

THE JOHNS Hopkins Hospital Training School graduated twenty-four nurses on June 1. President MacAllister, of Drexel Institute (Philadelphia) made the address on "The Practical Education in Professional Life."

THE UNIVERSITY of Maryland has filled the vacancy in the chair of therapeutics, created by the resignation of Dr. L. Edmondson Atkinson, by assigning that department to Dr. Charles W. Mitchell, who will fill both this and the chair of pediatrics.

DR. L. BENDERLY has been appointed assistant resident physician at the Hebrew Hospital.

FOR SHIPPING DEAD BODY.

William Divino, late janitor at the College of Physicians and Surgeons, was tried in the Criminal Court, May 28 and 29, on the charge of unlawfully shipping a dead body from Baltimore to Sioux City, Iowa, last January, and was found guilty. The maximum penalty is five years in jail. A motion was made for a new trial. As mentioned in this correspondence at the time, a man died from injury in the City Hospital and his body was sent to the morgue. No one claiming it, after two weeks, it was assigned to the College of Physicians and Surgeons, where Divino, custodian of the dissecting room, received and receipted for it. Later it was discovered in a box in the Sioux City Express Office.

NEW JERSEY.

A PHYSICIAN living at Morrisville (Pa.) was arrested in Trenton, May 26, for practicing medicine without a license and held in \$500 bail. It is claimed that the law is not violated when a physician who practices in another state is called to see a patient who may be ill in an adjoining state. Another claim is made that the party has a license which will be shown at the proper time.

Newark.

THE OPENING of St. James' Hospital occurred May 23. Dr. Augustus V. Wendel will be chief of the medical staff.

THE CITY Board of Health has taken initiatory steps toward the erection of a hospital for the care and treatment of communicable diseases. Dr. Herman Herold was made chairman of the committee, of which the other members are Drs. Frederick Becker and William S. Dishrow.

OHIO.

Cincinnati.

AT THE regular monthly meeting of the medical staff of the Cincinnati Hospital, Dr. G. A. Fackler was elected president of the staff for the ensuing year.

A CONFERENCE has been arranged between the secretaries of the State Boards of Health of Ohio and Kentucky, and the city health officers of Cincinnati and Covington, to be held in Cincinnati. It is the intention to establish a mutual relationship between the two states for the better control of contagious diseases.

MASSACHUSETTS.

THE BOARD of health in Boston has ordered that hereafter every physician must report every case of consumption that comes to his notice, as he would any other form of contagious disease.

AT THE annual meeting of the medical staff of the Franklin County Hospital, May 17, the following officers were elected: president, Dr. A. C. Walker, Greenfield; vice-president, Dr. Mary P. Dole, Greenfield; secretary, Dr. B. P. Croft.

THE NEW surgical building of the New England Hospital for Women and Children, at Roxbury, was dedicated May 21. Short addresses were made by Dr. Marie Zakoweska, the founder of the hospital; Dr. Elizabeth Keller and Rev. E. L. Clark, chairman of the building committee.

DISTRICT OF COLUMBIA.

RECENTLY appointed physicians to Georgetown University Hospital are E. P. Pothury, Jr., and John A. O'Donoghue.

THE SEVENTY-NINTH annual commencement exercises of Columbian University were held May 29. There were thirty-three graduates in medicine and thirteen in dentistry. The address was delivered by Dr. W. F. R. Phillips, of the faculty.

AT THE commencement exercises of the medical department of University of Georgetown, held May 22, twenty-one graduates received their degrees. The address to the graduates was made by Prof. Daniel R. Brower, of Chicago, and the degrees were conferred by Rev. John D. Whitney.

MICHIGAN.

THE FOURTH annual commencement of the Saginaw Valley Medical College was held in Saginaw, May 22.

AT THE commencement exercises of the Grand Rapids Medical College, held June 1, a class of twelve was graduated. Dr. Clarence White and Dr. Wm. Fuller made addresses, and Dr. E. G. Edwards presented the diplomas.

INDIANA.

PROPOSED CHANGE IN MEDICAL LAWS.

THE State Board of Medical Examination and Registration held a meeting at Lafayette, May 29, and decided to recommend that the laws governing the practice of medicine be changed, so that a diploma shall not be recognized as a proof of eligibility to practice medicine, but only as evidence entitling the holder to examination. The Board will also ask the next legislature to enact a law giving a clearer definition of the phrase "practice of medicine."

CALIFORNIA.

St. LUKE'S Hospital, San Francisco, is to have a new wing, to cost \$50,000.

FIFTEEN were graduated from the California Medical College at the recent commencement exercises. One of the number was a Chinese student.

AUSTRALIA.

SYDNEY'S PLAGUE.

Various portions of the city are still (May 5) under more or less quarantine, although \$150 a week is spent in placing it in better sanitary condition. March 27 the work of cleansing Sydney began, about 800 men being employed, and the number increased from time to time. In the quarantined area all able-bodied men are engaged to help the contractors, and prophylactic serum has been used on all employees. Seven hundred tons of debris were removed from yards and houses the first day. A price is placed upon rats in almost every portion of Australia. The epidemic seems to follow the line of sewage, and it is thought that the rats are forced, by the use of disinfectants, up the sewers to the heart of the city. The first plague case was that of a man who for four months had been almost exclusively employed in carting wood from the city warehouse to a wharf. During this time four steamships from Hongkong, with Chinese crews, had lain at the wharf: one had been there from January 9 till January 20, and the first case was on January 19.

The record of cases reported stands as follows:

	Cases.	Contacts.	Deaths.
January	1	10	0
February	4	32	2
March	52	259	15
April	112	680	38
May 1	4	13	2
May 2	11	11	2
May 3	6	26	4
May 4	6	26	0
Total	195	1061	63

There are now 99 patients and 25 "contacts" in quarantine. Out of the large number of the latter, there have been only about 10 who took the infection. Yersin serum is not used, there being none in the city. Dr. Frank Tidswell, the government's bacteriologist, and Dr. Ashburton Thompson, the president of the Board of Health, have been visited by representatives from the various colonies, all of which are striving to stamp the plague out of Australia. The Citizens' Vigilant Committee has asked the medical profession to give lectures in various parts of the city instructing the people in all measures of prevention.

CANADA.

REGARDING BAKING-POWDERS.

The Department of Inland Revenue at Ottawa has just issued a bulletin dealing with the subject of baking-powders. In it are given the details of the analysis of 156 samples purchased throughout Canada. Out of this number only 44 were free from alum; or, in other words, over 70 per cent. of the baking-powders sold in this country contain alum. A large part of this bulletin is taken up with a study of the scientific evidence, having to do with the physiologic effects of the ingredient, and especially so with data which has accumulated since 1880, the date when the last bulletin on this subject was issued. While many manufacturers and some chemists claim that in a well-made alum powder, no alum as such remains in the bread, but hydrate and phosphate of alumina, this has been studied most carefully and the results of the investigations are thus given: "The question of the harmlessness of alumina, that is the hydrate, has, however, not been proved, and the most that can be said for it is that the case is still unsettled. The health of a nation is too serious a matter to be imperiled lightly, and if it be possible to secure prohibitory legislation against alum baking-powders, it is all the more desirable that manufacturers of these powders should be required to state their composition on the package, so that consumers may know what they buy and use. Until it is demonstrated that hydrate of alumina and (in the case of alum-phosphate powders) phosphate of alumina

are harmless substances in food, the use of alum baking-powders is attended with a very serious risk; while not even the proving of these substances harmless would establish the safety of these powders, since for reasons already mentioned, it is quite uncertain that the reaction is completed in the bread."

CANADA AND THE BUBONIC PLAGUE.

The recent outbreak of the plague at Honolulu and its appearance at San Francisco and the Diamond Head Quarantine Station has directed the eyes of all Canada to Williams Head, anxiously inquiring what facilities there are on the Pacific Coast off British Columbia for the protection of the public health of Canada. The superintendent in charge of this station is Dr. Watt, a man who is alert and thoroughly alive to his duty and who has long ago expressed himself that no contagion will find him unprepared to meet it. The equipment of this station is complete and thoroughly modern. The hospitals and disinfecting houses and depots of detention are all furnished and ready for immediate use. The mechanical department is also up to date in every particular, and it is said to be a very interesting sight during the stay of an Oriental liner, to see hundreds of Chinese treated to their first bath in Canada—a bath from which disease germs never come forth. The system in vogue for the purification of the ships and their baggage is that by sulphur fumes; and the ropes holding the vessels to the wharf are carefully covered with funnel-like rat-catchers, to prevent the landing of any of these spreaders of the plague; 8000 gallons of muriatic acid and bichlorid of mercury is ready at any moment in an immense tank, to be sprayed on the exposed surfaces of ships where fumigations would not be feasible. The formaldehyde process is also in use. The hospital buildings are arranged on the pavilion plan, and very complete in all their arrangements, the better class of passengers, if necessary, being allotted separate accommodations. It will no doubt be eminently interesting as well as perfectly satisfactory to the citizens of the United States to know that Canada has such admirable facilities for coping and contending with any dreaded foreign pestilence such as the bubonic plague.

CANADIAN ARMY MEDICAL SERVICES.

It is very satisfactory to be able to report that the Government of Canada has been at last successful in placing this service on a proper footing. From the time of the Confederation, in 1867, the medical officer has practically remained in the position in which that era found him, a more or less ornamental appendage to the battalion claiming his services. In July last, the militia department issued a general order, and the scheme then outlined has now become established. The medical staff now consists of one colonel—director-general, 7 lieutenant-colonels, 17 majors, 22 captains, and 25 lieutenants. For the purposes of promotion, the officers of the army medical staff are considered as a distinct branch—under the command of the director-general—and promotion will take place from rank to rank on the same principle as that in a regiment or corps. Five bearer companies and five field hospitals were established on a peace footing. A bearer company will consist of 1 major, 2 captains or lieutenants, 1 sergeant-major, 1 quartermaster sergeant, 1 staff sergeant compounder, 4 sergeants, 1 bugler, 4 corporals, and 20 privates. The Halifax Bearer Company—No. 1 Bearer Company—is, however, to be kept on a war footing of sixty-four of all ranks. A field hospital will consist of 1 major, 2 captains or lieutenants, 1 sergeant-major, 2 staff sergeants, 2 compounders, 2 corporals, and 14 privates. Schools are to be held without delay in order to enable officers to qualify, and they will be in charge of officers who have already qualified at the depot of the Royal Army Medical Corps at Aldershot, England. These schools will last a week and terminate with an examination. Two classes of certificates will be given, viz., a first-class for officers making 70 per cent. of the whole number of marks and not less than 50 per cent. in any one subject; and a second-class to those making 50 per cent. of the total, or not less than 33 per cent. on any one subject. In this way it is hoped that all the medical officers of the militia will soon become properly qualified in their duties and the whole service efficient and capable.

PROGRESS IN LEGISLATION FOR INEBRIATES.

As a result of a conference which leading members of the profession in Toronto have had with the Premier of the prov-

vince. the Hon. Dr. Ross, a bill has been drafted and will be introduced at the next meeting of the local house of parliament. It will provide that in all cities in Ontario, having a population of 20,000 or over, a probation officer will be appointed to take the supervision of drunkards who have been placed on probation by the courts on suspended sentence. A medical superintendent shall be appointed by the government to inaugurate and superintend the medical treatment of inebriates and dipsomaniacs and assist in establishing, for their treatment, cottage hospitals and special wards in general hospitals throughout the province. Then the government will by this legislation be authorized to make grants for this work for special hospitals and for special wards in hospitals already existing—a bonus of 25 per cent. of the cost of the building or special equipment, as the case may be; then an additional special grant of ten cents a day over and above the usual per capita grant to all hospital patients; then an extra grant of forty cents a day shall be allowed for a period of seven days, for cases of acute alcoholism. The medical treatment is not to be considered as a charity but as a loan, to be repaid subsequent to treatment and while still on probation. Able-bodied chronic drunkards, instead of being fined and sent to jail, shall be sent to the central prison in Toronto for not less than six months, and all female drunkards are to be sent to the Mercer Reformatory in Toronto on cumulative sentences. Chronic drunkards, male or female, not able-bodied, are to be provided for in county or city houses of refuge. The bill further provides for the appointment of three physicians of standing, by the government, to constitute a committee of consultation to co-operate with the superintendent in inaugurating and carrying out the purposes of the bill.

HAWAIIAN ISLANDS.

FIFTY-TWO lepers have been received at the Kalihi detention hospital during the last seven months. Forty of these were taken on May 22, for Molokai, by the steamer *Lehua*, which makes a semi-annual visit to the island.

HONOLULU'S PLAGUE.

The plague in Honolulu is a thing of the past. The quarantine was raised on April 30, no new cases having developed from March 31 to that date. The yellow flag had been flying over the city for nearly 4½ months, and during that time over two hundred post-mortem examinations were made of suspected cases. Of this number sixty were found to be genuine plague. These examinations were made by Dr. Hoffman, the city pathologist of the Board of Health; to him and Dr. Garvin, the first-call physician, great praise is due, not only for their unceasing labors during the epidemic, but for their wisdom in the measures taken to rid the city of contagion. Though communication with the outside world was restored April 30, the burned district—Chinatown and its environs—remained quarantined against the rest of the city until the middle of May, although bacteriologic investigation of the soil of this district had first been made, as previously noted in THE JOURNAL, and no bubonic plague germs had been found. As the plague is reported from several places in Japan, and has existed for some time in Sydney, extreme vigilance has been maintained at the water-front, a floating quarantine wharf being provided, at which all in-coming vessels are required to land. The lines are provided with rat-guards. In the process of fumigation all rats in the cargo are likely to be killed, but to prevent the escape of any to land the cargo is rehandled and fumigated in the warehouse on the floating wharf. A movement is on foot to make a public park of the burned district. The effect of quarantine on the sugar exports from Honolulu is shown by the fact that there were only 72,617,677 pounds exported during the first three months, while in the corresponding periods of 1899 the exports were nearly 118,000,000 pounds.

ACCORDING to the *St. Petersburg Med. Woch.*, the Russian railroads are to be equipped with special cars for the transportation of sick persons. They are to be made with three separate compartments, one for infectious, one for ordinary diseases and one for insane patients.

Correspondence.

Medicine in the Far East.

VIENNA, AUSTRIA, April 20, 1900.

BOMBAY.

To the Editor:—Next to Calcutta, Bombay is the seat of the largest medical school in India. There are about 400 medical students in attendance at the Grant Medical College there, and the English members of the faculty think the class is too large, and that some measures should be adopted to reduce its numbers.

THE JAMSETJEE JEEJEEHROY HOSPITAL.

This is the largest institution of its kind I have seen in India. There is a separate set of buildings for gynecologic and lying-in cases, and a separate staff for these branches of work. Outside of this, however, Dr. Hatch, who has charge of the main hospital, does all manner of work, including that on the eye, nose and throat, as well as general medicine and surgery.

Among the first patients I saw with Dr. Hatch was a Parsee girl, suffering from tetanus, where the source of infection had been through holes punctured in her ears for ear-rings. Accurate statistics have been kept of the cases of tetanus treated in this hospital from 1849 to 1897. The average has been about 40 each year, or a total of 1900 patients, of whom 1090 have died and 810 have recovered. During all this period the treatment has changed from time to time as new remedies came into vogue, but the results have been nearly the same. These statistics have led Dr. Hatch to the conclusion that as far as curative agents are concerned, all the remedies so far used for the treatment of this disease are equally worthless. He uses chloral, the bromids and opium to control the spasms, but has no faith in any of these agents in lessening the mortality of the complaint. He has had considerable experience with the tetanus antitoxin and is outspoken in his condemnation of this agent. He says that in bad cases it does no good, and in the mild ones, he has seen it do harm.

I saw Dr. Hatch operate for an abscess of the liver, of which disease I saw a half dozen cases in his wards. He claims that the precaution taken by many surgeons to divide the operation into two stages in order to secure a union between the two surfaces of the peritoneum, is entirely unnecessary. He opens up the pus cavity freely, and then protects the peritoneal one by packing gauze around the incision. The aspiration of the liver, for whatever purpose it may be done, the Doctor looks upon as a dangerous procedure, and gave me several instances where death had occurred from hemorrhage following this.

I saw more cases of ununited fractures in a morning's stroll through the wards of Jamsetjee Jeejeebhoy Hospital than one would find in a western institution of the same size in a decade. Dr. Hatch attributes this unfortunate occurrence to the low vitality of his patients, in whom the reparative processes, after injuries, are below par. I am, with certain restrictions, a warm advocate of Champagniere's ambulatory treatment of fractures, and believe that it is in just such cases as these illy nourished Indians that early passive motion and massage would assist the processes of repair and lead to better results. For some reason that I could hardly attribute to a constitutional dyscrasia on the part of the patient, whenever an operation was done for the relief of these cases an open suppurating wound followed.

Among the diseases for which the patients who enter this hospital are treated tuberculosis heads the list. Following this, in nearly the same proportion, are dysentery and malarial complaints.

There is a fine series of pavilions connected with this hospital for the care and treatment of gynecologic and lying-in cases. In Dr. Dennick, who has charge of these departments, I found an energetic and up-to-date man. They confine about 400 women annually. I saw, in a single day, more cases of puerperal infection than one would see in the great wards of the Allgemeines Krankenhaus in Vienna in six months. Dr. Dennick apologized to me for this unfortunate condition of

things, and attributed it in part to the carelessness of his assistants, but more especially to the mismanagement of the cases before they entered the hospital. Here in India, as in China, the practice of obstetrics is almost entirely in the hands of midwives. In China, this midwife, in the management of her cases, does not in any way attempt to interfere. In India, however, nearly every one of these women has some secret nostrum consisting of a salve, ointment, or powder that she introduces into the vagina just before or during labor, which they claim has the power to dilate the womb, as well as produce a traction downward that aids in the delivery of the child.

These applications are filthy compounds, and after their use, infection often follows, and it is from this class of cases that Dr. Demmick claims most of his child-bed fever originates. The Doctor has great faith in antistreptococcus serum in the treatment of puerperal infection, a faith that my experience with the remedy does not sustain, for while I have seen it do harm, I have never seen it do any good. Locally, he treats his cases by carbolyzed vaginal injections, meddling but little with the uterine cavity. He gives 5-grain doses of the carbonate of guaiacol. In the obstetric wards of this hospital I saw a case of tetanus following delivery, which, owing to the fact that the native women are mostly delivered on the ground, is not an unfrequent accident. The cases, however, are generally milder in form, and more recoveries occur than when the infection is introduced into the system through other avenues.

The female wards here were full of dysenteric cases, which Dr. Demmick treats by the administration of *hobarrhena antidysenterica*, an Indian vegetable drug, that, mixed with aromatics, is the active agent contained in the numerous nostrums that are sold in India for the cure of bowel troubles.

GOKALDAS HOSPITAL.

This hospital is named after a rich Parsee who built it and gave it to the British government on condition that the latter should run and support it. It is the best arranged, from a sanitary point of view, of anything of its kind that I have seen in all India. The floors are all tiled, the walls calcimined and the ventilation most perfect. The cots on which the patients lie are made of iron, covered with a straw mat and a single sheet. These Indians all prefer a hard bed and usually want no pillows under their heads. Dr. Henderson, who has charge of this hospital, belongs to the British sanitary service, and in the line of his duty there must play the rôle of physician, surgeon, oculist, aurist, and in fact, practice every department known to medicine.

I saw another case of tetanus there, which Dr. Henderson was treating with large doses of carbolic acid hypodermically, and keeping the patient profoundly under the influence of chloral. In carefully looking over the mortality statistics of tetanus in India, one will be struck by the fact that the disease is less fatal than it is in the West. This can be accounted for in part by the less impressibility of the nervous system of the Indian, as well as the milder form of the disease as it prevails here. I saw in this hospital several cases of ununited fractures, and an open, suppurating wound was a complication of every case in which an operation had been done for its relief.

Among the native Indians there are no medical colleges, and medicine is nowhere taught in a systematic manner. They have, however, a large amount of ancient medical literature, written by eighteen eminent authors, which has been unchanged for centuries, and which is looked upon as containing all that is worth knowing in the science of medicine. These works are all written in Sanscrit, and not one in a hundred who practice medicine in India can read this classic tongue. The healing art as practiced by ninety-nine out of every hundred who follow this calling, in this vast empire, is a pure, unmixed quackery. Each one of these practitioners claims to have in his possession remedies that are unknown to other members of the craft, which he hands down to his son, who, like himself, keeps them a family secret. Their materia medica is recruited largely from the vegetable kingdom, though they use copper and iron, and to those who can pay for the luxury they administer gold, pearls and corals. Hemorrhoids form a

very common complaint among the natives, and the "pile" doctor, like his prototype in the West, roams from village to village in search of patients. His treatment consists in the application of strong escharotics that not only destroy the pile tumors, but often produce extensive sloughing in all the surrounding parts.

THE PLAGUE.

I spent several days, while in Bombay, among the plague-stricken victims of that city. Through the courtesy of Major Wilkins, who has charge of all the plague hospitals here, I had every opportunity to see and study this disease. I first visited the stations where the natives were receiving the preventive inoculation. In this line I was most interested in the work being done by Lieutenant Wylie and his wife, who are spending \$500 a month of their own private funds in this work. To induce the natives to be inoculated, they give three day's rations of food and ten cents in money to every one who will submit to the ordeal. They inoculate about 100 every day. These patients report every morning. There is usually a marked constitutional reaction as a result of the treatment. The authorities have great difficulty in getting the natives to submit to this preventive treatment, and so far only 90,000 have been inoculated in the whole province in which Bombay is situated.

The toxin that is used as a prophylactic against the plague is prepared by taking the virus from the liver of a patient who has just died of the disease. Of this a culture is made in agar-agar, for from four to six weeks, or until the germs of the disease have attained their maximum of vitality. This first culture is now put into bouillon and allowed to undergo a second process of germination and growth. This second culture is next submitted to a high temperature so as to insure the death of all the germs that it contains. This last is the fluid used as a preventive injection. Dr. Wylie tells me that the great difficulty is to get antitoxin of a uniform and proper strength. I find a wide difference of opinion among the men with whom I have conversed as to the utility of this preventive inoculation. In fact, at the present time, the whole subject seems to be in an experimental stage. The best evidence of its efficacy is furnished in one of the prisons here, where among 100 un inoculated prisoners 40 died of the disease, while among 100 of those who had been inoculated, only eight died. To overcome the prejudices of the natives against the inoculation for the prevention of the plague, the Viceroy of India, Lord Curzon, before he started on his late tour through the country, had himself and all his staff inoculated.

When, in 1896, the plague first began to be a serious menace to Bombay, the British authorities attempted to carry out most stringent measures for its suppression. A house-to-house search was made, and every person who had plague symptoms was taken to a hospital for treatment. These regulations were carried out only a short time, when it was found that the opposition to them was so great that their continued enforcement would lead to a revolution. So at the present time, only persuasive measures are used to induce patients to go to the hospital for treatment. To accomplish this, it is generally necessary to allow the whole family to accompany the friend who is removed from his home, and temporary straw huts are erected in the hospital grounds for the accommodation of the entire family. Not only this, but all the friends must be allowed free access, at all times, to the bedside of the plague-stricken patient. A half dozen plague victims in the agonies of death, with all their friends hovering over their bodies, all within the confines of a single hospital ward, would produce a scene, if enacted in the western world, that would rend the heart of the most hardened onlooker. The air would be full of the suppressed sobs of the men, and the wild shrieks of the women and children. In Bombay, however, the whole thing is a silent and noiseless pantomime. Not a tear trickles down the dark cheek of the Hindu as he sits, a silent spectator of one of the most heart-rending scenes that it falls to the lot of man to witness. In both race and religion he is the opposite of the one who inhabits the other side of the globe. He is a fatalist and believes that whatever happens must occur and can not be averted, and therefore looks on it as a religious duty

to submit, without a murmur, to whatever fate the Creator may send to him.

In my observation in the plague hospitals at Bombay, I saw many cases that illustrate the great difficulties with which an early diagnosis of this disease is beset. In fact, patients are often received into general hospitals and treated for other diseases, especially for lung troubles, who really have bubonic plague. Several cases of this kind were received during the last year in the Jamsetjee Jeejeebhoy Hospital, through a mistaken diagnosis, and in this way two nurses and one young physician lost their lives.

Attached to every plague hospital is a detention ward where patients are kept during a stage of the disease in which a diagnosis can not be made with absolute certainty. In a hospital where there were 200 plague patients there were 50 who were inmates of the detention ward adjoining. I saw a good many patients examined by experts. The symptoms sought for as diagnostic signs of plague were an initial chill, glandular swellings about the neck, armpits, or groin, redness of the conjunctiva, partial aphasia, ataxic symptoms on attempting to walk, and shooting pains running down the back part of the legs. The temperature after the initial chill generally runs up to from 104 to 106 F., and after remaining at this point for 36 to 72 hours, falls again to normal or below.

The sickest patients die in this first stage of the disease. In those who survive, after the lapse of another twenty-four or forty-eight hours the temperature again rises. From this time on the fever runs the usual course of a severe case of septic infection. The seat of the glandular involvement seems to have much to do with sealing the fate of the patient. If the glands about the neck are invaded, the case is a hopeless one. Next in its fatal results is the infection of the axillary glands, and the most hopeful cases are those where the buboes form in the groins. If the patient survives with the last form of glandular suppuration, the destruction of tissue is sometimes terrible. I have seen open cavities extending above and below Poupard's ligament, as large as a cocoon, where all the iliac blood-vessels and nerves were exposed.

I spent a forenoon at Arthur Road Plague Hospital, with Dr. N. H. Chosky, a native physician who has had charge of the plague work in this institution since 1896, and who has probably treated more cases of this disease than any man living. As illustrating the status of serumtherapy in this disease, and showing that at the present time the remedy is only on trial, the Doctor uses it on every alternate one as the patients come into his service, and treats the others on lines that he has heretofore adopted.

Ice applications are applied to the glandular swellings for the first forty-eight hours, and after that he resorts to warm poultices. Outside of the serum treatment, the management of the cases is purely symptomatic. Strychnin, camphor, digitalis and the like are resorted to to keep up the circulation. In all severe cases, the stomach will retain nothing, and medicines have to be given hypodermically and food by the rectum.

Though Dr. Chosky is not at all sanguine in his views in regard to the efficacy of the serum treatment of the plague, he is still hopeful and says that in his last 200 cases, one-half of whom he treated without the serum, and the other half with, of the former he saved 15 per cent., and of the latter 40 per cent. Major Wilkins tells me that for months together they have lost 95 per cent. of all the plague patients they have treated in Bombay.

I visited a small hospital set apart for the treatment of European cases of the plague. I found it nearly empty. It received twenty-five patients during the last four months, of whom one-half have died. The Parsees have a separate hospital for the care of their plague patients, and the mortality among them is slightly less than among the Hindoos, though the nervous sequelae that follow the disease are much more frequent among them, owing to their being of a more neurotic temperament than are the Hindoos.

The curative serum used is prepared in a large laboratory in Bombay, of which Dr. Bannerman has charge, and to whom I had a letter of introduction, but I was so pressed for time that I was not able to visit this institution.

W. S. CALDWELL, M.D.

The "Assistance Publique" of Paris.

PARIS, FRANCE, April 25, 1900.

To the Editor:—In the novel, "Les Morticoles," Daudet caricatured the Assistance Publique as an organization which, owing to the degenerated state of French society, finally became so powerful that there were only two classes, one composed of the Assistance Publique, with its vast machinery of lawyers, doctors, internes, externes, druggists, nurses, and attendant who were engaged in taking care of the other class, which was composed of the rest of society, comprising the ill and the imaginary ill, the insane, idiots, senile, juvenile, vicious and poor. While it is amusing from its absurd exaggeration of the modern tendency to mental and physical degeneracy, it is no exaggeration of the rapidly growing idea among the people—fostered by the prodigal amount of gratuitous work on the part of the medical profession—who think that society owes them a living and medical treatment. There was recently a case of two sisters, one of whom received aid from the Assistance Publique on account of poverty and tuberculosis, and the other gave up her work and tried to draw a pension also; when refused she hired a lawyer and brought suit for her rights.

Because the municipal council has recently granted an appropriation of about seventy-five million francs for remodeling such old landmarks, infected but historic, as Pitié, Charité, Bichat, and Laennec, the Assistance Publique is assumed to be immensely rich. But this is not at all true. The annual sum expended amounts to about thirty-five million francs, while the total revenue from rents, tax on balls, operas, spectacles, Paris-mutual (horse races), as well as private donations, does not amount to more than fifteen million francs, which leaves an annual deficit of twenty million francs to be made up from the municipal budget. The Assistance Publique was founded in 1849 and comprises in its management nearly all the hospitals and asylums, as well as the distribution of succor to the indigent, both within and without its institutions. Its work extends to more than half a million people annually; about 200,000 in hospitals and retreats, 11,000 orphans, 3000 insane, 113,000 indigent and necessitous, 110,000 aided at domicile, 22,000 accouchements, 30,000 children cared for in provinces, 4000 morally abandoned children, and about 10,000 children whose parents are assisted in supporting them.

The director-general, Dr. Napias, who receives a salary of 15,000 francs, is assisted by a council of surveillance composed of thirty-five members—one-fifth of whom are medical men—who are appointed by the President of the Republic for a term of six years without salary. The headquarters of the administration is at 3 Avenue Victoria, near the Hotel de Ville, where any one interested in visiting any or all of the institutions can obtain a card of admission from Dr. Napias.

Naturally, with such an extensive service, there is an immense staff to preside over the different bureaus; for in the present state of French "Mandarism," to become consulting physician one has to pass through the successive *concours of staziare externe, interne, assistant, agrégé médecin des hôpitaux, etc.* The fierce struggle to pass the *concours d'Internat*, was shown recently in the scandal of l'Hôpital Beaujon—where some unknown rejected candidate poured sulphuric acid into the box of examination papers, thus nullifying the examination, as previously noted in THE JOURNAL. The failure to discover the culprit may be explained by the intense *esprit de corps* existing among the students, that makes them all suffer rather than betray one of their number. This *esprit de corps* binds together both students and professors in such a solidarity of the profession that the absurd and meddlesome interference of laical directors in hospital affairs, as exists in many American hospitals, would be an utter impossibility in France.

Since so much is consumed by this institution, a great saving is secured by having under its own management a slaughter-house, and part of the central market, wine cellars and bakery. The latter, in the old "Scipio palace" in the Rue Scipio, buys wheat in large quantities and puts it through all the milling processes, turning it almost directly into the steam dough-mixers of the bakery, whose ovens, running day and night, turn out 16,000 kilos of bread a day, not including over a thousand loaves of gluten bread for the diabetics. A central

pharmacy puts up all the stock drugs as well as supplies the French hospitals in Africa and the Orient. A central magazine, near the Salpêtrière, makes bedding, surgical dressings and clothing for the patients, utilizing for this purpose the services of many of the inmates of the Salpêtrière. A central amphitheater of anatomy furnishes material for the students who can not be supplied at the University.

ÉCOLE LAILLIER.

To go into a minute description of all the branches of this great "hospital syndicate" would take too much space. I wish to call attention to one department, on account of its novelty—the Ecole Laillier—for the treatment of contagious scalp diseases of children at l'Hôpital St. Louis. Prior to 1890 the children suffering with scalp diseases were put into the general wards with adults, until Quinquad set apart a portion of the Salle Bazin for the treatment of the *teigneux*—ring-worm cases. This was an old building where there was an école externe for many cases for whom there was no room, but who came daily for treatment and instruction. When Besnier took charge of the service he had a young interne, R. Sabouraud, who took up the bacteriologic investigation of the *teigne tendante* or ringworm of the scalp, and demonstrated that it was due to two distinct forms of parasitic plant life the *microsporon Audouini* or *petit spore* and the *trichophyton* or *gross spore*. The former produced a large circular or oval bald plaque, in which projecting stubs of hairs were coated with a sheath of minute spores resembling fine sand sprinkled on a glue-coated thread; and the latter produced numerous small plaques in which the hairs, broken at the surface of the skin, showed as small black points or else were twisted under adherent scales that revealed under the microscope chains of large cells within the hair shaft. One was an ectothrix, the other an endothrix. In his investigations, which formed the basis of his "These de Paris" (1894), he generously gave all honor of his pre-discovery to his eminent predecessor in the same field, Gruby, whose work fifty years previously (1840) had failed to be recognized by the medical profession. The honor is none the less due to Sabouraud, whose work was entirely original and remains classic. In 1892, there broke out in the hospital at Bery-sur-mer—a sanitarium for children with true tuberculosis—an epidemic of *teigne tendante*, and Besnier was appealed to for aid in suppressing it.

He sent his interne, Sabouraud, who examined and found out of 500, 350 heads affected, the boys mostly having the *petit spore*, and the girls, *gross spore*. After nearly a year's work, with a corps of epilators and careful isolation, the disease was at last entirely exterminated.

Imbued with an enthusiasm, all the greater for the general indifference or ignorance on the part of the public and the profession in the care of these cases, Sabouraud set to work to found a special hospital and laboratory for the study and treatment of parasitic scalp diseases. The Assistance Publique, aided by private subscription, founded in 1895 the Ecole Laillier in the northwestern end of the grounds of St. Louis Hospital.

While the *teignes* are very rare in Germany, they are very frequent in France and England, there being about three thousand cases in Paris alone. When treated they may be cured in several months; untreated they last an average of four years. Favus, which is much rarer in cities and more common in the country, may last ten to twenty years when untreated. In other words about 5 per cent. of the infant school population is affected and refused admission to the city schools, 1 per cent. may find a place in special services, and 1 per cent. may receive externe treatment, leaving 3 per cent. to become street vagabonds, with its deplorable consequences.

The Ecole Laillier is a three-story brick and stone structure, occupying three sides of a hollow square, which forms an ample playground for the 350 children who are so fortunate as to be admitted. Large dining-rooms, well aired, hygienically perfect sleeping-rooms and school-rooms, abundant nourishing food, make their lives blissful as compared with their former homes. The whole drawback is the weekly séance with the epilator, of whom there are sixteen, and the bi-weekly application of croton-oil, with the subsequent expressing of suppurating follicles with antiseptic applications of iodine and iodid of potash

solution. As all cases suspected of having contagious scalp diseases are sent to Sabouraud for a certificate before being admitted to the schools, his Monday consultations for the *teignes* and Thursday for the *pelades* are crowded, and there is a long waiting-list for admission to the school.

When the case is considered as probably cured, the child is discharged with the injunction to return in a month for observation, then if there are no signs of return, a "provisory certificate" is given, and at the end of another month, a second certificate or "certificate definitive."

A branch of the Ecole Laillier, called "Ecole B." in another part of the grounds, is devoted exclusively to favus and *pelade*, or alopecia areata, so that the children affected with these mildly contagious scalp affections can not contract the extremely contagious *teigneux*.

There are here about sixty cases of *pelade* which are treated by means of the electric-light rays, as furnished in the apparatus of Finsen, of Copenhagen. An arc-light of twenty thousand candle power sends its actinic and violet rays through a system of lenses in four telescope tubes upon the heads of the four individuals who can take treatment simultaneously. A stratum of circulatory water in the telescope tube absorbs the heat rays, while at the point of focus, another water chamber lessens the unpleasant sensation of heat. The treatment is given three times a week, in one-half to three-quarter of an hour sances and the results obtained often after two or three weeks of treatment have been very gratifying. The favus cases, about fifteen in number, are treated by monthly epilation, with iodine, iodid, and glycerin applications, and average four to five months of treatment.

The clinical advantages of the school are made available to the profession in the bi-weekly consultations in a course of lectures on scalp diseases, by Dr. Sabouraud, gratuitous, in which the cures and life history of the scalp micro-organisms are given, as well as a demonstration of the cases. The privilege of working in his perfectly equipped laboratory for histologic and bacteriologic work is extended most cordially to a certain number of native and foreign physicians.

A. D. MEWBORN, M. D.

Opium in Infancy and Adult Life.

WESTFIELD, N. J., May 22, 1900.

To the Editor:—I have read, with the greatest interest, the paper in THE JOURNAL of May 19, entitled: "Use of Opium in Infancy, seen in Adult Life," by Dr. T. D. Crothers. It is, in many respects, one of the most striking contributions to current literature that has been recently published, and although a year has passed since the occasion of the Doctor's reading it, it touches the chord of perennial importance.

I have not had all the experience that Dr. Crothers has had, for I am not a specialist in his line, but in the course of practice among children in both New York and Brooklyn, from 1888 to the present year, I have been privileged to corroborate and confirm all that he has said, and very much more. The use of opium in infancy and childhood is an evil of the greatest magnitude, and especially among the working classes. I have no statistics to publish, but I can say that the custom prevails to an alarming extent. Not only is there the recognition of the convenience and practical value of the remedies for children's disorders, but quite as often where a child is in perfect health, the use of the opiate to "keep it quiet" is a stand-by. If the prescription-files and sales-books of the druggists were to be scanned, it would be evident that the evil is spelled with a large "E," and it is a formidable one, because when one tries to "reason" with those who dose the children, it is invariably useless. They may apparently have all confidence in you, and hear your reproofs with good grace, but no sooner do you leave the house than that mother or sister finds the bottle on her cupboard shelf, or on the shelf at the drug store, and gives a dose to the child. She may not intend to be a hypocrite, or to array herself in opposition to you; possibly not, but she knows, and you know, that the seductive opiate relieves, and it is relief that is her object and aim.

As to "after-effects" and "reaction," I have the most positive opinions. The effects of the repeated sedations are grievous. As Dr. Crothers says: "The cell functions and growths

are slowed up, retarded, and finally changed." I have noticed it, over and over again, and I can show to-day, boys and girls—especially girls—whose instability of health is traceable to those miserable drags.

Recognizing this perversion of cell growths and functions, and despairing of having my arguments accommodated with a hearing, I felt it incumbent on me to antagonize these effects, and it is my custom to seize every opportunity to show that the "drops" have done mischief. This is no difficult task, as these children are always complaining of ails and ills. I prescribe two drops of eucalyptol in milk three times a day, and it is good to be able to say that it promotes normal cell nutrition and antagonizes the disaffection of functions. It is my experience that this works admirably, not alone in affording temporary relief, but, moreover, in ensuring permanent results. This is a matter of prophylaxis altogether valuable and interesting, and one to be heartily commended. I am also using the eucalyptol for these youths out of my own clientele, and for others, who, I make no doubt, owe ill health or lessened vigor to the same cause. The results are uniformly excellent.

It is not a pleasant matter to contemplate, but I submit that this "opiumism" of infancy is largely responsible for the mental perverts, the inebriety, and the lack of mental, physical, and moral stamina, so largely in evidence.

Sincerely yours,

GIFFARD KNOX, M.D.

The New York Pathological Institute.

HARTFORD, CONN., May 21, 1900.

To the Editor:—The ways of politicians in New York are always mysterious and startling. The unknown is always happening, particularly to institutions that are not well founded in public opinion. In the early sixties an inebriate asylum was founded at Binghamton. Later, the state took charge of it, and after a varied career under "boss rule" it was finally turned into an insane asylum. A little farther on in the history the reformatory at Elmira was founded and conducted on most advanced lines. Then the same old battle concentrated about it and tremendous efforts were made to destroy it, and change it to some other work. Fortunately, this failed. The epileptic asylum has been the center of the controversy, and were it not for very wise management a political battle would have begun to change and break it up before this.

Now comes similar storm and effort to break up the pathologic institute. For reasons unknown and inconceivable, the superintendents of the state hospitals and the politicians are in great doubt as to the value of the work there. They urge abolishment of the work or changing it in some unknown way to the interest of the tax-payers, etc. This institute, inaugurated for the purpose of utilizing and studying the mass of material gathered, is practically a laboratory for the higher study of psychopathy, and is the first one organized in this country. Already its reports give promise of researches of the most practical character on the causes and condition of insanity. The five volumes of papers bearing on these higher questions are the foundations of an entirely new field of psychiatry, and in the work done there is more practical advance and more suggestive study than in the asylum literature of half a century. This institute is designed to make exhaustive studies, both microscopically and statistically, of all the phases of insanity and the various conditions which result in brain defects. This is done by trained experts who have nothing but the facts to ascertain, and have no other duties than those of scientific study. The asylum pathologists are supposed to send specimens of morbid anatomy, histories of disputed cases, and psychologic facts to this institute for final study. Matters which are not clear to the busy physicians on the staffs of these crowded hospitals are sent to this institute for study at leisure. There is in this an almost infinite field of most practical scientific work of the greatest value to every citizen of the state as well as to those of other states.

There is something startling in the adverse feeling of the superintendents of the various asylums to this work, and it is incomprehensible why they should not be its warmest ad-

mirers and seek in every way to continue a work which makes their own more and more accurate and scientific. It has been a matter of surprise to visitors at the older insane asylums of the country to find such an enormous accumulation of clinical histories of patients piled away in rooms as so much lumber. The staff has no time and perhaps little ability to study or analyze these records and make practical use of them. An institute could utilize these facts and show their practical meaning as no asylum could. There must be some central head with time and skill to study facts of this character. New York State has taken the lead with the warmest endorsement of every scientific man, and the present effort to break up the institute or narrow and change its work would be a calamity to science. We can not believe that the friends of psychopathy will permit such a change. The very absence of central scientific laboratory work has much to do with the confusion and ignorance of many phases of practical medicine. The whole trend of modern medicine is to centralize and specialize the study of all its various phases so that it can become more and more a science. The threatened destruction of the New York Pathological Institute is one of the perils which we hope may be avoided by wiser counsel and broader views.

T. D. CROTEERS, M.D.

Deaths and Obituaries.

EDWARD ORAM SHAKESPEARE, M.D., Philadelphia, died suddenly, June 1, from chronic cardiac trouble. He was born of distinguished lineage in New Castle County, Delaware, May 19, 1846. He was graduated from Dickinson College in 1867, and from the Medical Department of the University of Pennsylvania two years later. He began the practice of his profession at Dover, Del., but in 1874 removed to Philadelphia, where later he was appointed lecturer on operative ophthalmic surgery in the University of Pennsylvania. He was, in 1885, sent as the representative of the Federal Government to Spain and other European countries in which cholera was prevalent, to investigate the cause, prevention, and cure of that disease. He spent several months abroad in the study of the subject, and made a report to Congress. During the war with Spain he was appointed a brigade surgeon, with the rank of major of volunteers, and at the time of his death he was acting as a member of the commission attached to the office of the Surgeon-General at Washington to investigate the causes of typhoid fever in the United States Army. He was a member of many scientific societies, including the Delaware Medical Society, the Northern Medical Society, the Pathological Society of Philadelphia, and the Philadelphia County Medical Society. He contributed to *The American Journal of Medical Sciences* for January, 1870, a paper on "A New Ophthalmoscope and Ophthalmometer, Devised for Clinical Use and for Physiologic and Therapeutic Investigation on Men and Animals," which he had invented.

JAMES T. WHITTAKER, M.D., professor of theory and practice in the Ohio Medical College, died June 5, at his home in Cincinnati, of recurrent intestinal carcinoma. He graduated from Oxford University in 1863, and served for a time in the Union Army as a private. After this service he resumed the study of medicine, but again left college to accept an assistant surgeonship in the Navy, serving on the *Cumberland*. At the close of the war he entered the medical department of the University of Pennsylvania, where he graduated in 1866. He made two trips to Europe, enjoying the advantage of personal instruction from Dr. Robert Koch. He has served on the medical staff of the Cincinnati Hospital and at the time of his death occupied a similar position at the Good Samaritan.

W. H. I. O'MALLEY, M.D., assistant surgeon of the Cal. Twelfth Inf., died in San Francisco, May 24, aged 38 years. He was graduated from the University of California in the department of liberal arts and medicine. In 1898, he became a contract surgeon and was sent to Honolulu, where he remained until he was transferred to the Philippines. He was injured in December and again in February, and returned to San Francisco on the transport *Sherman*, April 25.

L. J. JONES, M.D., Wichita, Kan., died in Galena, Kan.,

May 20. He was born in Kentucky in 1830. He was a graduate of the Transylvania University and of Louisville Medical College. During the Civil War he was for over three years surgeon on the Union side, being connected with the Sixteenth Kentucky Infantry, and in charge of the officers' hospital of the Twenty-third army corps.

GARDNER C. PIERCE, M.D., Ashland, Mass., died May 18, in a hospital, where he had undergone an operation. He was graduated from Harvard University Medical School in 1866, and for over thirty years had practiced in Ashland. He was a member of the Massachusetts Medical Society, and a former president of the South Middlesex Medical Association.

WILLIAM H. CHAMBERLAIN, M.D., died May 21, at his home in Oneida, N. Y. He studied at the University of Michigan two years, then entered the New York Medical College, from which institution he was graduated in 1876. He practiced twenty-one years in Oneida, and three in Utica.

HORACE B. SCOTT, M.D., Jefferson, a surgeon in the U. S. N., died at the home of his father in Wallingford, Conn., May 29, aged 42 years. He was a graduate of Trinity College, Conn., class of 1878, and served in the navy until his health failed.

SAMUEL H. KEEDY, M.D., a native of Washington County, Md., and ex-United States Consul to Rheims and Grenoble, France, died at St. Agnes' Hospital, Baltimore, May 14, of heart disease. During the Civil War he was an assistant surgeon in the Federal Army.

H. C. CHAFFEE, M.D., Tolono, Ill., died May 21, aged 84 years. He was graduated from the Albany Medical College in 1854. After two years of study in Paris, he located in Tolono, where he has since lived.

JOSEPH H. LITTLE, M.D., Washington, Pa., died May 16, aged 65 years. He was graduated from Washington College in 1855, and from the medical department of the University of Pennsylvania in 1859.

SAMUEL C. MAXWELL, M.D., Duluth, Minn., died May 13. He was born in Crawfordsville, Ind., in 1840, and was graduated from Rush Medical College in 1866.

RESOLUTIONS ON DEATH OF DR. WOODRUFF.

At a meeting of the Columbus Academy of Medicine, held May 26, the following resolutions were passed. (An obituary of Dr. Woodruff appeared in last week's JOURNAL):

WHEREAS, Dr. Elmer W. Woodruff, in the early prime of life and rising usefulness, has, by the providence of God, been removed from our number:

Resolved, That we recognize in Dr. Woodruff an honorable and conscientious co-worker, devoted to the highest interests of his profession, as a practitioner and as a teacher (in Starling Medical College).

Resolved, That in his death, the Academy has sustained the loss of an active and useful member, whose high professional honor and exemplary life are worthy of remembrance.

Resolved, That these resolutions be made a part of the records of the Academy, published in the columns of the *Columbus Medical Journal*, and the *JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*, and that a copy be transmitted to his family with the profound sympathy of the members of the Academy.

Committee

J. U. BARNHILL,
J. F. BALDWIN,
W. D. DEUSCHLE.

ANDREW TIMBERMAN,

President.

A. M. STEINFELD,

Secretary.

New Instrument.

Normal Salt Transfusion Apparatus.

BY CARL HERMAN ANDERSEN, M.D.
CHICAGO.

In common with other workers, I have felt the need of a transfusion apparatus that would accurately sustain an even temperature and maintain a regulated flow, and for this purpose have devised one, which I here present.

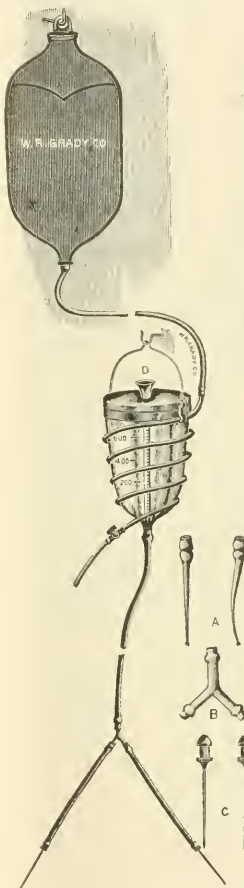
A. Glass tubes for intravenous transfusion. It will be noted that they have bulbous ends to avoid injuring the vein when introduced. B. Joint. C. Needles for subcutaneous transfusion. D. Perforation in the lid for sterilized cotton. E. Thermometer. F. Cotton diaphragm. G. Three-quart enema bag. H. Waste pipe.

It consists of a glass jar capable of holding 1000 c.c., as is indicated on its side. A thermometer is suspended in its center. It has a lid with a perforated center, into which sterile cotton is placed to filter the air; a cotton diaphragm inside the jar filters the salt solution. A rubber tube attached to its lower end carries off the solution, and there is a metal coil of tubing entwining the jar, through which is circulated hot water coming from a rubber bag suspended above it, or from an ordinary hot-water faucet. At the lower end of the coil is a stop-cock, to which is attached a rubber tube to carry off the hot water which circulates in the coil.

If this apparatus is used in a hospital, it can very readily be attached to the hot-water faucet, or to the hot-water boiler, and the water flowing through the glass will keep the saline solution at an even temperature. If it is used in private practice, all that is necessary is to fill the rubber bag, which holds three quarts of water, and allow it to flow through as fast as it can be carried off through the waste

pipe. The opening in the latter is made so that it will take about thirty minutes to carry off the three quarts of water, and as that is as long as it takes to administer an intravenous or subcutaneous transfusion, it answers all purposes of a stationary boiler.

When we consider that intravenous or subcutaneous infusion of normal salt solution is performed only in cases where there has been considerable hemorrhage, or where the patient is in a critical condition, it can readily be seen that if a solution is used which is below the normal blood heat, it must do harm, as, instead of decreasing the shock, it will increase it. It must also be remembered that in ordinary transfusion apparatus, that is, the kind in general use, the solution will lose from 10 to 14 degrees in heat, and as it flows through the rubber tube it loses from .5 to .75 degree for every foot. From this, it can readily be seen that the last half of the transfusion is done with water much below the normal blood heat.



French Medical Sickness Insurance Society.—A society was organized among the physicians of the department of the Seine fourteen years ago, for the purpose of securing a fund to pay an indemnity of \$2 a day to members in case of sickness. The reserve fund is now \$60,000, and the immense services the society has rendered are an eloquent plea for further organization among members of the profession. It has been predicted that the twentieth is to be a century of association, and an editorial in the *Presse Méd.* of April 25 remarks that the medical profession has more to gain from organization than has any other, that it would "thus transform the weakness of each into the strength of all, as an association has the paradoxical virtue of being stronger than the sum total of its component parts."

Miscellany.

Committee of Revision of the United States Pharmacopœia.—The eighth decennial convention for revising the United States Pharmacopœia elected the following committee for revision, the medical or pharmaceutical bodies represented being in parentheses: Charles Rice (chemist, public drug department), New York City, chairman; Joseph J. Remington (Phila. Coll. of Pharm.), Philadelphia, vice-chairman; Reynold W. Wilcox (Med. Soc. State of N. Y.), New York City; Edward H. Squibb (N. Y. Academy of Med.), Brooklyn, N. Y.; Virgil F. Coblentz (N. Y. Coll. of Pharm.), New York City; Willis G. Gregory (Buffalo Coll. of Pharm.), Buffalo, N. Y.; Wilbur L. Scoville (Mass. Coll. of Pharm.), Boston; Hobart A. Hare (Am. Med. Assn.), Philadelphia; John Marshall (Univ. of Pa., Med. Dept.), Philadelphia; Samuel P. Sadtler (Phila. Coll. of Pharm.), Philadelphia; Henry Kraemer (Phila. Coll. of Pharm.), Philadelphia; John J. Abel (Johns Hopkins Univ., Med. Dept.), Baltimore, Md.; Charles Caspari (Md. Coll. of Pharm.), Baltimore, Md.; Alfred R. L. Dohme (Am. Pharm. Assn.), Baltimore, Md.; George F. Payne (Atlanta Coll. of Pharm. and Sur.), Atlanta, Ga.; Albert B. Lyons (Mich. Pharm. Assn.), Detroit, Mich.; Alonzo B. Stevens (Mich. Univ., Pharm. School), Ann Arbor, Mich.; Nathan S. Davis, Jr. (N. W. Univ., Med. School), Chicago; Walter S. Haines (Rush Medical College), Chicago; Osear Oldberg (N. W. Univ., Pharm. School), Chicago; Carl S. N. Hallberg (Chicago Coll. of Pharm., Univ. of Ills.), Chicago; John M. Good (St. Louis Coll. of Pharm.), St. Louis, Mo.; C. Lewis Diehl (Louisville Coll. of Pharm.), Louisville, Ky.; Lueius E. Sayre (Kan. Univ., Pharm. School), Lawrence, Kan.; Edward Kremers (Wis. Univ., Pharm. School), Madison, Wis.; Horatio C. Wood (Univ. of Pa.), president of the Pharmacopœial convention—*ex-officio*.

Scope of the Pharmacopœia.—The Committee of Revision is authorized to admit into the pharmacopœia any products of Nature of known origin; also any synthesized product of definite composition which is in common use by the medical profession, the identity, purity, or strength of which can be determined. No compound or mixture shall be introduced if the composition or mode of manufacture thereof be kept secret, or if it be controlled by unlimited proprietary or patent rights.

Doses.—After each pharmacopœial article—drug, chemical, or preparation—which is used or likely to be used internally or hypodermically, the Committee is instructed to state the average approximate—but neither a minimum nor a maximum—dose for adults, and where deemed advisable, also for children. It is to be distinctly understood that neither this convention nor the Committee of Revision created by it intends to have these doses regarded as obligatory on the physician or as forbidding him to exceed them whenever in his judgment this seems advisable. The committee is directed to make a distinct declaration to this effect in some prominent place in the new pharmacopœia, the metric system to be used and the equivalents to be given, parenthetically in customary weights and measures, in approximate equivalents.

Nomenclature.—It is recommended that changes in the titles of articles at present official be made only for the purpose of insuring greater accuracy, or safety in dispensing. In the case of newly-admitted articles, it is recommended that such titles be chosen as are in harmony with general usage and convenient for prescribing; but in the case of chemicals of a definite composition a scientific name should be given at least as a synonym.

Assay Processes.—The Committee is instructed to append assay processes to as many of the potent drugs and preparations made therefrom as may be found possible, provided that the processes of assay are reasonably simple—both as to methods and apparatus required—and lead to uniform results in different hands. As regards the products of such assays, tests of identity and purity should be added wherever feasible. Physiologic tests for determining strength should not be introduced by the Committee.

Purity and Strength of Pharmacopœial Articles.—The Committee is instructed to revise, as carefully as possible, the limits of purity and strength of the pharmacopœial chemicals and preparations for which limiting tests are given. While no concession should be made toward a diminution of medicinal value, allowance should be made for unavoidable, innocuous impurities or variations due to the particular source or mode of preparation, or to the keeping qualities of the several articles. In

the case of natural products, the limits of admissible impurities should be placed high enough to exclude any that would not be accepted by other countries. Regarding the strength of diluted acids, tinctures, and galenic preparations in general, it is recommended that the Committee keep in view the desirability of at least a gradual approach upon mutual concessions toward uniformity with similar preparations of other pharmacopœias, particularly in the case of potent remedies which are in general use among civilized nations.

General Formulas.—It is recommended that general formulas be introduced, as far as the particular nature of the several drugs will permit, for fluid extracts, tinctures, and such other preparations as are made by identical processes, and that the general formula to be followed in each case be merely indicated by reference.

Weights and Measures.—The Committee is instructed to retain the metric system of weights and measures adopted in the seventh decennial revision.

Precedents.—In all matters not specially provided for in these "General Principles," the rules established for previous revisions if there are any, should be followed.

Supplements.—The Committee of Revision is authorized to prepare a supplement whenever such action may be deemed desirable or practicable.

An Army Hospital in the Philippines.—Major S. C. Mills, inspector-general, U. S. A., made an inspection of the Santa Mesa Hospital, March 13, the report of which has just been received by the U. S. War Department. It is interesting, as giving a full description of the hospital and its management from the point of view of one who is a soldier but not a medical officer. The hospital is situated three miles east by north of the Palace, City of Manila, on the Calle Santa Mesa. A blue print, without description, shows the arrangement of the buildings, which were erected originally as barracks, but were turned over to the medical department on Nov. 4, 1899. The first patient was received November 10, following. The wards, six long pavilions, are arranged, three facing the other three, on a street or enclosure 200 feet wide. This street is prolonged at one end by three sets of nurses' quarters on one side, and on the other three buildings—an office and two quarters for hospital men. Officers' quarters close in one of the ends, and storage buildings and stables the other. The length of the enclosure thus formed is about 500 yards; about midway of its length is the dispensary building, and near the stable is the guard-house. All these buildings are of native construction, the frames being bamboo and the sides and roof, nipa; while the partition walls do not reach the roof. The floors are of split bamboo and well raised from the ground. There are covered verandas along the front and ends of each building, and the result is well-ventilated apartments which are probably as cool as can be constructed in that climate. Each ward building is nearly 300 feet long, and is divided into two sections by a room in the center for the wardmaster's daily supplies and dispensaries. A mess-room and kitchen are connected with each ward building by covered ways in the rear, and beyond these each has a separate building for its sinks, with a bath-house, containing four showers. This arrangement of the buildings makes each ward complete in itself, with its mess-room, kitchen, closets and bath-room attached. The capacity of the hospital is 650 beds; at present five wards are occupied, three medical, one surgical and medical, and one venereal, the last being used as a lock ward for venereal cases from the other military hospitals in the City of Manila.

Since the hospital was opened, Nov. 10, 1899, the number of cases treated has been: regulars, 840; volunteers, 1372; total, 2212; the number of deaths, 24, of which 6 were from dysentery, 5 from diarrhœa, 3 each from typhoid and malarial fevers, 2 from injury, 1 from gastric disorder and 4 from other causes. The number present at the time of inspection was 289, of which 111 were venereal, 60 malarial fever, 30 dysentery, 11 diarrhœa, 15 dengue, and 7 surgical cases. No case of typhoid fever was present.

The clothing of patients is taken from them on entry and stored under lock in a clothing room, while the pajamas, hats, shoes and stockings are issued for use. Pajamas are thus, so to speak, the uniform of the hospital patients, and this has the advantage of making a patient always recognizable, and he can not, unknown, cross the line of sentinels. The bunks

are of iron with woven-wire mattresses; and in each ward there are on duty during the day two wardmasters, two female nurses, and six hospital corps men; during the night, four attendants. Hospital corps men work in twelve-hour shifts, and female nurses in eight. The patients are fed from the regulation allowance of forty cents a patient a day. The low price of beef permits this sum to be just sufficient. Full, light, and special diets are prepared in the kitchen of each ward, and in each is a chief cook, who is a hospital corps man, two Chinese cooks and four Chinese mess-room attendants. The kitchens were found to be neat, clean and well supplied; and the food well-prepared and served. Supplies from the subsistence-department are good and furnished promptly; bread is purchased in the city and is of excellent quality; ice is furnished by the medical department; water is from the city mains, but is filtered before use for drinking purposes. The food for the sick is inspected by the ward surgeons, the nurses and the medical officer of the day. The inspector cites bills of fare for each ward from March 5 to 11, inclusive. The March 5 bill is submitted as an illustration.

Breakfast.

<p>FULL DIET.</p> <p>Dry corn beef hash. Corn bread with molasses. Boiled rice with milk and sugar. Bread, butter, coffee.</p>	<p>SPECIAL DIET.</p> <p>Poached eggs on toast. Boiled rice with milk and sugar. Coffee.</p>
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Dinner.

<p>Beef soup. Roast beef. Brown gravy, mashed potatoes. Bread pudding with sauce. Stewed apples, bread, tea.</p>	<p>Beef soup. Bread pudding. Canned apples. Bread and tea.</p>
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Supper.

<p>Hamburger steak. Boiled potatoes. Canned peas, stewed. Stewed prunes. Bread and tea.</p>	<p>Mock turtle soup. Dry toast. Soda crackers. Stewed apples. Bread and tea.</p>
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The dispensary is in excellent condition. There is a good operating-room, with the necessary instruments and appliances, and also a chemical and bacteriologic laboratory. The surgeon in charge makes a stated inspection of the entire hospital once a week; the officer of the day inspects twice daily, in the morning and after taps; ward surgeons make regular rounds twice a day and such other visits to particular patients as are required. The books are correctly and neatly kept. There is a hospital fund properly accounted for; balance verified at inspection, \$100.10. There is a system of calls similar to that of military posts. Proper precautions are taken to guard against fire. Laundry work for the hospital is done in the city on contract at 2 cents, gold, per piece.

The general condition of the hospital is extremely good. The hospital is clean, comfortable, well-equipped and well run. An excellent system of record of the admission, diagnosis, treatment, transfer or other disposition of each patient, has been devised; and the history of each case is complete. Major E. B. Moseley, surgeon, U. S. A., has been in charge of this hospital since its organization, and the condition of the hospital now is a great tribute to his professional and executive skill and ability.

BOOKS AND PAMPHLETS RECEIVED.

Acknowledgement of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

BOOKS.

A TREATISE ON NASAL SUPPURATION; OF SUPPURATIVE DISEASES OF THE NOSE AND THE ACCESSORY SINUSES. By Dr. Ludwig Grunwald. Translated from the Second German Edition, by William Lamb, M.D., M.C., M.R.C.P. With eight illustrations in the text, two plates, and one table. Cloth, Pp. 325. Price \$3. New York: Wm. Wood & Co. 1900.

INTERNATIONAL CLINICS. A Quarterly of Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose and Throat, and other Topics of Interest to Students and Practitioners. By Leading Members of the

Medical Profession Throughout the World. Edited by Henry W. Cartell, A.M., M.D., Philadelphia; with the collaboration of John Ashburn, Jr., M.D., L.D.S., and Charles H. Reed, M.D., Philadelphia; James T. Whitaker, M.D., LL.D., Cincinnati; with regular correspondents in Montreal, London, Paris, Leipzig, and Vienna. Volume I, Tenth Series, 1900. Cloth, Pp. 315. Price \$2.75. Philadelphia: J. B. Lippincott Co. 1900.

ANNUAL OF ECLECTIC MEDICINE AND SURGERY Edited by John V. Stevens, M.D. Vol. VIII, Embracing the Papers and Proceedings of the Various State Eclectic Medical Societies for the years 1897 and 1898. Cloth, Pp. 538. Price \$2. Cincinnati, Ohio: The Scudder Brothers Co. 1900.

TWENTY-FIFTH ANNUAL REPORT OF THE SECRETARY OF THE STATE BOARD OF HEALTH OF THE STATE OF MICHIGAN for the fiscal year ending June 30, 1899. Cloth, Pp. 600. Lansing, Mich.: Robert Smith Printing Co. 1899.

PROCEEDINGS AND ADDRESSES AT A SANITARY CONVENTION HELD AT TRAVERSE CITY, MICHIGAN, AUG. 22 AND 23, 1899. Under the direction of a Committee of the State Board of Health and a Committee of Citizens of Traverse City. (Submitted to the Report of the Michigan State Board of Health for the Year 1899.) Paper. Pp. 105. Lansing, Mich.: Robert Smith Printing Co. 1900.

REPORT OF THE TRUSTEES OF THE NEWBERY LIBRARY. For the year 1899. Paper, Pp. 64. Chicago: Hollister Bros. 1900.

CITY OF FALL RIVER, MASS. REPORT OF THE BOARD OF HEALTH for the year ending Dec. 3, 1899. Paper, Pp. 70. Fall River, Mass.: J. H. Prudden & Co. 1900.

THE OPHTHALMIC PATIENT. A Manual of Therapeutics and Nursing in Eye Diseases. By Percy Friedenberg, M.D., Ophthalmic Surgeon to the Randall's Island and Infants' Hospitals. Cloth, Pp. 310. Price \$1.50. New York: The Macmillan Co. 1900.

A TEXT-BOOK OF PRACTICAL THERAPEUTICS: With Especial Reference to the Application of Remedial Measures to Disease and Their Employment Upon a Rational Basis. By Hobart Amory Thayer, M.D., Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. With Special Chapters by Drs. G. E. deSchweinitz, Edward Martin and Barton C. Hirst. New (8th) Edition. In One Octavo Volume of 796 pages, with 37 Engravings and 4 Colored Plates. Cloth, 4s. Leather, 8s. net. Philadelphia and New York: Lea Brothers & Co.

TEXT-BOOK OF MEDICAL TREATMENT OF DISEASES AND SYMPTOMS, for Use of Students and Practitioners of Medicine. By Nestor Thayer, D. D., F.R.C.P., Professor of Principles of Medicine, Harvard College, London. Adapted to the U. S. Pharmacopoeia by E. Quin Thornton, M.D., of Jefferson Medical College, Philadelphia. Octavo. Pp. 624. Just Ready. Cloth, 84 net. Philadelphia and New York: Lea Brothers & Co.

CLINICAL EXAMINATION OF URINE WITH AN ATLAS OF URINARY DEPOSITS. Including Forty-one Original Plates, Mostly Colored. By Lindley Scott, M.A., M.D. Cloth, Price, \$5. Philadelphia: P. Blakiston's Son & Co. 1900.

PRACTICAL TREATISE ON THE SEXUAL DISORDERS OF THE MALE AND FEMALE. New (2d) Edition. By Robert W. Taylor M.D., Clinical Professor of Venereal Diseases in the College of Physicians and Surgeons, New York. Octavo. Pp. 455, with 91 Illustrations and 13 Plates in Colors and Monochrome. Cloth, 83 net. Philadelphia and New York: Lea Brothers & Co.

TRANSACTIONS OF THE NEW YORK STATE MEDICAL ASSOCIATION for the Year 1899. Volume XVI. Edited for the Association by M. C. O'Brien, M.D., of New York County. Cloth, Pp. 887. New York: Published by the Association.

DISEASES OF THE INTESTINES. A Text-Book for Practitioners and Students of Medicine. By Max Einhorn, M.D., Professor of Medicine at the New York Post-graduate Medical School and Hospital. Cloth, Pp. 390. Price, \$3. New York: Wm. Wood & Co. 1900.

PAMPHLETS.

TREATMENT OF VENEREAL ULCERS. N. E. Atonstam, M.D., Ph.D. Reprinted from *Medical Age*.

SIX CASES OF CHRONIC HEART DISEASE SUCCESSFULLY TREATED BY THE SCHOTT METHOD. Victor Neesed, M.D. Reprinted from *N. Y. Med. Jour.*

NON-MALIGNANT GASTRIC AND DUODENAL ULCERS: WITH ILLUSTRATIVE CASES. Thomas Satterthwaite, M.D., New York. Reprinted from *Med. Record*.

TRADE PAMPHLETS.

MONOGRAPHS FROM RESEARCH LABORATORY OF SHEEP AND DOGME. No. 1. The History, Pharmacognosy and Chemistry of Cascara Sagrada. By Alfred R. L. Dohme, Ph.D., and Herman Engelhardt, Ph.D. Baltimore, Md.

A CATALOGUE OF INSTRUMENTS USED IN THE PRACTICE OF LARYNGOLOGY, RHINOLOGY AND OTORHOLOGY. Manufactured by Mayer & Meltzer, London, England.

ST JOSEPH SANITARIUM AND BATH HOUSE, AND THE CURATIVE WATERS OF MT. CLEMENS, MICH.

The Public Service.

NAVY CHANGES.

Changes in the Medical Corps of the Navy for the week ending May 19, 1900.

Medical Director T. C. Walton, detached from duty at the naval laboratory, Brooklyn, N. Y., and from other duty May 20, and ordered home to wait orders and retirement May 31, at 62 years of age.

P. A. Surgeon W. C. Braisted, orders to the *Mayflower* revoked. When the *Detroit* is placed out of commission detached and ordered home and directed to hold himself in readiness for orders to sea.

P. A. Surgeon G. D. Costigan, detached from the Boston Navy Yard, May 20, and ordered to temporary duty on the *Pensacola* and then to the Asiatic Station via the *Gaetic*. Assistant Surgeon E. Davis, detached from the naval hospital, Brooklyn, N. Y., May 20, and ordered to temporary duty on the *Pensacola* and then to the Asiatic Station via the *Gaetic*.

Assistant Surgeon J. T. Kennedy, detached from the *Independence*, June 4, and ordered to the Asiatic Station via the *Gaetic*. Assistant Surgeon T. M. Lippett, detached from the *Oregon*, and ordered to the *Acwarc*. Pharmacist S. W. Douglas, detached from the *Wabash* and or-

ferred to the Key West naval station for such duty as may be assigned as relief of Pharmacist I. N. Hurd.

Pharmacist I. N. Hurd, upon reporting of relief, detached from the Key West naval station and ordered to the *Wabash*.

MARINE-HOSPITAL CHANGES.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital Service for the seven days ending May 24, 1900.

Surgeon R. M. Woodward, to proceed to Porto Rico on special temporary duty.

P. A. Surgeon J. M. Eager, relieved from duty at Cincinnati, Ohio, and directed to proceed to Norfolk, Virginia, and assume command of the service.

Assistant Surgeon John McMullen, Bureau order of April 2, 1900, directing Assistant Surgeon McMullen to assume command of the Tortugas Quarantine, temporarily revoked, and directed to report to medical officer in command of that station for duty.

Assistant Surgeon John W. Kerr, Bureau order of May 7, 1900, directing Assistant Surgeon Kerr to proceed to Hongkong, China, for duty, suspended, and directed to report to medical officer in command, San Francisco Quarantine (Cal.) for temporary duty.

Assistant Surgeon J. W. Scherschewsky, relieved from duty at Havana, Cuba, and directed to proceed to New Orleans, La., and report to medical officer in command for duty and assignment to quarters.

Assistant Surgeon J. W. Amesse, Bureau order of May 7, 1900, directing Assistant Surgeon Amesse to proceed to Honolulu, Hawaii, for temporary duty, suspended, and directed to report to medical officer in command, San Francisco Quarantine (Cal.) for temporary duty.

Assistant Surgeon R. L. Wilson, to report to medical officer in command San Francisco Quarantine (Cal.) for duty.

Assistant Surgeon T. D. Berry, upon being relieved from duty at New Orleans, La., to proceed to Havana, Cuba, and report to Surgeon H. R. Carter for duty.

Assistant Surgeon R. H. Earle, relieved from duty at Detroit, Michigan, and directed to proceed to the San Francisco Quarantine (Cal.) and report to the medical officer in command for duty.

Assistant Surgeon B. J. Lloyd, relieved from duty at Chicago, Illinois, and directed to proceed to the San Francisco Quarantine (Cal.) and report to the medical officer in command for duty.

Acting Assistant Surgeon B. W. Goldsborough, granted leave of absence for two days.

Acting Assistant Surgeon J. W. Stevens, to assume temporary charge of the service at Cincinnati, Ohio, vice P. A. Surgeon J. M. Eager, relieved.

Acting Assistant Surgeon W. O. Wetmore, relieved from duty at the Immigration Depot, New York, N. Y., and directed to report to the medical officer in command, Cape Charles Quarantine (Va.) for duty and assignment to quarters.

Hospital Steward A. M. Roabrig, to report to medical officer in command, San Francisco Quarantine (Cal.) for special temporary duty.

Hospital Steward S. W. Richardson, to report at Washington, D. C., for special temporary duty.

HEALTH REPORTS.

The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine-Hospital Service, during the week ended June 2, 1900.

District of Columbia: Washington, May 12-19, 5 cases, 1 death; Colorado: Archullita Co., May 19, 2 cases; Arapahoe Co., May 19, 2 cases; Boulder Co., May 19, 1 case; Otero Co., May 19, 3 cases; Pueblo Co., May 19, 2 cases; San Miguel Co., May 19, 1 case.

Illinois: Cairo, May 12-26, 4 cases.

Indiana: Evansville, May 19-26, 1 case; Indianapolis, May 12-19, 7 cases.

Kansas: Wichita, May 19-26, 7 cases.

Kentucky: Covington, May 19-26, 8 cases.

Louisiana: New Orleans, May 12-26, 78 cases, 22 deaths; Shreveport, May 19-26, 3 cases.

Massachusetts: Fall River, May 19-26, 1 case; Lowell, May 19-26, 2 cases.

Michigan: Detroit, May 12-19, 3 cases; Grand Rapids, May 12-19, 3 cases, 1 death.

Minnesota: Minneapolis, April 28 to May 5, 54 cases, 3 deaths.

New Mexico: Capitan, May 7-21, 11 cases.

New York: New York, May 19-26, 4 cases.

Ohio: Cleveland, May 19-26, 32 cases.

Oregon: Portland, May 17, 1 case.

South Carolina: Greenville, May 12-19, 2 cases.

Ttch.: Salt Lake City, May 12-26, 6 cases.

Virginia: Petersburg, May 19, 2 cases; St. Croix Co., May 22, 2 cases.

Washington: Tacoma, May 12-19, 1 case.

Wisconsin: Door Co., May 22, 8 cases; Douglas Co., May 22, 8 cases; Eau Claire Co., May 22, 10 cases; Kewaunee Co., May 22, 6 cases; Playmouth Co., May 22, 1 case; St. Croix Co., May 22, 70 cases, 1 death; Waupaca Co., May 22, 3 cases, 1 death.

Wyoming: Cheyenne, May 19, 3 cases; Rock Creek, May 19, 2 cases; Sweetwater Co., May 19, 18 cases; Green River, May 19, 18 cases; Evanston, May 19, 6 cases; Aspen, May 19, 1 case; Tunnel, May 19, 13 cases.

SMALLPOX—FOREIGN.

Austria: Prague, April 28 to May 12, 9 cases.

Belgium: Antwerp, May 5-12, 6 cases.

Brazil: Rio de Janeiro, March 31 to April 13, 14 cases, 11 deaths.

Canada: Ontario—Collingwood, May 16, 1 case; Sault Ste Marie, May 16, prevalent; Manitoba—Winnipeg, May 12-26, 16 cases, 3 deaths.

China: Hongkong, April 7-21, 1 case, 1 death.

Egypt: Cairo, April 1 to May 6, 55 deaths.

England: Liverpool, May 5-12, 6 cases; Death: London, April 24 to May 12, 13 cases, 1 death; Southampton, May 12-19, 1 case.

France: Lyons, April 21 to May 12, 8 deaths.

Germany: May 5-12, 2 cases.

Gibraltar: April 28 to May 13, 4 cases.

Greece: Athens, May 5-12, 3 cases, 4 deaths.

India: Bombay, April 17 to May 1, 101 deaths; Calcutta, March 24 to April 7, 102 deaths; Kurrachee, April 15-20, 45 cases, 19 deaths; Madras, April 7-27, 2 deaths.

Italy: Leghorn, May 5-12, 1 case, 1 death.

Mexico: Chihuahua, May 12-19, 1 death; Vera Cruz, May 12-19, 4 cases, 4 deaths.

Russia: Odessa, April 28 to May 12, 15 cases, 4 deaths; St. Petersburg, April 28 to May 5, 15 cases, 3 deaths; Warsaw, April 22 to May 5, 6 deaths.

Scotland: Glasgow, May 11-18, 27 cases, 1 death.

Spain: Corunna, May 5-12, 1 death; Madrid, April 21 to May 5, 10 deaths; Valencia, May 12-19, 1 case.

Straits settlements: Singapore, April 1-21, 11 deaths.

YELLOW FEVER.

Brazil: Rio de Janeiro, March 31 to April 13, 47 cases, 34 deaths.

Colombia: Panama, May 15-22, 7 cases, 4 deaths.

Cuba: Cienfuegos, May 26, 5 cases, 3 deaths, at Santa Clara barracks.

CHOLERA.

India: Bombay, April 17 to May 1, 37 deaths; Calcutta, March 24 to April 7, 217 deaths; Madras, April 7-13, 1 death.

Japan: Osaka and Hiogo, April 21-28, 1 case.

PLAGUE.

China: Hongkong, April 7-21, 49 cases, 35 deaths.

India: Bombay, April 17 to May 1, 894 deaths; Calcutta, March 24-31, 1599 deaths; Kurrachee, April 16-29, 763 cases, 622 deaths.

Japan: Osaka, April 8 to May 14, 11 cases, 3 deaths; Shidzouka, May 7, 1 case.

CHANGE OF ADDRESS.

Dr. B. Agin, from 2236 to 2336 Bellefontaine St., Kansas City, Mo.

Dr. L. Andrews, from 356 Marshfield Ave. to 356 S. Hermitage Ave., Chicago, Ill.

Dr. D. W. Byers, from Woburn to 12 Rutland Square, Boston, Mass.

Dr. F. E. Bellinger, from Omaha, Neb., to Laurens, Iowa.

Dr. W. M. L. Coplin, from 1419 S. Broad St., Philadelphia, to Grassland, W. Va.

Dr. R. F. Currie, from Galveston to Lott, Texas.

Dr. H. S. Chandler, from Woodward, O. T., to Glen Allen, Mo.

Dr. M. C. Cornelius, from 4725 to 4710 Calumet Ave., Chicago.

Dr. J. C. Campbell, from 3423 Peachtree St. to Prudential Bldg., Atlanta, Ga.

Dr. J. C. Da Costa, from 1633 Arch St. to 247 S. 13th St., Philadelphia, Pa.

Dr. J. C. Phippin, from Univ. of Va., Charlottesville, to 1015 N. Main St., Danville, Va.

Dr. K. W. Field, from 1312 Canal St., New Orleans, La., to 245 Willburt St., Dallas, Texas.

Dr. H. S. Kringer, from Chicago, Ill., to Kaylor, Pa.

Dr. P. H. Fisher, from Detroit to Coloma, Mich.

Dr. G. W. Finley, from 150 to 13416 N. Meridian St., Brazil, Ind.

Dr. M. J. Friedel, from 1228 Milwaukee Ave. to 566 N. Ashland Ave., Chicago, Ill.

Dr. W. Fraser, from 6860 to 6901 Halsted St., Chicago, Ill.

Dr. H. Forline, from Bradbury Bk. to Douglas Bk., Los Angeles, Cal.

Dr. C. J. Gibson, from care Maltine Co. to 227 N. Central Ave., Austin, Chicago.

Dr. W. A. Gillespie, from 1708 to 1204 Canal St., New Orleans, La.

Dr. H. F. Goodwin, from 531 W. Adams St. to 511 Ashland Bou., Chicago, Ill.

Dr. E. S. Goodhue, from 1514 N. 20th St., Los Angeles, to Piru City, Cal.

Dr. H. C. Homer, from 2301 Indiana Ave. to 2515 Wabash Ave., Chicago, Ill.

Dr. R. S. Jackson, Galveston to Double Bayou, Texas.

Dr. T. T. Jacobson, from The Laurel, Cleveland to Ravenna, Ohio.

Dr. S. Jakubowski, from 535 Garfield Ave. to Cook County Hospital, Chicago, Ill.

Dr. W. A. Jaquith, from 2841 Rhodes Ave. to 5713 Drexel Ave., Chicago, Ill.

Dr. J. J. Johnson, from St. Louis, Mo., to Russell, Kansas.

Dr. E. W. King, from Mt. Pleasant, Miss., to Sachse, Texas.

Dr. W. P. Kingsbury, from 203 E. 19th St. to 335 2nd Ave., New York, N. Y.

Dr. O. E. Lindjer, from St. James to 830 22nd Ave. S., Minneapolis, Minn.

Dr. J. Lydier, from 28 E. Lawn St., Charlottesville, to 704 Pearl St., Lynchburg, Va.

Dr. B. Levenberg, from 154 Orange St. to 288 Woodland Ave., Cleveland, Ohio.

Dr. S. Lennon, from Washington D. C., to The Shelburne, Atlantic City, N. J.

Dr. R. R. Loomis, from Keesauqua, Ia., to Brock, Mo.

Dr. P. Lydston, from Hotel Luzerne to 570 Fullerston Ave., Chicago, Ill.

Dr. E. A. Lawbaugh, from 239 La Salle St. to 2754 N. Hermitage Ave., Chicago, Ill.

Dr. John Morris, from 118 E. Franklin St., Baltimore, Md., to Seelye, Ill.

Dr. S. S. Norsman, from Madison, Wis., to Cape Nome, Alaska.

Dr. D. A. Payne, from Galveston, Texas, to 866 Monroe St., Chicago.

Dr. C. Pratt, from Columbus to Bellefontaine, Ohio.

Dr. W. A. Robinson, from Amsterdam to Filley, Mo.

Dr. W. J. Roberts, from 417 S. Garrison St., St. Louis, to Jefferson City, Mo.

Dr. J. S. Simpson, from Burnside, Ky., to Onelda, Tenn.

Dr. L. C. Snell, from 1615 N. 7th St., Kansas City, to Noel, Mo.

Dr. J. Starkweather, from St. Louis, Mo., to Harris, Kans.

Dr. J. E. Strecker, from Chattanooga, Tenn., to Logansport, Ind.

Dr. J. T. McShane, from 26 E. Ohio to 229 S. Penn St., Indianapolis, Ind.

Dr. E. A. Slekels, from 1174 to 914 Galeua Ave., Dixon, Ill.

Dr. P. A. Sullivan, from 281 Jackson Boul., to 293 Monroe St., Chicago, Ill.

Dr. L. W. Shannon, from 285 Maxwell St., to Alexian Brothers Hospital, Chicago.

Dr. J. P. Sheppard, from Columbia, Tenn., to Krause Building, Little Rock, Ark.

Dr. O. W. Session, from Rox 43, Los Angeles, to Hueneen, Cal.

Dr. F. V. Watson, from Roberta to Baldwin, Wis.

Dr. J. W. White, from St. James to Senath, Mo.

Dr. C. Williams, from 716 Westlake, Los Angeles, Cal., to Hartford, Conn.

The Journal of the American Medical Association

Vol. XXXIV

CHICAGO, ILLINOIS, JUNE 16, 1900.

No. 24.

Oration.

GASTRIC HEMORRHAGE.

ORATION IN SURGERY, DELIVERED AT THE FIFTY-FIRST ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT ATLANTIC CITY, N. J., JUNE 5-8, 1900.

BY WILLIAM L. RODMAN, M.D.

Professor of the Principles of Surgery and Clinical Surgery, Medico-Chirurgical College.
PHILADELPHIA.

Permit me in the first place to express my profoundest gratitude to the ASSOCIATION for the distinguished honor conferred in placing the surgical oration for 1900 in my hands. It is with more than diffidence that I approach so great a responsibility, being keenly alive to my own shortcomings, and having for the nonce a quickened memory of the brilliant addresses made on former occasions by many of my illustrious predecessors.

Instead of reviewing the advances made in the entire field of surgery during the past year—a task which could, at best, be only cursorily done in the time that I feel warranted in occupying, I have chosen to consider the subject of hemorrhage from the stomach in its several phases, as being more likely to interest a mixed audience, such as we have, comprising specialists, general practitioners and surgeons. Furthermore, the lack of attention given the subject justifies the selection.

Gastric hemorrhage of whatever nature was, until recently, looked upon as strictly a medical affection, and was treated on the same general principles as underlie the treatment of many other internal hemorrhages. This is still true of many, indeed most, cases of gastrorrhagia, but as I shall endeavor to show, is not the case with others which are treated by a combination of medical and surgical means, and others still which should be met by prompt operative procedure.

Our purpose will be best subserved by enumerating the different varieties of gastrorrhagias, showing how they are to be diagnosed, and giving the treatment to be pursued in the more important varieties. Hemorrhage from the stomach may result from ulcer of the stomach, duodenal ulcer, gastric carcinoma, cirrhosis of the liver, vicarious menstruation, post-operative hematemesis, purpura hemorrhagica, miliary aneurysms, aneurysms of the aorta and other vessels, leukemia, typhoid, yellow and other infectious fevers, valvular disease of the heart, and various kinds of traumatism.

It will be practicable to consider only the most important and frequent causes of gastric hemorrhage.

Gastric ulcer is the most common disease of the stomach producing hemorrhage—occurring in 5 per cent. of the entire population, according to Ewald¹ and others high in authority.

Hematemesis occurs in at least 50 per cent. of all cases of gastric ulcer, and many authorities estimate it as present in 80 per cent. It is, too, fatal in 8 per cent. of the cases in which it occurs, according to the conservative estimate of Leube,² and we can not question that it is indirectly fatal in a much greater number of cases by anemia and its remote consequences.

Many authorities who might be quoted place both the frequency and mortality of hemorrhage higher than Leube does, and very few as low. Therefore, its prompt detection and proper treatment are of the greatest importance. The recognition of gastric hemorrhage resulting from ulcer is usually readily made on account of the previous diagnosis in the case; but if the patient is seen at or subsequent to the hemorrhage for the first time, its association with the other classic symptoms of ulcer, particularly pain and vomiting after eating, leave little room for doubt. While there will be pain, vomiting, and gastrorrhagia in carcinoma of the stomach, the differences furnished by the two diseases are so marked that doubtful or border-line cases will be rare.

Pain, which is common to both, is more influenced by the taking of food in ulcer, and the local tenderness on pressure is decidedly more circumscribed, so much so that the patient will point at it with the tip of his finger, rather than with the entire hand. This is a valuable sign, and is insisted upon by J. M. DaCosta.³ It is usually felt with the greatest intensity from one to two inches below the xiphoid cartilage; and directly opposite, near the heads of the last two ribs, will be found a second painful spot. The pain of ulcer is often relieved at once by emesis if it empties the stomach. This is not the case with the pain and vomiting of carcinoma.

The character and amount of the ejected blood, however, will usually give prompt and positive evidence of its source, and the cause underlying it, making it needless to question and physically examine a patient who should be kept quiet during, and for some time after, a hemorrhage. Bleeding in carcinoma is rarely so free as in ulcer; the amount of blood lost being more frequent, in small quantities, and of the characteristic coffee-ground appearance. It does not resemble pure blood, as it does in ulcer, even though mixed with food. The presence of hydrochloric acid—perhaps an excess of it, or hyperchlorhydria—in the ejected matter is as characteristic of ulcer as its presence and the presence of lactic acid are of carcinoma. Ulcer is more frequent in females under 40, whereas carcinoma occurs more commonly in men past middle life.

If an examination of the patient is allowable, the presence of a palpable tumor will be more often encountered in carcinoma than in benign ulcer, but I would emphasize the fact that a decided tumor may, and did, exist in quite a number of the forty benign ulcers thus far excised. On account of the tumor, all of the operators

thought that they were operating for malignant disease, until the microscope showed differently, and in every instance the subsequent clinical history has confirmed the verdict of the microscopist. Our distinguished president, Dr. W. W. Keen, was one of the first to do partial gastrectomy for a benign ulcer which caused quite a marked tumor through the abdominal wall. The patient recovered promptly and is still—ten years after the operation—in perfect health. Others have had the same experience, as will be seen by reference to my paper read before the American Surgical Association, May 1, reporting all operated cases up to date.

Treatment.—Formerly the treatment of hemorrhage from gastric ulcer was uniformly by ice, astringents, and opium, combined, of course, with rest. This should properly be the treatment still for the first hemorrhage in all cases; for the second possibly; but not for subsequent ones, for recurring hemorrhage, like appendicitis, will sooner or later prove fatal, and should, like that affection, be treated radically; and to carry the parallelism further, the best time to operate is between attacks. With two hemorrhages coming close together we may assume that, as in appendicitis, there will be a third attack, and if anything is to be attempted surgically it should be done when the patient is in fairly good condition, and not in the collapse of hemorrhage.

Before taking up operative procedures it might be well to refer to the treatment of gastrorrhagia by copious enemata of hot water, as advised and practiced with such happy effect seemingly by Tripier.⁵

In several cases which had resisted all the usual medicinal and dietetic treatment, Tripier secured prompt and abiding results by hot enemata repeated twice or thrice daily. The water should be injected at a temperature of 112 to 120 F. There is no doubt, he says, that the hemorrhage came from the stomach, duodenum and points high in the alimentary tract. Hot water acts reflexly.

Tripier has also found that hot enemata promptly check intestinal hemorrhage in typhoid fever, as it will bleeding from the rectum, sigmoid, and large bowel. We use hot water to check external, uterine, and other hemorrhages, and so superior is it to ice that one rarely sees the latter used. It certainly should be preferred in rectal and other intestinal hemorrhages where the water can come promptly in contact with the bleeding points. We also know that with the patient in proper position, points higher up in the alimentary canal may thus be reached, and the bleeding capillaries or arterioles influenced directly by the best of hemostatics—heat. There is also evidence to show that it acts reflexly, and may in this way control duodenal, even gastric, hemorrhage.

Plunging the hands in hot water will at times quickly arrest bleeding at the nose, as will ice applied to the head. This, surely, must be reflex. Another and good reason for using hot water per rectum in the manner advised by Tripier is, that if nothing more is done shock is combated in the best possible way, as it is easy to add salt to the water in proper proportion to make normal salt solution. Hot water should also be taken in small quantities by the stomach. It is my belief that it will be less likely to excite vomiting and more certain in its hemostatic effects than ice. Favorably as I look on the proposal to use hot water in the ways indicated in both gastric and intestinal hemorrhage, anatomy and pathology must not be forgotten, and it should be clearly understood that hot water can do no more in internal hemorrhages than is to be expected in external ones.

If the bleeding is capillary or the open arterioles of very small size, prompt hemostasis may result; whereas, if an artery or vein of any size has been opened we may expect much less from any treatment which depends for its success on the formation of a firm clot in the mouth of the bleeding vessel, than we usually can in external hemorrhage. In the latter we usually have complete section of a blood-vessel, which favors retraction and contraction of its coats—Nature's best means of arresting hemorrhage, favoring as they do the formation of a clot.

In hemorrhage the result of disease, however, we have very generally a lateral opening made into the caliber of the blood-vessel, and the ability of the latter to contract and retract within its sheath is no greater, but actually less, than that of a vessel incompletely cut across. Occasionally, it is true, ulcerative action cut as completely divide a blood-vessel as if it were done by a knife, but such cases are exceptional, as will be shown by a careful study of fifty-five fatal cases of gastric and duodenal hemorrhage collected and reported by M. Savariaud⁶ in his very complete thesis.

Of fifty-five autopsies collected from various sources, and reported by Savariaud—none were operated upon—there were: Ulcerations of the splenic artery, 17 cases; ulcerations of the coronary artery, 6; ulcerations of the pancreatico-duodenal, 7; ulcerations of the gastric arterioles, 10; branches of the coronary vein, 2; other veins, 2; vessel not determined, 2; no vascular orifice visible, 4; vessel not mentioned, 4.

Hematemesis frequently occurs as the result of duodenal ulcerations, and as it is at times impossible to differentiate between gastric and duodenal hemorrhage, we have included the seven cases of duodenal ulcer. Furthermore, gastric and duodenal ulcerations frequently coexist and the treatment of both is essentially the same.

The splenic artery and vein have been opened by the same ulcer, as occurred in the case of Gaillard.⁷

Contrary to what might with reason be expected, there is no constant relation between the size of the vessel and the amount of blood, or the rapidity with which it is lost. It is impossible, therefore, to diagnosticate with any degree of certainty the source of the hemorrhage, and an opinion at best is only a guess based on probabilities anatomic and pathologic. He who said, "the end of all philosophy is a learned doubt," must have been a medical man thinking of gastric hemorrhage.

The subjoined table is also from Savariaud.

Vessel.	Cases.	Sudden Death.	Rapid Death.	Survived Considerable Time.
Heart	4	1	1	2 (3 days)
Aorta	2	1	1	1 (10 days)
Hepatic	2	1	1	1 (10 days)
Splenic	17	3	7	7 (2 to 8 days)
Coronary	6	1	3	2
Pancreatico-duodenal ...	6	1	3	2 (8 to 15 days)
Arterioles	10	1	1	8 (4 to 15 days)
Small Veins	4	1	1	2 (7 to 11 days)
Invisible Veins	3	2	1	1 (21 days)

It will also be seen from this table, based on autopsies where careful examinations were made, that death may be sudden in capillary hemorrhage, or delayed ten days when there is an opening into the aorta as large as a haricot bean—Grunfeld's case.

This uncertainty of diagnosis is a strong argument in favor of surgical intervention before it is too late.

I would emphasize the fact shown by the above table, which is based on accurate post-mortem examinations, that large and rapidly fatal hemorrhages may occur from capillaries. These observations have also been borne out in many of the operative cases herewith reported, for in

at least seven, while the bleeding was free, it could not be located. So then, having in mind the usual source of hemorrhage in gastric ulcer, and that it is from vessels of rather large size in nearly four-fifths of all fatal cases, the uncertainty and utter unreliability of the ordinary medical means employed will be apparent.

Measures adapted to the treatment of capillary hemorrhage may often succeed, and of these we believe hot water to promise the most, but as one would not think of treating hemorrhage from the radial artery or vein by such means, one should think less of doing so here with vessels of equal and even greater size involved, with Nature's best means of checking hemorrhage made impossible for the reasons already given.

It is therefore manifest that hemorrhages following the superficial erosions of the gastric mucous membrane—the *exulceratio simplex* of Dieulafoy—rather than the gastrorrhagias following the *ulcus simplex* of Cruveilhier, which is essentially a perforating process, stand the best chance to be arrested spontaneously by Nature, or to be cured by the routine medicinal and dietetic treatment.

The hemorrhage may undoubtedly be just as free in the superficial as the deep ulcers, but the difference is in the size of the bleeding vessels. As there are only capillaries and arterioles in the gastric mucous membrane, hemorrhages from such vessels could be reasonably expected to yield to measures impotent in the presence of bleeding from a coronary or splenic artery. Representing as they do less than 20 per cent. of the fatal hemorrhages, there is every reason to believe that bleeding from capillaries and arterioles will constitute a very much larger per cent., possibly a majority, of non-fatal gastrorrhagias. I have collected, so far as I know., every published case of operation for bleeding ulcer, and to them added many reported to me in personal communications for the first time. A careful study of my tables does not enable me to say definitely the number of cases in which the bleeding came from arterioles. It does, however, justify the statement that it is a large per cent.

Having exhausted all of the ordinary medical means for arresting hemorrhage, should such cases be treated as external hemorrhage, viz., the bleeding vessels cut down and ligated? There are now a sufficient number of cases on record to justify the statement that better results will be secured by judicious interference than by a policy of inaction hitherto invariably followed. By this I would not be understood as advocating the opposite plan of interference in every case—far from it. Up to a certain point there is substantial agreement between physicians and surgeons, and I may say here that the idea of arresting hemorrhage from gastric ulcer by surgical means occurred to a physician and a surgeon at the same time. In all cases of small but frequent hemorrhages, which slowly but almost surely destroy the patient, recourse should be had to timely operation. If there is at the same time gastrectasis, the indication for operation is absolute, as dilatation stretches the ulcer, prevents healing and favors bleeding.

The results, too, of operations for chronic hemorrhage have been more than encouraging and should, without question, lead to earlier and more frequent surgical intervention. There have been thirty-one operations for frequently recurring, or what might be called chronic, hemorrhage, with six deaths, or a mortality of 19.3 per cent. This is, under the circumstances, an excellent showing

when it is remembered that it represents but little more than the average mortality given in a large number of operations on the stomach for non-hemorrhagic ulcers. Mr. Robson⁸ reports 188 operations for gastric ulcer—non-hemorrhagic and non-perforating—with a mortality of 16.4 per cent., which is about the same conclusion reached by Heydenriech,⁹ Tricome¹⁰ and others who have written on the subject. He (Robson) later on gives the mortality of operations for chronic hemorrhage as 10.5 per cent. Manifestly gastroenterostomy, pyloroplasty, or other operations on the stomach should not give a better prognosis on account of the presence of hemorrhage as a symptom. The good showing now made for recurring hemorrhage will be still better when physicians generally recognize that if delayed operations are justifiable, early ones are better, and should, therefore, be encouraged at a time when the chances of success are correspondingly brighter.

Operations for acute hemorrhage in general do not so imperatively call for surgical intervention, but when this is said, it is saying nothing more than is true of external hemorrhage. In the present state of our knowledge, we can not say that operation should ever be done during the first hemorrhage or the ensuing shock. Likewise, if seen after the hemorrhage, when the patient is successfully rallying from shock, a policy of non-intervention is not only permissible, but best.

Dieulafoy¹¹ advises surgical intervention after the first hemorrhage, if as much as half a liter of blood is lost, and insists on operation if the bleeding is repeated within twenty-four hours. One of Dieulafoy's patients was successfully operated on by Cazin, after the first hemorrhage. There has been, however, a rather general condemnation of too early operation by surgeons, from Mikulicz, the first to operate for hemorrhage, in 1887, and from Keen, Hartman, Heydenriech and Robson, none of whom have advised operations in acute hemorrhage. Certainly surgeons can not be accused of too great alacrity in operating for gastric hemorrhage when none have been so radical as a physician.

If the hemorrhage is repeated within a short time, the burning question will present itself to the physician first, to the surgeon next: shall a policy of "masterly inactivity" be longer pursued? To this question a majority would still answer "yes," believing that the chances offered by Nature are better than those given by surgery. I am satisfied that during a second serious hemorrhage inaction should govern, or only medical means be used; but as soon as bleeding ceases, the patient has rallied from shock and is in good condition, something should be done to prevent what are reasonably certain—other hemorrhages. This is even less radical than what we should do in external hemorrhage, and, as has been said, Nature has less chance to arrest spontaneously bleeding from vessels opened by ulcerative action.

I am thoroughly convinced, from a careful study of all reported operative cases up to date, that none were operated on too early, but many too late. It is certainly the duty of the physician to summon surgical aid as soon as the second hemorrhage begins, if he has not already done so, that everything may be in readiness to seize upon a propitious time for interference before a third attack.

It is easy to believe that several cases in my tables were lost by delaying operation until after the third and fourth hemorrhage. *Per contra*, there have been quite a number of successful results after the second and third

TABLES EMBRACING ALL CASES FOUND IN LITERATURE OF OPERATIONS FOR ACUTE AND CHRONIC HEMORRHAGES COMPLICATING GASTRIC ULCER.
COMPILED WITH THE ASSISTANCE OF DRs. STILLWELL C. BURNS AND W. H. THOMAS.

Operator.	History.	Symptoms.	Diagnosis.	Conditions found at operation.	Operation.	Remarks.	Result.	Reference.
1 Able (A)	One month previous to admission had vomited thirty ounces of blood.	Epigastric pain, vomiting, slight abdominal rigidity.	Chronic ulcer.	No ulcers discovered at time of operation.	Gastrotomy	Temperature continued to rise, a curative of hematoma, ulcers on ant. and post. walls. Patient has remained well up to the present time.	Death.	N. Y. Med. Annals, May, 1891
2 Andrews, E. Wyllys (A)	For two years has had constant boring pain located beneath the umbilicus, greatly increased by food.	May 23, 1898, the patient collapsed from sudden failure of circulation. This was repeated the following day.	Gastric ulcer.	Ulcer 12 mm. in diameter found in anterior wall suit deeply eroded.	Ulcer drawn forward so as to the base of which a strong ligature was tied.	Rectal operation well. Patient continued to suffer from hemorrhage until left the hospital, Nov. 3, 1898. No hematoma.	Recovery.	Annals of Surgery, 1898, p. 393.
3 Andrews, E. Wyllys (A)	Had suffered for several years from cardialgia and nausea. Gastric hemorrhages.	Pain in the epigastrum constant. Severe hematemesis.	Gastric ulcer.	Small erosion on posterior wall which had perforated and the stomach in Simons position found at three other points.	All these points were ligated with silk suture.	Stood operation well. Hemorrhage stopped. Patient continued to suffer from hemorrhage until left the hospital, Nov. 3, 1898. No hematoma.	Recovery.	Annals of Surgery, 1898, p. 393.
4 Armstrong F. (A)	Repeated copious hemorrhages from gastric ulcer. No symptoms of gastric ulcer. Medicinal treatment had no effect upon hemorrhage.	Blanched mucous membranes, on slight exertion. Temperature on admission, 102° F.; pulse, 136; respirations, 44.	Chronic ulcer.	No deeply excavated ulcer was found. Three different places which looked like linear fissures.	Hemorrhage stopped by application of Pyloric suture. Abdominal incision closed without drainage.	Stood operation well. Hemorrhage stopped. Patient continued to suffer from hemorrhage until left the hospital, Nov. 3, 1898. No hematoma.	Recovery.	British Med. Journal, 1898, p. 1057.
5 Armstrong F. (A)	Suffered from indigestion for over 10 yrs. Diagnosis of ulcer made 4 yrs. ago, at which time she had slight hemorrhages from stom.	Pain, vomiting and recurring hematemesis.	Gastric ulcer.	Deeply excavated ulcer on lesser curvature 2 inches from pylorus. Blood flowed freely from margin. Pyloroplasty.	Excision of ulcer. Opening of forus closed as in Heineke-Pyloroplasty.	Making a good recovery; 3 weeks after operation she is taking considerable quantities of food.	Recovery.	Montreal Med. Jour., vol. xxviii, p. 107.
6 Armstrong F. (C)	Symptoms first appeared in 1892.	Indigestion, pain in stomach for two years. Repeated vomiting of small quantities of blood.	Gastric ulcer.	On opening anterior wall found blood oozing from several small ulcers. At one of these ulcers an area 2 in. square situated on ant. wall, which was dark superficially eroded and completely perforated.	All bleeding and eroded surfaces touched with a broad Paquin and the abdomen closed without drainage.	Convalescence to date smooth and afebrile. She is now taking solid food. Has no pain in the abdomen. She is evidently making blood.	Recovery.	Not reported.
7 Armstrong F. (A)	Repeated gastric hemorrhages, palpitation, frequent belching, worse since Jan. 1897. Symptoms moved once a week; symptoms worse since influenza Oct. 7, 1896. Red-blood corpuscles 1,000,000.	Repeated gastric hemorrhages, palpitation, frequent belching, worse since Jan. 1897. Symptoms moved once a week; symptoms worse since influenza Oct. 7, 1896. Red-blood corpuscles 1,000,000.	Dilatation of stomach, chronic ulcer.	Circular constriction from 6 to 8 points. Stomach dilated.	Gastroplication	No vomiting, no succussion splash since operation. Discharged in 10 days. Followed case 2 years; no return of symptoms. Discharged in the later part of December in perfect health.	Recovery.	Chl. f. Sch., 1897, 1894, 18.
8 Bircher (C)	One acute hemorrhage from stomach.	Pain relieved by vomiting. No improvement on washing out stomach. Patient unable to work. Entered hospital in March, 1894.	Gastric ulcer.	Ulcer found encircling pylorus. Measured 1 inches across. Intestinal border to gastric border.	Incision was extended in the long axis through the disease into healthy mucous membrane, then joined transversely (Heineke-Mikulicz pyloroplasty with silk suture).	Checked the hemorrhage immediately.	Recovery.	Petersau: Deutsche Med. Woch. 1894, 24, 25.
9 Cazin (A)	Patient brought to clinic in high anemic state; on arrival had several violent hematemesis. Pulse so weak that operation decided to operate despite persistent hemorrhages.	Epigastric pain after eating. Aroused by coffee ground matter. He admitted gonorrhoea, venereal ulcers and alcoholism.	Gastric ulcer.	Simple gastro-enterostomy performed in twelve minutes. Ulcer not sought for.	Hemorrhage stopped permanently as though a hemostat had been applied.	Hemorrhage permanently cured.	Recovery.	Annals of Surgery, 1895, August, 1894.
10 Cazin (A)	Hemorrhage had occurred a time before operation. Hemorrhage occurred a short time before operation.	Epigastric pain after eating. Aroused by coffee ground matter. He admitted gonorrhoea, venereal ulcers and alcoholism.	Gastric ulcer.	Pyloric stenosis.	Pyloroplasty.	Hemorrhage permanently cured.	Recovery.	Annals of Surgery, 1895, August, 1894.
11 Curtis, E. M. (C)	Hemorrhage had occurred a time before operation. Hemorrhage occurred a short time before operation.	Epigastric pain after eating. Aroused by coffee ground matter. He admitted gonorrhoea, venereal ulcers and alcoholism.	Gastric ulcer.	Gastro-enterostomy.	Hemorrhage permanently cured.	Hemorrhage permanently cured.	Recovery.	Annals of Surgery, 1895, August, 1894.
12 Czerny (A)	Hemorrhage had occurred a time before operation. Hemorrhage occurred a short time before operation.	Epigastric pain after eating. Aroused by coffee ground matter. He admitted gonorrhoea, venereal ulcers and alcoholism.	Gastric ulcer.	Gastro-enterostomy.	Hemorrhage permanently cured.	Hemorrhage permanently cured.	Recovery.	Annals of Surgery, 1895, August, 1894.
13 Czerny (A)	Hemorrhage had occurred a time before operation. Hemorrhage occurred a short time before operation.	Epigastric pain after eating. Aroused by coffee ground matter. He admitted gonorrhoea, venereal ulcers and alcoholism.	Gastric ulcer.	Gastro-enterostomy.	Hemorrhage permanently cured.	Hemorrhage permanently cured.	Recovery.	Annals of Surgery, 1895, August, 1894.
14 Czerny (C)	Hemorrhage had occurred a time before operation. Hemorrhage occurred a short time before operation.	Epigastric pain after eating. Aroused by coffee ground matter. He admitted gonorrhoea, venereal ulcers and alcoholism.	Gastric ulcer.	Gastro-enterostomy.	Hemorrhage permanently cured.	Hemorrhage permanently cured.	Recovery.	Annals of Surgery, 1895, August, 1894.
15 Czerny (C)	Hemorrhage had occurred a time before operation. Hemorrhage occurred a short time before operation.	Epigastric pain after eating. Aroused by coffee ground matter. He admitted gonorrhoea, venereal ulcers and alcoholism.	Gastric ulcer.	Gastro-enterostomy.	Hemorrhage permanently cured.	Hemorrhage permanently cured.	Recovery.	Annals of Surgery, 1895, August, 1894.
16 Czerny (C)	Hemorrhage had occurred a time before operation. Hemorrhage occurred a short time before operation.	Epigastric pain after eating. Aroused by coffee ground matter. He admitted gonorrhoea, venereal ulcers and alcoholism.	Gastric ulcer.	Gastro-enterostomy.	Hemorrhage permanently cured.	Hemorrhage permanently cured.	Recovery.	Annals of Surgery, 1895, August, 1894.

No.	Operator.	Sex.	Age.	History.	Symptoms.	Diagnosis.	Date of operation.	Conditions found at operation.	Operation.	Remarks.	Result.	Reference.	
31	König, Jr. (C)	M.	31		Continual hematemesis	Gastric ulcer.	8, 4, 1894	Ulcer situated near the pylorus.	Resection	The resulting cicatrix caused obstruction of the stomach, third colotomy made necessary by closure of this opening. Hematemesis and pain recurred rapidly increased in weight.	Recovery.	Wilm. Med. April, 1899, p. 929.	
35	Küster, E. (C)	F.	23	(Daughter of day laborer.) Daily vomiting for years; improvement and aggravation fluctuated until Oct., 1903, when several attacks of vomiting occurred.	Vomiting, profuse hematemesis, hæmorrhagic from pyloric stenosis. Gastric dilatation.	Gastric ulcer, Pyloric stenosis.	4, 1894	Ulcer 5 cm. deep near greater curvature; floor of ulcer large and firm; pylorus could not be dis-covered by the finger. A tumor was felt on the posterior wall; a flat ulcer the size of a five-cent piece was seen; pyloric canal somewhat distorted.	Cauterization of ulcer with thermo-cautery; subsequent gastro-enterostomy.	Hematemesis and pain recurred rapidly increased in weight.	Recovery.	Vand. deutschl. Gesellsch. f. Chir., 1901, No. 31.	
36	Küster, E. (C)	M.	42	(Stone mason.) Healthy till 36th year; when pain and vomiting commenced. Jan. 12 he entered hospital. Hematemesis, gastric hemorrhages occurred. For two years had vomited after slightest condition, but no effort made to treat ulceration.	Pain in epigastrium; vomiting; hematemesis; stools black, includes yellow mucus.	Gastric ulcer.	6, 1894	Ulcer was felt on the posterior wall; a flat ulcer the size of a five-cent piece was seen; pyloric canal somewhat distorted.	Ulcer cauterized with thermo-cautery; gastro-enterostomy performed.	Patient did well; August 9 had gained ten pounds.	Recovery.	W. W. Cou-till: Bos-ton, 1899, p. 38.	
37	McArdle, J. S. (C)	F.	24	(Inspirator.) Vomiting, hematemesis present. In hospital condition, but no effort made to treat ulceration.	Pain, vomiting, hematemesis; stools black, includes yellow mucus.	Gastric ulcer.	13, 1888	Stomach much thickened; owing to the very firm adhesions nothing could be done.	Exploratory gastrostomy; nothing else attempted.	Post-mortem showed an oval ulcer on the posterior wall, which had eroded the pancreas and the superior mesenteric artery.	Recovery.	Dieulafoy: Presse Méd., 1898, p. 81.	
38	Mitzer, S. J. (A)	M.	57	Began to vomit blood 4 years ago; continued for 36 days during an attack.	Pain, vomiting, hematemesis; stools black, includes yellow mucus.	Gastric ulcer.	10, 28, 1897	Stomach, appearing healthy at the time of operation.	Gastrostomy; ulcer could not be found.	Ulcer large as 50 cent piece on post-surf.; involving greater curvature and pylorus; cauterized about the pylorus; stomach produced; duodenal ulcer.	Death.	Arch. fur Klin. Med., xxviii, 79.	
39	Michaux, F. (A)	F.	30	No previous gastric symptoms.	Profuse hematemesis October 20, 22, 23, 25.	Gastric ulcer.	9, 13, 1887	One litre of blood in the stomach. Round ulcer on posterior wall 8 to 10 centimeters in diameter; pyloric stenosis; stomach dilated; chronic ulceration.	Cauterization with thermo-cautery and pyloroplasty.	Death 50 hours after operation; autopsy showed peritonitis localized about the pylorus; stomach produced; duodenal ulcer.	Death.	Marion's Paris, 1897, ibid.	
40	Mikuletz, (A)	F.	20	(Factory girl.) Symptoms of 1 year's standing; for the last 3 months vomiting followed by the ingestion of the smallest quantity of milk.	Pain, vomiting, hematemesis; stools black, includes yellow mucus.	Gastric ulcer.	12, 1889	Small ulcer at lesser curvature; erosion of coronary artery.	Cauterization of ulcer; gastrostomy.	In perfect health three years after operation.	Death.	Paris, 1897, ibid.	
42	Mikuletz, (C)	F.	21	Symptoms of ulcer for several years; repeated hematemesis.	Symptoms of ulcer for eight years; repeated hematemesis.	Gastric ulcer.	13, 1894	The pancreas was invaded; the hemorrhage from coronary artery occupied the pylorus.	Resection; perforation; antrum.	Died from shock during the evening of the day of operation.	Death.	J. R. Combe: Brit. Med. Jour., 1898, p. 459.	
44	Mikuletz, (C)	F.	42	Symptoms of ulcer for several years; repeated vomiting of blood; hematemesis; dilatation of stomach.	Symptoms of ulcer for seven years; repeated vomiting of blood; hematemesis; dilatation of stomach.	Gastric ulcer.	13, 1894	The ulcer occupied the pylorus.	Anastomosis by Murphy's button, after retroflexion of the large colon, colopexy by Doyne's method.	Rapid recovery followed; button passed on twelfth day.	Recovery.	J. R. Combe: Brit. Med. Jour., 1898, p. 459.	
41	Moore (A)	M.	38	Symptoms of 14 months' duration.	Epigastric; hematemesis; emaciation.	Gastric ulcer.	7, 1896	Abscess on posterior wall not distributed.	Gastro-jejunostomy (Woolfer).	Has gained very much in weight; all symptoms have subsided.	Recovery.	Wilm. Med. Jour., 1899, p. 929.	
45	Murphy, (C)	F.	51	(Typist.) Symptoms of 14 months' duration.	Epigastric; hematemesis; emaciation.	Gastric ulcer.	7, 1896	Abscess on posterior wall not distributed.	Partial gastrectomy; removal of ulcer and part of gastric wall 1.3 inches.	Recovery mesenteric; is still living; no symptoms of stricture since operation.	Recovery.	Wilm. Med. Jour., 1899, p. 929.	
46	Price, J. (C)	F.	31	(Typist.) Typical history of benign ulcer. For a year prior to operation small hemorrhages occurred.	Hemorrhages, pain and progressive emaciation.	Gastric ulcer.	4, 1898	Ulcer found at pylorus on posterior wall.	Partial gastrectomy; removal of ulcer and part of gastric wall 1.3 inches.	Recovery mesenteric; is still living; no symptoms of stricture since operation.	Recovery.	Wilm. Med. Jour., 1899, p. 929.	
47	Price, J. (A)	F.	37	(Typist.) Typical history of benign ulcer. For a year prior to operation small hemorrhages occurred.	Hemorrhages, pain and progressive emaciation.	Gastric ulcer.	4, 1898	Ulcer found at pylorus on posterior wall.	Partial gastrectomy; removal of ulcer and part of gastric wall 1.3 inches.	Recovery mesenteric; is still living; no symptoms of stricture since operation.	Recovery.	Wilm. Med. Jour., 1899, p. 929.	
48	Pringle, (A)	M.	35	(Wagoner.) Has had colicky pain in bowels; for 1 week before admission had been drinking more than usual; admitted with sudden hematemesis.	He had a fresh hemorrhage about the pylorus and anemic that operation was postponed until she became in better general condition.	Gastric ulcer.	4, 24, 1898	The ulcer was located on the anterior wall near cardia.	Partial gastrectomy; a portion of the stomach wall as large as the hand was removed with the ulcer.	Nothing abnormal found on incision. A portion of the stomach wall as large as the hand was removed with the ulcer.	Recovery mesenteric; is still living; no symptoms of stricture since operation.	Recovery.	Wilm. Med. Jour., 1899, p. 929.
49	Robson, Mayo (A)	M.	35	(Wagoner.) Has had colicky pain in bowels; for 1 week before admission had been drinking more than usual; admitted with sudden hematemesis.	He had a fresh hemorrhage about the pylorus and anemic that operation was postponed until she became in better general condition.	Gastric ulcer.	4, 24, 1898	The ulcer was located on the anterior wall near cardia.	Partial gastrectomy; a portion of the stomach wall as large as the hand was removed with the ulcer.	Nothing abnormal found on incision. A portion of the stomach wall as large as the hand was removed with the ulcer.	Recovery mesenteric; is still living; no symptoms of stricture since operation.	Recovery.	Wilm. Med. Jour., 1899, p. 929.
50	Robson, Mayo (A)	M.	36	(Wagoner.) Has had colicky pain in bowels; for 1 week before admission had been drinking more than usual; admitted with sudden hematemesis.	He had a fresh hemorrhage about the pylorus and anemic that operation was postponed until she became in better general condition.	Gastric ulcer.	4, 24, 1898	The ulcer was located on the anterior wall near cardia.	Partial gastrectomy; a portion of the stomach wall as large as the hand was removed with the ulcer.	Nothing abnormal found on incision. A portion of the stomach wall as large as the hand was removed with the ulcer.	Recovery mesenteric; is still living; no symptoms of stricture since operation.	Recovery.	Wilm. Med. Jour., 1899, p. 929.
51	Roux, (A)	M.	36	(Wagoner.) Has had colicky pain in bowels; for 1 week before admission had been drinking more than usual; admitted with sudden hematemesis.	He had a fresh hemorrhage about the pylorus and anemic that operation was postponed until she became in better general condition.	Gastric ulcer.	4, 24, 1898	The ulcer was located on the anterior wall near cardia.	Partial gastrectomy; a portion of the stomach wall as large as the hand was removed with the ulcer.	Nothing abnormal found on incision. A portion of the stomach wall as large as the hand was removed with the ulcer.	Recovery mesenteric; is still living; no symptoms of stricture since operation.	Recovery.	Wilm. Med. Jour., 1899, p. 929.

53	(A) Rydygier (C)	M. 48	Gastric disturbances for six years.	Hæmatemesis on several occasions.	1894	A loop of small intestine adherent to pylorus. The endoabdomen at point occupied by ulcer. Adhesion to anterior abdominal wall. The normal color of surface or depression of the gastric mucosa.	lesser curvature. Perforation temporarily closed; pylorus ressected; open end of duodenum was brought down into wound in stomach. Fascia maintained for thirty days.	operation. Patient 3 yrs. after operation in perfect health. He had gained 11 kilos in weight and digested all his food.	Survived.
54	(A) Schlor	M. 27	Had a pyloric resection five years ago for pyloric stenosis; appetite good; well nourished.	Taken suddenly with violent vomiting of bright red blood.	1896	Ulcer of the lesser curvature.	Diagnosed after operation. Beginning phlegmon of ant. abdominal wall and mesentery from leak of food.	Death. Emission of blood from ant. abdominal wall.	Survived.
55	(A) Spencer W. G.	F. 37	For eleven years had had hæmatemesis without other symptoms. Partial unconsciousness noted after several small vomitings in one of 1 1/2 pints, half of which was pure blood.	Sudden faintness; acute anæmia. Gastric ulcer.	1896	Pyloric stenosis; dilated stomach.	Arteries and veins ligated, and supported ulcers tucked inward by a double row of continuous sutures.	Recovery. Details sent to author.	Survived.
56	(C) Spencer W. G.	F. 35	Hæmorrhage the one important feature.	Pyloric stenosis; dilated stomach.	1896	Pyloroplasty	Pyloroplasty	Recovery. Details sent to author.	Survived.
57	(A) A. H.	M. 27	Previous to August, 1898, had enjoyed good health; at this time he began to suffer from hæmatemesis. The hæmatemesis occurred on the following dates: Sept. 13, large amt of blood (not measured); Sept. 30, 30 oz.; Sept. 21, 20 oz.; he probably lost altogether one-third of the total weight of his body.	Uncontrollable gastric hæmorrhages.	1898	Patient moribund. Operation performed after transfusion and stimulation. On the 23d he vomited, but no blood was found in the vomit. A spot was found thin in the centre and indurated peripherally. Redistiching from it was performed. Patient at this time became collapsed.	He rallied after the operation. On the 23d he vomited, but no blood was found in the vomit. A spot was found thin in the centre and indurated peripherally. Redistiching from it was performed. Patient at this time became collapsed.	Death. Details sent to author.	
58	(A) Tuffier	M. 30	(Railroad employe.) Entered hospital for hæmatemesis; had suffered from same for ten years; a month ago the first hæmorrhage from stomach occurred, followed by others on Sept. 10, 20, 25, 28, 29, 30, abundant; 2 days before coming to hospital had 3 copious hæmatemeses; the day before he vomited 400 ccs. of considerable melæna.	Gastric ulcer.	1906	The transverse colon was distended, black and opaque, and filled with blood. The posterior surface of the pylorus. The existence of a large group of lymphatic glands in the lesser curvature was also discovered. The first loop of jejunum was filled with blood, none being in the stomach.	Death. Details sent to author.	Survived.	
59	(C) Tuffier	F. 25	Uncontrollable hæmatemesis.	Uncontrollable hæmatemesis, which led to a grave ecchæmia.	1906	Induration found at the pylorus; encroaching upon anterior surface of stomach. Patient too emaciated to operate.	Gastro-antrostomy (von Hacker's method).	Since the operation the patient has never vomited.	Recovery. Same as Medicalc. Ibid.
60	(C) Tuffier	M. 39	Uncontrollable hæmatemesis which led to a grave ecchæmia.	Painful hæmatemesis, dilatation and tenderness on pressure.	1906	At the level of the lesser curvature an indurated portion was felt, adherent to liver.	Gastro-antrostomy.	Died from accidental septic complications, nature which were determined at autopsy. Genure had been adher. to lesser curv.	Death. Details sent to author.
61	(C) Tuffier	F. 40	(Working woman.) For hæmatemesis, digestion for sometime had been good; 7 days before admission experienced sudden hæmorrhage from stomach, leading to hæmatemesis vomited blood several times.	Gastric ulcer.	1906	Stomach and duodenum dilated, pylorus permisable. Neither induration nor hæmorrhagic enlargement at any point.	Gastro-antrostomy (von Hacker's method).	The patient left the hospital Sept. 9, 1898, her appetite and hæmatemeses.	Recovery. Details sent to author.
62	(C) Tuffier	M. 42	Entered hosp. for hæmatemesis; had suffered from same for intervals for 3 yrs.; 13 mos. ago severe gastrohæm. and vomiting of 8 pints of blood; hæmorrhage continued for 24 hours later; next day he had another hæmatemesis, after which he improved; 6 mos. ago hæmorrhage from stomach as severe as the preceding one.	Dilatation of stomach. Periods of violent gastralgia vomiting. Pyloric stenosis. Several severe gastric hæmorrhages.	1906	A slight induration accompany. ing a slight constriction of the pylorus, noticed.	Posterior gastro-antrostomy.	Patient improved rapidly; at no time has he had any trouble from hæmatemesis. He was a typhic. The patient, who was a sympathic, followed rigorously the specific treatment under which he had been placed. March 15, 1900, in excellent health.	Recovery. Details sent to author.
63	(A) Van Klesf	F. 37	Had suffered with gastric distention for fifteen years; came under my care in 1906.	Dilatation of stomach. Periods of violent gastralgia vomiting. Pyloric stenosis. Several severe gastric hæmorrhages.	1906	Pylorus very much contracted. Round ulcer one centimeter in diameter on anterior wall.	Resection of the pylorus.	Patient made an excellent recovery and gained in weight.	Recovery. Details sent to author.

Acute and chronic cases are designated by (A) and (C) under name of operator. Several cases are border-line ones, but we have tried to classify them as accurately as could be done from the information given. One case is not counted in either class (Guilford's, No. 21).

hemorrhage, operation having been done in a condition of extreme anemia in all of them, as in the cases of Roux, Robson, Caxin, Andrews, and two of Armstrong's cases. There have been thirty-two operations for acute hemorrhage with thirteen deaths or 40.6 per cent. mortality, a much better showing than was made by Mayo Robson, who reported a smaller number of cases, and included also among them cases of vicarious menstruation and post-operative hematemesis, neither of which has any direct etiologic or other connection with gastric ulcer. It will be seen from a glance at the tables—appended—that many operative procedures have been carried out in the treatment of gastrorrhagia, and to those sufficiently interested to study them, the symptoms, condition found at operation, method of operation, and result of each case are given. I wish here to give full credit to my assistants, Drs. W. Herscy Thomas and Stillwell C. Burns, for most valuable assistance rendered in the collection of data and preparation of the tables.

It will not be my purpose here to review the merits of all of the many operative procedures that have been undertaken for the arrest of gastric hemorrhage. This would interest surgeons chiefly, and they will find all information desired in the tables herewith presented, or in an analysis of them by the author in a paper read before the American Surgical Association on May 1, last. Of the dozen methods practiced, the three best are pylorotomy or partial gastrectomy, according to the site of the ulcer, gastroenterostomy, and ligation en masse of the gastric mucosa. The first is ideal surgery, preventing possible perforation and malignant degeneration; the second is practical and oftentimes the best surgery, stopping hemorrhage and favoring cicatrization of the ulcer by putting the stomach at rest; while the third is frequently the most desirable way to end an exploratory gastrotomy when the site of the bleeding vessel was unknown until the stomach was opened. Each method has given good results, but for many reasons the second has been preferred in a majority of instances, and of the many ways of performing gastroenterostomy the posterior or Von Hacker's method with the Murphy button has been, and should be, generally chosen. While hemorrhage per se as a symptom of gastric carcinoma has not, so far as I know, led to an operation, there can be no doubt that in certain cases it will be either so free or of such frequent recurrence as to make one desirable.

Resection, if practicable, is best, but gastroenterostomy would not only arrest the bleeding, but usually delay the inevitable end, and bring about a decided amelioration of all the distressing symptoms. Indicated as it often is in advanced carcinoma without hemorrhage, the presence of the latter as a symptom should be an additional reason for surgical intervention.

Cirrhosis.—Hemorrhage into the stomach is a frequent symptom in cirrhosis of the liver, and death resulting therefrom can not be considered as rare. Preble,¹² of Chicago, has recently reported 60 cases of fatal hemorrhage—3 in his own practice, 1 in that of a colleague and 56 collected from literature. The diagnosis in all was verified by autopsy. After a careful analysis of these, a full history of each being given, he draws some interesting and striking conclusions: 1. Fatal gastrointestinal hemorrhage is an infrequent but not rare complication of cirrhosis of the liver. 2. In a great majority of the cases the cirrhosis is atrophic, but it may be hypertrophic. 3. In one-third of the cases the first hemorrhage is fatal; in the other two-thirds the hemor-

rhages continue at intervals of over a period varying from a few months to several years, the maximum given being eleven years. 4. In one-third of the cases the diagnosis can be made at or before the time of the first hemorrhage. In the other cases the diagnosis can not be made at all or only after a few months or years, during which time other symptoms of cirrhosis have developed. 5. Esophageal varices are present in 80 per cent. of the cases and in more than one-half of the 80 per cent. the varices show macroscopical ruptures, and it is probable that many other ruptures would be found if the varices were tested by injection of air or fluid. 6. Fatal hemorrhages occur in cases which show no esophageal varices, and they are probably due to the simultaneous rupture of many capillaries of the gastrointestinal mucous membrane. 7. The hemorrhages in this class of cases are usually preceded by other symptoms of cirrhosis, but the first symptom may be a fatal hemorrhage. 8. In 6 per cent. of the cases which show esophageal varices was the cirrhosis typical, i. e., showed ascites, enlarged spleen and subcutaneous abdominal varices.

It is certainly interesting to learn that the diagnosis of cirrhosis can be made in only one-third of the cases at the time of the first hemorrhage. A study of Preble's cases along with those collected by Savariaud¹³ impresses one with the possibility of an unexpected and fatal gastric hemorrhage in the course of either a latent gastric ulcer or cirrhosis.

I am also impressed with the belief that several of the cases reported as having been operated on for diffused or capillary hemorrhage complicating ulcer were really instances of venous hemorrhage into the stomach on account of an obstructed portal circulation due to cirrhosis. Such cases do not, and can not give as good operative results as in ulcer.

Treatment.—It has been suggested that as esophageal varices are the cause of a large per cent. of the gastrorrhagias complicating cirrhosis, pressure should be made on the ruptured varix or varices by introducing a rubber bag into the esophagus and distending it with water or air. This suggestion, so far as I know, has not been carried out. The objections that one can urge against it are manifold: 1. It is questionable whether pressure can be sufficiently protracted in this way to be of benefit. 2. In only 6 per cent. of the cases showing esophageal varices was the cirrhosis typical, and therefore easily diagnosed. It is certainly unsafe to formulate a treatment which at best has only a chance to reach a comparatively small number of cases. 3. The esophageal veins are part of the systemic, while those returning blood from the gastric mucous membrane are of the portal circulation. Therefore, it would seem, *a priori*, that dilatation of the esophageal veins could not occur until there was primarily marked dilatation of the venules of the gastric mucosa, and secondarily enlargement of the connecting veins between the two systems. 4. Hemorrhage from the stomach may result from so many causes that nothing in the way of surgery short of gastrectomy—which discloses the source of the hemorrhage—or gastroenterostomy—which by draining the stomach and placing it at rest, may stop the bleeding—would seem to be indicated.

There can be no reasonable doubt, however, that operations for gastric hemorrhage in cirrhosis have a less promising future than the same procedures in bleeding ulcer; for in the former there is in addition that general hemorrhagic tendency that makes bleeding from any sit-

nation most difficult to arrest. We have all realized this, and know how hard it is to permanently control the epistaxis of a cirrhotic patient. Still, while mindful of the difficulties in the way of success, I believe that with limitations surgical intervention may properly be considered. No operation has as yet, so far as I know, been deliberately performed where the diagnosis of cirrhosis had been made. Several of the cases reported and operated on as hemorrhagic ulcers may have been—probably were—instances of cirrhosis.

A study of Preble's cases makes it sufficiently clear that in many instances it is simply impossible to diagnose between the hematemesis of ulcer and cirrhosis. One of them (Case 36), a young woman in her usual health, suddenly vomited a large amount of blood, and a diagnosis of *ulcus ventriculi* was made without reservation. At autopsy it was found to be a marked case of cirrhosis, and no evidence whatsoever of ulcer could be discovered. The opposite error can as easily be made, as evidenced by Preble's report of two cases seen at the Cook County Hospital with Drs. Walker and Ochsner: "Both were men between 40 and 50 years, hard drinkers for many years. Both vomited a large amount of blood while at their usual work and in their usual health. Neither had any gastric disturbances other than could be referred to the chronic alcoholism. In both the physical examination was negative. There was no change in the hepatic dullness, no splenic tumor, no ascites, no superficial varices, no localized or diffused epigastric tenderness. The hematemesis continued over a few days, till death. Were they cases of gastric ulcer or obscured cirrhosis of the liver? The general condition of the patients was so good as almost to exclude any thought of carcinoma. The age, sex, and lack of gastric symptoms spoke against ulcer. The negative physical examination spoke against cirrhosis. Fatal hemorrhage from either cause is rare. The post-mortem examination showed that both were cases of gastric ulcer, and the eroded vessel could be seen on the base of the ulcer. There was no suggestion of any change in the liver."

VICARIOUS MENSTRUATION.

There has been a more or less general sentiment, if not positive conviction, on the part of a majority of the profession, that vicarious menstruation may manifest itself in the way of hematemesis. Such was, too, until recently the general teaching, and there are not wanting those who still believe in the possibility of such an occurrence. If it does happen, one would naturally think that it would be in young women whose ovaries and tubes have been removed, or in women submitted to hysterectomy, the appendages being left, and who can not therefore, menstruate in the natural way. I have written to fifty prominent gynecologists and surgeons to learn if they had seen, and if so how frequently, instances of vicarious menstruation showing itself by hematemesis following removal of the appendages, uterus, or both. Nearly all have answered, and it is a significant fact that only two have reported—each a single case—affirmatively. Yet these operations are very common, one of them having been for many years probably the most frequently practiced surgical procedure. Many of the writers have expressed a positive conviction that vicarious menstruation does not occur. It would seem, therefore, that what has hitherto been a vague impression with most of us is not corroborated by a careful examination of a large number of cases, where it should if it ever occurs.

POST-OPERATIVE HEMATEMESIS.

I can not find, in any of the text-books on surgery at my command, reference to post-operative hematemesis. It must therefore be rare.

Mayo Robson,¹⁴ in his Hunterian lectures, states that he has encountered it in seven cases of his own, two being fatal, and refers to a similar experience of Eiselberg, who reported to the surgical society in Berlin the details of six cases. It is significant that nearly all of those reported by Robson and Eiselberg were instances of operations on the intestines, omentum, and structures adjacent to the stomach. The anesthetic could not have been responsible for the vomiting of blood, for in one of Mr. Robson's cases cocaine was used, and a cholecystotomy for carcinoma of the bile-ducts completed in fifteen minutes. In several others there was no vomiting after the operation. Robson states that in six of the cases the omentum was ligated, and in another it was probably cut. He also says that "in an experiment on an animal multiple hemorrhages into the stomach followed twisting of the omentum."

Mr. Robson has also kindly given me, in a letter, details of a case of stab wound of the abdomen. He says: "I explored the abdomen for a stab wound, and as the patient was vomiting blood, I expected to find a wound of the stomach, but discovered no perforation of the stomach walls, though I had to ligate the superior mesenteric vein, the patient making a satisfactory recovery. The hemorrhage was doubtless due to bruising of the mucous membrane without rupture of the peritoneal coat." The explanation given of the hematemesis in this patient is satisfactory and rational, and could not well have resulted in any other way. I do not, however, understand why operations on the omentum should cause post-operative hematemesis, as I can see no anatomic explanation for it. At first it would seem theoretically that twisting the omentum might force into the venules of the mucous membrane an amount of blood which they could not accommodate, and some weak vessel give way, causing hemorrhage into the stomach, notwithstanding the great capacity of veins to undergo enormous dilatation without rupture.

I have, with the assistance of Drs. Burns and Woody, experimented on four dogs, endeavoring to, if possible, cause hemorrhage into the stomach by rapid and severe traumatism not applied to the stomach itself.

In Experiment 1, a large dog was chloroformed, the omentum twisted into a rope, ligated high up, and then resected. The stomach was at one time cut into and there was no suggestion of even hyperemia from cardia to pylorus. The stomach was removed, tacked on a board and photographed at once by Dr. Kassabian.

In Experiment 2, a medium-sized young dog was chloroformed, the omentum twisted rapidly into a rope, and ligated high up. In addition, I squeezed the spleen and pancreas so forcibly that I ruptured the former to a slight extent, hoping by the compression to force enough blood from these organs whose blood-supply is so intimately connected with that of the stomach, into the gastric mucosa, to cause rupture of some of its vessels. The stomach was immediately opened and found to be perfectly normal in every respect, quite as much so as in Case 1.

In Experiment 3, the dog was chloroformed, the omentum twisted into a rope, and the small intestines were compressed and squeezed far more than would, or could, be done in any operative procedure, Dr. Burns at

the same time compressing the liver so as to interfere with the portal circulation. The stomach was then rapidly opened and found perfectly normal. The dogs were not allowed to come from under the anesthetic, and in all the stomach was quite empty, food having been withheld for some hours.

In Experiment 4, a medium-sized female dog was chloroformed, the omentum twisted into a rope, ligated high up and resected. The wound was then closed with ordinary aseptic precautions, and the animal made a rapid and painless recovery. There was no vomiting of blood or blood in the feces at any time during the three weeks that the dog was kept under close observation in the laboratory. She ate well soon after coming from under the chloroform, and never had a bad symptom.

Of the fifty surgeons written to, only nine have seen post-operative hematemesis. Three operators, Johnston, of Richmond, Parish, of Philadelphia, and Wathen, of Louisville, have had one case of gastrorrhagia following hysterectomy. All occurred within a week after operation, one being fatal. Clarke and Noble, of Philadelphia have each seen fatal hemorrhage from duodenal ulcers after operation. The former does not give the exact nature of the operation, but it was intrapelvic. Noble states that his patient was a woman about 60, operated on for ventral hernia. Hemorrhage that was quickly fatal occurred on the tenth day after operation. Autopsy showed a marked duodenal ulceration. Noble and Wathen have each had a fatal case of hemorrhage after nephrorrhaphy. Noble operated on both kidneys in a young woman. Death occurred on the twelfth day, as a result of hemorrhage from the stomach and bowels. No autopsy was allowed. Wathen's patient was a highly neurotic young woman. She began vomiting blood more than a week after operation, and died two or three days later. There was no autopsy. Johnston has also reported cases of hematemesis following operations for ovarian tumor with a twisted pedicle, suppurating ovarian cyst, strangulated hernia, and extrauterine pregnancy. The first three were fatal and accompanied with general peritonitis; the last recovered. Three others have seen post-operative hematemesis, but it followed operations on the stomach itself; these were apparently cases of secondary hemorrhage, and are, therefore, excluded. I have been particular to make inquiries as to the frequency of hematemesis after hernia operations, as Robson and Eisberg have both seen it. Of fifty surgeons written to, only two have encountered it, and one of the cases was a strangulated hernia with general peritonitis. The other was a patient operated on for ventral hernia, and who died from a demonstrated duodenal ulcer.

In more than a hundred herniotomies—strangulated and nonstrangulated cases—I have never encountered it. It is impossible to quote from only a few of the many surgeons communicated with. W. T. Bull, of New York, writes: "I have never seen hematemesis after any operation. I fancy I have had 650 herniotomies." W. B. de Garmo writes: "I have never seen in any of my own cases one of hematemesis following operation. In replying to your second question I would say, I have done 653 herniotomies; of these 573 have been by the Bassini method for the cure of inguinal hernia." W. B. Coley, of New York, says: "I have never seen a case of post-operative hematemesis. I can not tell how many cases I have removed omentum but in a large number. You could say that in over 700 cases of hernia operations

I have never seen it." J. M. T. Finney, of Baltimore, writes: "In my own personal experience, I can not recall an instance of post-operative hematemesis following hernia or any other operation in which the omentum was involved, nor have I known of any taking place in the Hopkins Hospital."

The sum total of all the hernia operations done by the fifty surgeons to whom I have written must be many thousands, and yet but two cases of post-operative hematemesis are reported, and each has been satisfactorily explained, one patient dying of peritonitis following strangulated hernia, the other from a duodenal ulcer demonstrated by autopsy. All of the cases seen by Robson and Eisberg followed intra-abdominal operations, such also being the case with all post-operative hematemeses reported by American surgeons, excepting two cases where nephrorrhaphy had been done. In doing nephrorrhaphy the peritoneum may, in the first place, be incautiously opened by the most careful operator, and secondly, there is always a considerable amount of traumatism necessary to force the kidney into the lumbar incision. It is not, therefore, difficult to understand how a hematoma may easily be produced by the great abdominal pressure oftentimes necessary to bring the kidneys into view, and how, furthermore, this extravasation may occasionally cause sapremia, septicemia, or peritonitis according to circumstances. All septic conditions favor disintegration of the blood-corpuscles and predispose to hemorrhage from mucous surfaces. The gastric mucosa is particularly liable to congestion in conditions of sepsis, both on account of the marked tendency of the thin and more or less disintegrated blood to settle in the internal organs, and the vomiting and retching so frequently present.

We have in this a satisfactory explanation of the rare hematemeses following abdominal operations, and have shown that even violent traumatism to the omentum, intestines, spleen, pancreas and liver did not produce immediate hemorrhage into the stomach in any of the dogs experimented on, and it does not seem unreasonable to suppose that delayed hematemesis will usually depend on disintegration of the blood due to sepsis.

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SUPPOSED INCREASE OF DISEASES OF NERVOUS SYSTEM AND OF INSANITY.—In a recent issue of the *Lancet* (May 26), Professor Erb has been quoted as saying that this increase is due to the causes of nervous irritation and depression, the greater anxiety, hurry and mental toil, the overtaking at school, the increased amount of work necessary to enter the learned professions, the more exciting nature of man's amusements, the more stimulating character of his diet, the restlessness incident to travel—all tending to lead to a nervous breakdown. An increase has been noted in England, America and Sweden, but none in Scotland.

Address.

SECTION ON STOMATOLOGY.

ADDRESS OF CHAIRMAN.*
BY M. H. FLETCHER, M.D.
CINCINNATI, OHIO.

The compliment of having been elected as your Chairman is highly appreciated, but the pleasure is largely counteracted by my inability to return something of value to you in the form of scientific research. I have partly finished a series of investigations on the formation of bone from periosteum, and cementum from the pericementum, but press of other matters did not allow time for their completion, so their results will have to be presented on another occasion.

The symposiums on "Dental Education" and "Interstitial Gingivitis," which are to take up most of the time of this year's meeting, are especially important to us.

Much to the credit of our specialty, it may be said that the past five years have seen great advancement in teaching dentistry, as is shown for instance, by the proceedings of "The National School of Dental Technicians." Advancement in the branches discussed at this school, apparently has stimulated greater effort in other departments of dental pedagogics.

As to the diseases of the tissues about the teeth, much can be said at the present time, but it is probable that many more facts will be in our possession at the end of another decade, for to-day finds in the ranks of our specialty, a greater number of trained scientific investigators than ever before, and many of them are giving much attention to the tissues under discussion, both histologically and pathologically, all of which will bring its fruit in due time.

Among other points which are unsettled about this subject is the nomenclature; and the present year seems especially fruitful in new names. When there is a choice of ways, the laws of natural selection usually prevail, and the survival of the fittest is the result. In order that Nature may have an abundance of material from which to select, I wish to add to the already long list of names under discussion, by nominating a term which may be old, but which seems to me to be the one of natural selection as compared with the others suggested, namely, "peridentitis."

"Pyorrhea alveolaris," indicating a flow of pus from the sockets of the teeth, is clearly a poor choice. "Alveolitis" or "chronic alveolitis," suggested by Dr. Henry Nash, does not seem to cover the case in a generic way much better than the former, since the socket, or bone, indicated by the word "alveolitis" is only a part of the tissues involved. The term "interstitial gingivitis," used by Talbot, is admitted by him to be deficient, and it seems especially so as to the term "gingivitis," since this name clearly indicates the gums and no other tissue, whereas all the tissues about the teeth may become involved: so we apparently need a generic name composed of one word in order to be acceptable, and this demand seems to be met in the term "peridentitis," for the following reasons: *Peri* is a Greek term of Latin origin, meaning around, about, or near; *dent*, or *dens*, is the Latin for tooth, and also a Greek term of Latin origin, and a termination used in modern pathologic nomenclature, to signify inflammation of the part indicated.

A comparable term to this is that of "peridontitis," indicating inflammation of the tissue surrounding a gland.

The adoption of "peridentitis" or some comparable term used as a generic name, admits of the use of descriptive adjectives for the varieties, specific stages, or pathologic conditions of the tissue surrounding the teeth; for example, acute peridentitis, or chronic suppurative, sloughing, necrotic peridentitis, indicating death of bone, etc.

This term is distinguished from pericementitis, which indicates an acute stage of inflammation of the periodontal membrane; and from our standpoint, seems to fulfil the demands in the case, being quite comparable to terms adopted for similar descriptive use in other parts of the body.

Original Articles.

DENTAL AND ORAL SURGERY.

ITS RELATION TO THE GENERAL FIELD OF MEDICINE AND SURGERY, AND THE TRUE PROFESSIONAL STATUS OR RANK OF THE PROPERLY EDUCATED PRACTITIONER OF DENTAL AND ORAL SURGERY.*

BY N. S. DAVIS, M.D., LL.D.
CHICAGO.

The American Dental Association was organized in Washington, D. C., in July, 1860, by twenty-three delegates representing the chief dental societies and dental colleges then existing in the country.

The fifth annual meeting of the Association was held in Chicago during the last week in July, 1865, and its members were welcomed in a brief but excellent address by the late W. W. Allport, D.D.S., M.D., of that city. On the evening of July 27, 1865, during the annual meeting, I had the pleasure of entertaining the members in my own home, and was called on to respond to the following sentiment offered by Dr. C. W. Spaulding, then president of the Association: "To the President of the AMERICAN MEDICAL ASSOCIATION, Medicine, Surgery, and Dentistry, departments of a common science, their disciples should constitute a common brotherhood."¹ I can not now, after thirty-five years have passed, give a better expression of my present views concerning the true relations of dental and oral surgery to the general field of medicine than by quoting a large part of the response made by me on that occasion, as follows: That medicine, surgery, and dentistry are actually departments of a common science, very few will be disposed to deny. I say a "common science" in deference to popular custom. It would be more proper, however, to use the plural form of expression, for what is generally styled medical science is really an aggregation of many sciences and their cultivation with direct reference to the prevention and alleviation of human suffering. The science of medicine properly so-called consists of facts and principles selected from every department of the natural sciences, from philosophy, psychology, political and social economy, and their application to the elucidation of the causes, nature and treatment of such diseases, deformities and injuries as are liable to afflict our race. Therefore, the student of medicine in its general sense

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1. Chicago Medical Examiner, September, 1865, p. 576.

is emphatically a student of Nature. And not only so, but he studies the broad fields of Nature for the highest and noblest of temporal objects, namely, to qualify himself for mitigating or relieving the imperfections, deformities and diseases of his fellow men, whether they occur in the teeth, the organs of special sense, the extremities, or the more vital organs within the body.

Medicine, surgery and dentistry are all based on chemistry, anatomy, physiology, pathology and materia medica. Without chemistry and anatomy no one of you as dentists can know either the composition or structure of a single tooth, or its connection with the jaws, gums, blood-vessels, nerves, etc. Without physiology no one could know the natural uses and influences of the several parts just named or the relations of the teeth to the whole processes of digestion, assimilation and nutrition.

As pathology bears the same relation to organized structures in an imperfect or diseased condition as physiology does to them in the natural, so without a knowledge of it, neither the physician, surgeon nor dentist could know anything of the origin, nature and tendencies of the diseases and defects he professes to treat. The materia medica in its full scope includes everything that can be made useful in the mitigation or removal of any of the ills to which our race is liable. The gold that fills the cavity in a tooth, the wash that soothes an irritated gum and the instruments used for adjusting them are as much a part of the materia medica as are the pills and powders administered by the physician.

Consequently, these five branches of medical study are fundamental, and no man can do full justice, practically, to the most limited specialty without a thorough knowledge of them all. Every member of the American Dental Association will doubtless acknowledge that a dentist certainly understands the composition, structure and mode of development of the teeth, together with the causes that render their development defective or induce in them disease and decay. But in every tooth, you have three of the five primary forms of living, structural organization, namely, the fibrous, vascular and nervous, with the peculiar arrangement of inorganic matter to give it solidity.

A knowledge of these structures, whether chemically, anatomically or microscopically, involves a knowledge of the same structure in all other parts of the body. To understand development of a tooth and its appendages from materials furnished by the blood involves a knowledge of the blood itself and of all the laws that govern the intricate processes of assimilation, nutrition and disintegration in living structures generally.

The same remark applies with equal propriety to the causes of imperfections and diseases of the dental organs and the means for remedying them. Therefore, so far as dentistry involves scientific knowledge, as distinguished from a mere mechanical art, it rests on the same foundations and necessarily involves the same series of studies as all other departments of medicine and surgery. The various organs and structures of the human body are not as so many isolated parts, the functions and diseases of which have no influence on each other, but they are so intimately connected and mutually dependent, that not a single morbid impression can be made on one organ that will not exert some modifying influence on all the rest.

The same heart sends the blood to every organ and structure of the body. The same nerve-centers radiate the delicate threads that are to impart sensibility or to

command motion in the remotest part of our organization. And the same vital properties pervade every living atom. Every link in the chain of actions constituting digestion, assimilation, nutrition, disintegration and excretion is so connected that not one can be broken without embarrassing the action of the whole. Consequently, it is not possible to comprehend the nature, tendencies and results of the diseases of one organ without studying their influence on all the others, and vice versa. There can be no such thing, therefore, as specialism proper in the study of pathology or the nature of diseases. The whole field must be studied before any one of its parts can be fully understood.

There is still another aspect of this subject that is worthy of a moment of thought. From the nature of the laws that govern mental processes, exclusive practical attention to any one department of a general subject tends to contract and bias the mind by giving undue relative importance to one series of facts, while neglecting another series of equal importance. An evil of much greater magnitude, however, consists in the strong tendency of specialism to encourage incompleteness of professional education. During a connection with medical teaching for sixteen—now more than fifty—years I have rarely found a student who on his final examination proved himself ignorant of some important department without his alleging that he did not intend to practice that particular department and consequently had paid less attention to it. Indeed, incompleteness of education leading to the adoption of partial and restricted views and the universal tendency to neglect whatever is not intended to be turned directly to practical pecuniary advantage constitute the foundation of a large part of the evils that exist in the professions of our country. During the thirty-five years that have elapsed since the first expression of the foregoing views the last-named evil has been developed to an extraordinary degree. Instead of a few divisions of the wide field of medicine, we have seen it cut into almost as many specialties as there are organs or groups of organs in the human body. And we are told that every individual member of the profession should limit his study and practice to some one class of diseases, or to the diseases of some one organ or group of organs. By thus concentrating attention upon a limited number of diseases or injuries, it is claimed that greater skill will be acquired in their treatment and greater advancement in our knowledge of their nature and tendencies. It is also claimed that the whole field of medical sciences with their practical application is so extensive that it is impossible for one man to so master the whole as to properly qualify himself for the practice of all its departments.

This process of reasoning is plausible and to a limited extent true. It is true that in all the mere mechanical arts, the greater the division of labor, and the more perfectly each man is restricted to a certain series of movements, the greater will be the accuracy and skill acquired in their performance.

The dentist who restricts his work entirely to the processes of filling teeth may possibly acquire greater skill in that particular work—provided he has enough of it to do—than he would if in addition he extracted teeth, fitted artificial teeth, treated diseases of the mouth, etc.

The surgeon who restricts himself entirely to the more important and delicate operations on the eye, or the ear, or the blood-vessels, may acquire greater dexterity in performing these operations than if he attended

the whole field of operative surgery. But the rule applies only to such operative procedures as are essentially mechanical, and can not be extended to the treatment of the diseases of particular organs without causing much more evil than good, simply because there is no living structure or organ in the body so isolated that its functions both in health and disease are neither influenced by other organs nor by the general functions of the tissue metabolism. Yet to such an extent has specialism been carried, both in education and practice, that we have special colleges not only for the education of dentists, but also for midwives, for psychoneurologists, for electrotherapists, for psychopathists, for physiopathists, for osteopaths and even evening or night colleges for the accommodation of those who are obliged to pursue some other occupation for a living during the day. In consequence of all this special or one-sided education, it is quite common to see patients suffering with headaches, indigestion and general prostration vainly treated week after week by local applications to the vagina and neck of the uterus when all they needed was fresh air, judicious exercise and proper diet; or patients suffering with plain scrofulous ophthalmia and being treated exclusively by local applications to the eyes until the edges of the eyelids are being denuded and the cornea ulcerated, when the prompt internal administration of alteratives and tonics in the beginning would have soon removed the whole difficulty; or patients with decaying teeth, diseased gums and aphthous sore mouths being treated solely by teeth cleaning, mouth washes or powders and local anesthetics to relieve pain, when the whole trouble depended on faulty assimilation and imperfect nutrition. Another consequence is that every family, instead of one, needs from six to ten doctors to supply its needs properly. There must be a special obstetrician to see that the children are born properly; another for diseases of the children; a third for the diseases of the mother; a fourth for those of the father; a fifth for the eyes; a sixth for the ears; a seventh for the nose, throat and air-passages; an eighth for the lungs and heart; a ninth for the nervous affections; a tenth for the teeth, etc.

Doubtless before this you are ready to ask if I oppose all specialists in the medical profession. I answer, "by no means." There is a natural basis on which a limited number of specialties can be founded with great advantage; and which indeed develop themselves by the natural and inevitable course of circumstances. For instance, the diseases, deformities and defects of the dental organs, involving no immediate changes to life and requiring for the treatment of many of them a special mechanical manipulation, naturally and almost necessarily constitute a special department of surgery—a department, indeed, that should be regarded as equal in importance and dignity and consequently requiring equal education with every other branch of the profession. Those conditions of the eyes requiring delicate and dexterous operations are also mostly chronic and allow the patient time to seek and obtain the services of men who have acquired more than ordinary skill in the performance of such operations. The same is true of those conditions requiring the most dangerous and difficult surgical operations on other parts of the body, such as lithotomy, ovariectomy, the ligating of large and deep-seated arteries for aneurysms, etc.

Hence it is eminently proper that in all large cities where the required opportunities are afforded, men

should devote special attention to such departments. But this can never justify or excuse any class of medical men for being content with only a partial medical education. In strict harmony with the foregoing views, several of the leading dentists in New York, Chicago and other cities, who had studied medicine as a whole and received the degree of M.D., became members of the local medical societies; and from these they were sent as delegates and became members of the AMERICAN MEDICAL ASSOCIATION. They were not only treated as actual members of the "Common Brotherhood," but at the annual meeting in Richmond, Va., in 1881, on the motion of the late Dr. Samuel D. Gross, seconded by Dr. L. A. Sayre and myself, a section of dental and oral surgery was created on the same footing as all the other Sections of the ASSOCIATION. The Section was organized by the appointment of Dr. D. N. Goodwillie, of New York, as chairman, and Dr. T. W. Brophy, of Chicago, as secretary, and it has maintained an active and honorable existence to the present time, as your presence here to-day abundantly attests. To still further promote the union of dentistry with all the other legitimate departments of medicine and surgery, at the annual meeting of the AMERICAN MEDICAL ASSOCIATION in Chicago, in 1887, the following resolution was adopted by nearly a unanimous vote:

Resolved, That the regular graduates of such dental schools and colleges as require of their students a standard of preliminary education and a term of professional study equal to the best class of the medical colleges of this country and embrace in their curriculum all the fundamental branches of medicine, differing chiefly by substituting practical and clinical instruction in dental and oral medicine and surgery in place of clinical instruction in general medicine and surgery, be recognized as members of the regular profession of medicine, and eligible to membership in the ASSOCIATION on the same regulations as all other members.

Obviously there is no more propriety in having a separate profession of dentistry, than there is of ophthalmology, or neurology, or gynecology. The same standard of preliminary education and the same curriculum of medical studies covering the four years' course should be required of all who propose to practice in any of the departments or specialties of medicine and surgery. All should be required to pass the same rules, both ethical and legal. Let there be in every medical college faculty a professor of dental and oral pathology and practice on the same basis that you have a professor of ophthalmology, neurology or gynecology.

The instruction by an efficient occupant of such a chair is needed as an important aid to every practitioner of medicine, whether his field of practice is in the city or the country. For if he never attempts to treat a defective tooth or a diseased gum, he should be able to recognize the existence of such conditions and promptly direct the sufferers to those who would treat them. And for those members of the college class who intend to make dentistry their special field of practice, it would only be necessary to supplement their general course by from six to twelve months of post-graduate mechanical and clinical dental work, as do most of those who choose other specialties after their graduation. By thus unifying all departments of medical and surgical practice, including dentistry, under the same educational standards and the same title of Doctor of Medicine, the influence of the profession would be increased. Better economy could be practiced, inasmuch as it would dispense with the necessity for providing separate laboratories and professorships for teaching dental students

the fundamental branches of medical science, as well as separate state boards of examiners, and some embarrassments pertaining to professional rank and position would be removed.

At the first annual meeting of the Section, in connection with the AMERICAN MEDICAL ASSOCIATION, in 1882, one of its members presented an interesting paper on the importance of having dental practitioners for both the army and navy service, and the need of such has become so apparent since the war with Spain that serious propositions have been made in government circles, to have at least one dental and oral surgeon appointed for every 1000 enlisted men in the military service. But if they are not fully educated and graduated M.D.'s., can they rank as regular members of the army and navy medical corps? Or will they be ranked simply as artisans? These same questions were raised recently on a proposition to appoint a dentist on the staff of one of the London hospitals. Another important embarrassment arises every time a dentist educated in an exclusively dental college desires to become a practitioner of medicine. In his application to a medical college, he always insists that he ought to be graduated M.D. by simply attending the senior year of the medical college, when not one out of twenty of such applicants has been educated in either anatomy, physiology, pathology or materia medica and therapeutics, and it is practically impossible for him to make up these fundamental deficiencies while attending the practical and clinical instruction of a senior year.

This, however, brings us back face to face with the most radical evil that pervades all departments of professional education in our country, namely, the dominant spirit of commercialism that is ever ready to sacrifice mental discipline, breadth of knowledge and soundness of judgment for whatever leads most directly to the chance of earning the dollar.

COURSE OF STUDY.*

BY W. A. EVANS, M.D.
CHICAGO.

In preparing this paper I have had before me the time cards of several of the very best dental schools that this country has produced. Some of these have rather nominal university connection; some have considerable university control; some have close medical school affiliations. Such figures as I use are obtained by averaging those derived from these schedules.

The question is not one of condemnation of the dental course as now existing. Lest there be some misunderstanding in this regard, I hasten to say that the average dental course is better than the average medical course. I will even state the matter more strongly: For the average dental student any good dental course is better than is the best medical course for the average medical student.

Unquestionably the past demand has been, and the present one is, for a dentist who can meet the ordinary questions that arise in the course of dentistry without any special reference to the more abstruse or remote problems, or to the more remote bearings of ordinary problems. This demand is changing, and the dentist of the future who succeeds will be a man somewhat differently educated.

If I may institute a comparison between the medical and dental courses, I should call attention to these facts: A small proportion of the medical graduates go through hospitals, thus learning the handling of patients, the every-day care for medical details and the bearing of responsibility, whereas, every dental student has two years of practical ordinary work in which he learns the handling of patients, the every-day care of dental details, the doing of things and the bearing of responsibility.

This matter of responsibility is no small item. When we must suffer the consequences or gain the rewards of a certain position, we learn that position more accurately, more judiciously and more permanently than we could ever have learned it otherwise. The medical dispensary in efficiency is not to be ranked with the dental infirmary.

When all this has been said, the fact remains that we do not make of the dentist as broad a man as is possible. In looking over these catalogues I find that 59 per cent. of the professors of the dental schools investigated have some professional title in addition to their D.D.S., or without the D.D.S. I do not refer to literary degrees. This is evidence of recognition of the truth of my statement on the part of these men whose brains have put them in positions of authority.

How are we to increase not only their breadth, but their desires for greater breadth? The second clause is more important than the first.

In averaging these time-cards I find that in the first year in prosthetic technics, prosthetic dentistry and other purely dental subjects, an average of sixteen hours a week is spent. In anatomy, physiology, chemistry, histology, bacteriology and materia medica twenty-one hours are spent. If we figure on Dr. Bayard Holmes' basis of two hours of preparation and one of recitation constituting an hour of study, then the twenty-one devoted to foundation work would increase perceptibly. Nevertheless, when we compare the number of hours of preparatory study required by the dental student with the preparation time required by the medical student, we find that the first year in dentistry does not require as much work as the first year in medicine. It would be advisable to make several changes. One would be to add a competent course in physics. It is usually given in connection with chemistry or made a nominal entrance requirement. The importance of this subject is so great in dentistry that it requires special consideration: it should not be left to the hazard of an entrance requirement. Dental physics also should be taught.

I find but little reference to embryology and comparative anatomy. Yet, when you finally solve the disease known as pyorrhea, you will have to thank the dog. There are any number of dental diseases apparently impregnable, whose flanks can be turned through knowledge of the lower animals.

I do not know whether I would decrease that average of technics in the first year or not; but the number of hours devoted to the broader subjects ought to be increased. I find one school scheduling infirmary in its first year. This is wise. It seems desirable to put the student in the infirmary in the beginning of his work. A proper plan would be to assign each first-year man to a third-year man, and have the former serve the latter in the capacity of an assistant. He would do no work, but would watch the senior, wait on him, dry cavities, etc. The advantage of this would be twofold. It would give the senior confidence and self-control. It would

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save his energies. It would increase his observation and his mental acuteness. The first-year man would gain in many ways. Most important of all would be the fact that it would give him an idea as to the dental bearings of anatomy, histology, chemistry, etc. The declaration of Mr. Flannagan, of Texas, to-wit: "What are we here for?" has been somewhat lost to sight. While we must ever broaden, we must always remember that the object is to make a dentist a broad, learned, growing, developing dentist, but always a dentist.

Coming to the second, or junior, year we find that the infirmary gets an average of eight hours a week on the assignment schedule. In a few schools the infirmary is conditional. The purely dental subjects get an average of sixteen hours. This includes prosthetic technics, orthodontia technics, prosthetic dentistry, operative dentistry, instrumentology, oral surgery and orthodontia. Other subjects, such as anatomy, physiology, pathology, bacteriology, chemistry, and materia medica and therapeutics get sixteen hours. My general criticism of the first year would apply with more force here. The disproportion is too great. There should be less of technical, laboratory and didactic instruction, and more of other work: less of the art, and more of the science of dentistry—dentistry broadly considered.

In the third year I find infirmary gets an average of twenty-five hours. In my observation the student actually puts in over twenty-five hours. To orthodontia, oral surgery, operative dentistry, prosthetic dentistry, porcelain and bridgework, and applied pathology, eight hours are given; to other subjects about three hours. The criticism that I would make here is that too little study is required of the senior student. He is kept busy during the day, but the system of clinics and lectures without quizzes does not employ all his time. This is bad, because in this way he fails to get the full advantage of what is going on around him and thus gets out of the habit of studying while he is still in the school.

Finally there are two general considerations to be noted. The dental course should be a four years' course. The criticism against lengthening the medical course does not apply here, for you keep your student far better in contact with his ultimate aim, and there is little danger of your making a scientist and ruining a practitioner. The dentists now practicing want it; the people do not oppose it. It rests with the possibility of unity in the dental faculties.

The second general point is this: Dentistry suffers whenever it is dissociated from medicine. They are not only natural allies; they are of the same body. Any effort at dissociating them tends to make of dentistry an art and possibly a trade rather than a science. Therefore, every possible effort should be made to hold them together. That which a young man gets in college comes in two general ways—what he gets from lecturer and demonstrator, and what he absorbs from his atmosphere. The latter transcends the former. Believing this, I must think the medical schools and the dental schools should be joined; that certain classes should be taught in the same section rooms; certain subjects should be covered in identically the same way; certain aims should be common, and association between the student should be free and untrammelled. This does not mean any loss of dignity to that which is properly a specialty, but it means an added dignity from an equal position in a great sisterhood.

103 State Street.

TECHNICAL VS. THEORETIC TRAINING.*

BY JOHN S. MARSHALL, M.D.

CHICAGO.

The subject which has been assigned to me seems to contain some very interesting and serious questions which lie at the very foundation of the present system of training in our American dental colleges.

This is a practical age and Americans are a practical people. Our public educational systems are all planned on the basis of practicality. To our people an education which does not fit the young man or the young woman for the practical, every-day affairs of life is looked on as being of little value. The great aim in life of the average American citizen is money-getting, and therefore the education which does not fit him to obtain the object of his ambition is in large measure valueless to him.

This desire for money-getting permeates the professions to such an extent that the young men who seek to enter their ranks are ambitious to reach the goal by the shortest possible road, and by the least expenditure of money that will fit them to begin the earning of a livelihood, rather than to prepare themselves in every possible way and in the most thorough manner for the duties and responsibilities of their high calling, regardless of the time and money spent in the preparation.

This desire to enter the professions with the minimum of preparation that will enable one to compass a living does not have a tendency to raise professional standards either in culture, scientific attainments, or ethics. In fact, the whole tendency is degrading and can work only ill to the honor of the profession, to the individuals who thus prepare themselves for the duties of professional life, and to the innocent public on whom they practice.

This commercial spirit in the professions has made it possible for any small coterie of men, imbued with the money-making and advertising spirit, to establish a college for the avowed purpose of educating young men and women for a professional career—especially in medicine and dentistry—but in reality for the covert purpose of gratifying their ambition for money-making and to see their names in the public prints, and this many times with no regard to an honest return to the student in the way of sound professional teaching for the money paid into the treasury of the institution.

Even the best of the professional colleges are not entirely free from this commercial spirit and they vie with each other in their ambition to increase their student body beyond that of their neighbor, employing means sometimes which are not entirely above reproach. On the other hand, many of the better class of dental colleges have been striving to deal honestly with their students, and to give them the best professional training that the time and the money invested would permit. To this end they have arranged their courses of instruction with the view of giving their students a good technical training in all that pertains to the purely mechanical and operative departments. But, in striving to attain the highest development of the student in these directions, the equally important work relating to the fundamental medical sciences, which are the basis of our knowledge of health and disease, and which govern the treatment of disease in all its forms, has not been

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studied with the same degree of energy, nor has it been given the prominence in the curriculum which its importance deserves. As a result of this, the dentist who is graduated from our colleges to-day is a first-class jeweler, capable of making the most beautiful pieces of crown, bridge or plate work, and inserting the most brilliantly finished gold fillings, after the latest and most approved methods of cavity preparation, anchorage, condensation and polishing. But what is all this worth to the patient if, through ignorance of the laws which govern the resistance of tissues to irritation, or of the principles of antiseptics, a pulpitis follow the insertion of such a filling, or because of improper treatment of a septic root canal, the crown or bridge is lost by reason of the development of alveolar abscesses which might have been avoided by a proper knowledge of the principles of antiseptics and of surgery?

What can be said of a system of teaching which fails to prepare the graduate of dental surgery to distinguish the differences between a case of aphtha—common canker-sore mouth—and a syphilitic mucous patch? How many really know the differential diagnosis between these diseases? Syphilis is so common in these days that the dentist needs to be well grounded in the clinical aspects of the disease in order to guard his patients and himself from inoculation.

Again, if the dentist has not a good knowledge of the anatomy, physiology and pathology of the nervous system how can he diagnose a case of reflex neuralgia of the fifth nerve from a case of hyperemia of the pulp in a tooth which gives no external evidence of injury or disease of the crown? It is not sufficient that he have a good knowledge of the anatomy of the teeth, and of the bones, muscles, blood-vessels, nerves and glands of the mouth and jaws. He must have a wider range of knowledge than this implies, or else he will never occupy that exalted plane of professional equality with the members of the medical profession which it is his right and duty to do.

Dentists sometimes complain that their medical brethren do not always treat them with that degree of respect which is due to them as professional equals; that they are not consulted as to the best method of treatment to be pursued in a given case of dental or oral disease; and that the physician presumes to dictate as to what shall or shall not be done rather than to advise with the dentist as he would with the oculist, the laryngologist or any other specialist, in a case that came under their especial departments.

When much lack of courtesy occurs on the part of the physician, it may usually be set down either to prejudice and narrow-mindedness or to some unfortunate experience, for it can not be said that dentists have never given their medical brethren cause to doubt their ability to render an intelligent diagnosis in certain oral diseases, or to treat such cases after the most scientific methods.

Thirty years ago a large majority of the rank and file of the dental profession were without college training, and consequently held no professional degree, while many of them were positively ignorant of all that pertained to the art of dental surgery save the extraction of teeth, the making of a rubber plate and plugging a tooth with amalgam or gold. Under such circumstances it was no wonder that medical men of education did not feel justified in calling such dentists in consultation over serious cases. The educated dentist, however, has never

had cause to complain of his treatment by the cultured medical man, for no class of men are more anxious to divide the responsibility of a case calling for special knowledge than is the educated, cultured physician. No man more fully realizes than he that the field of medicine has become so large that it is impossible for even the most brilliant mind to acquire all the knowledge comprised in the various branches of medicine and surgery, or even to completely assimilate all that belongs to a single department, and therefore he is glad of the opportunity for the good of his patient and the relief of his own mind, to call in consultation a man more eminent than himself in that particular department, by reason of his superior knowledge and skill.

Technique or technical training, as it is generally understood to-day, was not a realized fact ten years ago. At that time the system was still in the embryo stage. The idea was in the minds of a few progressive men who realized the great need of more careful training in the manipulative departments of dental surgery. Little by little a system has been evolved which covers the entire field of mechanical and operative dentistry, so that to-day in our best institutions it would be difficult to plan a more thorough course of instruction in these departments.

The difficulty, however, lies in the fact that so much time is being spent in the manipulative training of the student that his scientific education is being neglected, and instead of making scientific practitioners out of our students, we are training them largely as mechanics and artisans. Do not misunderstand me on this latter point, for I would not have his technical training made any less thorough or complete than it is to-day, for manipulative skill of the very highest order is required in the first-class dental surgeon. But he needs much more than this if he is to intelligently meet the grave responsibilities of his calling. The health of his patient, and often life and death, wait on his decision in the treatment of many forms of dental and oral diseases. Is it not therefore of vital importance that he should be well grounded in all of those scientific departments of study which are the foundation of a broad medical education—*anatomy, physiology, histology, pathology, chemistry, materia medica, therapeutics and surgery*? How can he recognize morbid conditions if he knows little or nothing of the normal appearance of tissues or of the physiologic functions of the various organs, parts and systems of the body, and their interdependence on each other? How can he hope to successfully treat even the ordinary forms of disease which belong to his specialty if he is deficient in the knowledge of general and surgical pathology, or of the administration of remedies and their therapeutic effects?

What the profession needs to-day is not less technique, but a more thorough training in those sciences which make the intelligent physician and surgeon.

The question which very naturally arises in the consideration of this subject—provided that you agree with me that this training in the general medical sciences is necessary—is how may this scientific education be obtained?

I would suggest: 1. So elevate the entrance requirements that only the most intelligent and studious can hope to gain admission to the dental colleges. 2. Lengthen the college course to four years of nine months each. This would give ample time for the most thorough training. 3. Place the dental students in the same

classes with the medical students for the first two years of the course of study, and require them to take the same work and pass the same examinations; and during the last two years devote all the time to those subjects which pertain to dental surgery. 4. Graduate no student who has not fulfilled all of the requirements of the course.

But then, the commercial spirit again comes to the front, and contends that such a movement would ruin our schools. If such schools were organized for the purpose of *just making money*, then the sooner they disappear the better. There are already too many schools in existence and only the better ones should live.

If dental surgery is a department of medicine, then let it place itself on the same plane with the other learned professions. But it can do so only by adopting the same high standards of culture, professional attainments and ethics.

34 Washington Street.

ENCOURAGEMENT OF HIGHER EDUCATION AND ORIGINAL RESEARCH.*

BY WM. ERNEST WALKER, D.D.S., M.D.

PASS CHRISTIAN, MISS.

I have the honor of submitting for your consideration the following outline of a plan which has for its object the encouragement of higher education and original research. To this end I propose that the Section on Stomatology of the AMERICAN MEDICAL ASSOCIATION take steps to acquire the power or authority, whether by charter or otherwise, by virtue of which it may be empowered to confer on deserving individuals, regardless of sex, the degree of S.D., *Stomatologic Doctor*—Doctor of Stomatology—and in order that this degree may stimulate to higher education and original research I would recommend that this degree be conferred strictly and only on compliance with the following requirements: 1, that the recipient shall be of good moral character and in good professional standing; 2, that he shall have previously acquired the degree of M.D. from an institution not conferring the degree of M.D., subsequent to 1903, on less than the requirement of an attendance on four sessions, of not less than seven months each, in four different years; 3, that he shall also have taken a course on the mouth and its associate parts; 4, that he shall have made some original, meritorious and valuable contribution to stomatology; 5, that this degree shall not be conferred except on the unanimous vote in the affirmative, of all the members present at the meeting at which this action is contemplated.

Dentistry stands to-day as the only specialty in medicine which does not universally require the degree of M.D., as a prerequisite to entrance on the practice of a specialty; but it is a source of gratification to see that in the United States the number of dental practitioners with the degree of M.D. is increasing annually.

In the State of Virginia, of the graduate dental practitioners enrolled in Polk's Dental Register (1898), 14 per cent. have the degree of M.D., and I have no doubt that the forthcoming edition will show a greatly increased percentage, as I personally know of a number who have acquired it since 1898.

I believe that offering the stomatologic degree, as outlined above, as a goal to be reached only through the

previous acquirement of the medical degree in addition to the course on the mouth, will serve to stimulate a greatly increasing number to acquire that degree and thus receive the benefit of its broadening and elevating influence.

I need not argue, before this body, the propriety of the provision that the recipients of the degree S.D. be required not only to hold the degree M.D., but also to have taken a course on the mouth and its associate parts. You will note that the requirement that the M.D. shall have been conferred by a college not conferring the degree *subsequent to 1903* on less than the requirement of an attendance on four sessions, does no injustice to those having received the M.D. previous to the inauguration of the four-year course, provided that their alma mater discontinued, before 1903, the shorter course previously *en règle*; thus having the assurance that the standard was high, considering the time at which the degree was conferred.

The fourth requirement entitling the recipient to the degree S.D. is that not only shall he have made some addition to "the sum of the scientific knowledge concerning the mouth," but such additions shall not only be *original* but they must be also *meritorious*; and not only "original and meritorious" but also valuable.

Original work may be meritorious because of the labor and self-sacrifice which the work represents, but it may nevertheless, in its final result, be practically valueless to stomatology; wherefore, the three qualifying terms—original, meritorious, valuable.

The fifth requirement, that the degree S.D. be granted only with the unanimous consent of the members present at the meeting at which this action is contemplated, together with the other four requirements, sufficiently guards against the degree ever being conferred except on fully deserving individuals.

I also beg to submit the following as a suitable form, certifying to the granting of the degree of S.D. by this Section:

AMERICAN MEDICAL ASSOCIATION.

Section on Stomatology.

To all those to whom these presents shall come, greeting: Know ye that by virtue of the authority vested in the Section on Stomatology of the AMERICAN MEDICAL ASSOCIATION, we, the members voting unanimously in the affirmative, do this day confer on X Y Z, M.D., the degree of S.D.—*Stomatologic Doctor*—in recognition of his original, meritorious and valuable contributions to the sum of the scientific knowledge concerning the mouth; he having complied with the following requirements, *to-wit*, that no person shall receive this degree except that: 1, he shall previously have acquired the degree of M.D.; 2, he shall have taken, in addition, a course on the mouth and its associate parts; 3, he shall have made some original, meritorious and valuable contribution to stomatology; 4, it shall have been unanimously voted by the members present that the degree be conferred on him.

Wherefore, we, the members of the Section, have caused to be affixed hereunto the signatures of the acting chairman of the Section and of the three last retired chairmen, and of the present Secretary; the same to be stamped with the seal of the Section on Stomatology of the AMERICAN MEDICAL ASSOCIATION.

Thus briefly outlined, I submit this project and hope it may receive favorable and earnest consideration.

[The other papers presented in the Symposium on Dental Education will appear in subsequent issues of THE JOURNAL.—Ed.]

THE MUTUAL Life Insurance Company of the Physicians of Paris is a new organization, recently founded by certain members of the profession at Paris. Membership is limited to physicians under 50 years of age. The annual fee is \$6. The company will start with \$200 as the maximum paid the family of a deceased member, but as the society grows this sum will be increased.

*Presented in a Symposium on Dental Education, before the Section on Stomatology, at the Fifty-first Annual Meeting of the AMERICAN MEDICAL ASSOCIATION, held at Atlantic City, N. J., June 5-8, 1900.

MEDICINE AND DISEASE IN PHILIPPINES.

BY DAVID J. DOHERTY, M.D.

CHICAGO.

This subject should be treated by some one who has personal information, but our army and navy medical officers have doubtless been too much occupied by their duties to indulge in study or composition. The medical department at Washington has as yet issued no reports, while standard works on geographic pathology give but little attention to the Philippines, and original ones by Filipino or Spanish authors are not accessible to many American readers. Yet the Philippine Islands, with their teeming millions of inhabitants, are on our hands and we must face our duty toward them. All this is my apology for presenting this paper, which contains in condensed and systematized shape all the data that I have gathered from a number of authorities, whose titles are given in the bibliographic index at the end of the article.

Modern medicine bases its classification of diseases on etiology; and with the aid of bacteriology is rapidly studying and cataloguing the etiologic factors of disease. Still we have not yet advanced far enough to dispense with the old views as to the influence, causal or conditional, of physical environment, such as climate, temperature, food, etc. These factors must still remain, if not as causes, at least as conditions. They may be the *tertium quid*, the copula between the microbe and its victim, increasing or inhibiting its potency or virulence, and hence it is necessary to mention briefly the climatic conditions of the islands.

The Philippine archipelago possesses "a singular variety of climate." (Encyclopedia Britannica.) This is due to its extent, from the fourth to the nineteenth degree of north latitude; to the division of its surface into innumerable islands; to its many channels and currents, which carry the winds of the Pacific; to its chains of mountains, their altitude and direction; to the fact that the warm equatorial current tilts full against it and sweeps northward along by it; and, chiefly, to its location in a direct line between the varying atmospheric pressures of the table-lands of Asia and Australia. This condition explains the contradictory statements of travelers as to its climate, the paradox that the portion nearer the equator is more healthful than the northern islands, and the fact that it is an exception to the rule of double alternating wet and dry seasons which characterize equatorial lands. Its location exposes it to the sweep of the monsoon, which blows during the northern winter from the high-pressure atmosphere of Asia to the low-pressure atmosphere of Australia, and in a reverse direction during the northern summer. The result is a general division of the year into two portions: that in which the northeast monsoon blows, or from about October till February; and that in which the southwest monsoon prevails, from June till October, with an interval of calm. The first period is cool and dry, the interval very hot, and the second period wet. As may be inferred, no absolute statement as to the date of occurrence and the duration of these periods can be made, for they vary in different islands.

The temperature is high and constant, its mean ranging, according to latitude from 72 to 81 F. in the cold season; 88 to 82 F. in the hot season; and 87 to 83 F. in the wet. It must not, however, be inferred that one can not feel cold there, for especially at night, even at the sea-level, I have noted that travelers sometimes speak

of "an overcoat being agreeable," of "blankets being desirable," of "being numb with the cold," etc. The humidity is rather uniform. The rainfall at Manila in inches averages 8.6 in the cold season, 10.4 in the hot, and 36 in the wet. At Sulu, the range is 15, 33, and 25 inches, respectively, in the same seasons. The barometric excursion is between 755 and 762 mm. Atmospheric electricity is considerable, almost every night showing flashes, and during the wet season thunderstorms are of almost daily occurrence. At the change of the monsoons, which takes place near the equinoxes, and especially at the autumnal, violent winds occur, sometimes causing typhoons or cyclones.

A knowledge of these meteorologic data is necessary in order to study the nature and etiology of the diseases, which exist in the archipelago, and to determine rules of public hygiene and private health. The high temperature and the humidity induce an excessive action of the skin. This constant diaphoresis is the cause or occasion of some of the many skin diseases that prevail there. Continued hyperactivity of a tissue leads eventually to atrophy or paralysis, and the way is opened to other skin diseases. Constant thirst is another sequela, and this leads, more by its too generous gratification than by its neglect, to anorexia and various forms of dyspepsia. Diminished urinary secretion is another which leads on its own cortege of ailments. Muscular lassitude and weakness, inactivity and curtailed respiratory action are also effects and in turn become causes. Any lesion in the delicate physiologic mechanism impairs the function of other parts, and the door is opened to all the endemic, epidemic and sporadic diseases, which make up the nosology of the Philippines.

It must not be inferred that the climate of the Philippines is deadly. On the contrary, it is the most healthful of any in the tropics. But the physical conditions which determine the growth and spread of germs and which affect the susceptibility of the human race prevail more in the tropics than elsewhere. Hence, it follows that neither the individual nor the race inhabiting the tropics can be as healthy or as vigorous as those in the temperate or sub-arctic zones. It also follows that, notwithstanding the help which Nature gives him by its monsoons and typhoons, man himself must obey every rule of hygiene and every precaution of experience in order to hold his own in the struggle for existence.

My review of the diseases which occur in the Philippines is drawn principally from Barcones' "Estudia para una Nosologia Filipina." Dr. Barcones was a surgeon of the Spanish navy, who spent two years in the hospitals at Cavite, Zamboanga, Joló and Manila. In scientific insight, common sense and clearness, his work is fully equal to any similar book in French, German or English. I have also read Cavada's "Historia Estadística," a huge accumulation of more or less reliable data arranged by provinces and gathered from reports of Spanish officials. These data, when tabulated, enable us to judge the relative frequency of diseases, though the popular and symptomatic character of the diagnosis robs them of scientific value.

The first place in frequency is occupied by fevers: the malarial form predominating, the others being typhoid, malignant, putrid and catarrhal. Next in order come dysentery, phthisis and other pulmonary affections, skin diseases, colics, convulsions, leprosy, smallpox and buboes. The table also contains the names of cholera, rheumatism, inflammation of the eyes, dropsy, measles,

erysipelas, paralysis and worms. Finally are mentioned two diseases by their native names, *soroc-soroc* and *colocolo*. The former I have not been able to identify; but the latter is a condition of atrophy of the male genital organs due to early marriage and excessive sexualism common in hot countries.

Barcones divides his work into three parts, treating respectively of endemic, epidemic and sporadic diseases.

ENDEMIC DISEASES.

Those due to telluric infection.—1. The most important in this class is the chronic diarrhea of hot climates. It is not dysentery nor bilious, mucous or choleric diarrhea. It is a specific disease probably due to a specific germ and characterized by frequent stools without tenesmus, not bloody, but thin, profuse and grayish or whitish-yellow in color. The points of differential diagnosis are: absence of fever, no tenesmus, profuseness of stools, and obstinacy to treatment. The patients are or become anemic, the tongue becomes aphthous and ulcerated, hemorrhagic maculae form in the mucosa, grit-like shreds of epithelium are found in the stools, which become more frequent and profuse, pustules form in the skin, which is sensitive to cold, the extremities become paralyzed, the liver atrophies, the intellect is numb and complete marasmus closes the scene. 2. Acute suppurative hepatitis is also frequent and seems to be due to a specific infection.

Those due to paludal infection.—1. Malaria, the dominant forms being double quotidian and double tertian. All races are subject to this, and new arrivals are particularly amenable. It prevails throughout the entire archipelago, but is worse on Balabac, Basilan and the subarchipelago of Sulu. 2. Continuous fevers, which may be benign, grave or pernicious. The first has no cold stage, but a burning skin and intense headache, perhaps also bilious vomiting and jaundice. It runs three to ten days and generally leaves gastric trouble as a sequela. The grave form is two-fold: one, resembling severe typhoid, but with intermissions of fever, lasting six to seven days and terminating by a crisis; the other, with a similar range of fever, but with bilious vomiting, icterus, mucous ecchymosis and cerebral derangement. The pernicious fever may be comatose, apoplectic, deliriant, epileptiform, syncopal, algid or choleric form. It occurs chiefly in Basilan, Balabac and Joló. All these types of pernicious fever have similar characteristics in onset, season, fever, condition of abdominal viscera and malarial protozoa in the blood. A low temperature, especially in the young, is serious. 3. Larvate paludism—neuralgia, urticaria, etc.—occurs in anemic women and yields to quinin. 4. Paludal cachexia, general among the natives and characterized by anemia, pale or muddy skin and mucosa, small and slow pulse, cardiac weakness and soufflé, and diminution of red blood-corpuscles, besides enlarged liver and spleen. The points for differential diagnosis of malarial infection are splenic enlargement, protozoa in the blood, and action of quinin. Barcones says that, in the Philippines, all pernicious fevers should be suspected to be malarial and the patient should be saturated with quinin as quickly as possible. 5. Manila fever. A special type of pernicious fever occurs in Manila during the hot months of April and May, and sometimes becomes epidemic. Dr. Barcones found it nowhere else, and he was not able to learn from other doctors of its occurrence elsewhere. He thinks it is malarial in character, but other physicians class it as distinctly specific. Malaria is a disease of

hot and moist mouths, while this occurs in the hot and dry season. The onset is insidious, without initial chill and with but slight symptoms, perhaps a little vertigo or anorexia. There is hardly any lassitude, the pulse range is normal—60 to 90—respiration easy, no thirst, no increase of spleen or liver, tongue moist and clean, urine limpid; in fact, the victim feels almost as well as usual. *But the thermometer shows a rising temperature, and when it reaches the point of danger, say 42 C., a rush of symptoms overwhelms the patient.* The prognosis is so grave that a physician, if he can be called in time, must not delay about theories. He faces a condition and a dying man, not a theory. If the patient is robust, then blood-letting is indicated; if not, baths, quinin, alcohol, bromids, caffein, anything and everything, in the practically hopeless battle. It would seem advisable to try infusion of normal salt solution with or without the blood-letting.

Microbe infection.—1. Typhoid is very frequent, especially among the dense population of Manila. The prognosis is always grave, on account of the debilitating conditions of life. 2. Dysentery is always endemic and sometimes epidemic, contagion being through the stools. It is due to a microbe which produces ulcers in the large bowel. The stools may be as numerous as one hundred in twenty-four hours; they are often bloody and mucous, and always attended by tenesmus and severe griping. There is intense thirst, goose-flesh, variable pulse and excruciating pain, followed by adynamia, somnolence, coldness and death about the twentieth day. This must not be confounded with the chronic diarrhea of hot climates that afflicts foreigners who are addicted to alcohol and high living. It follows slight, acute attacks often repeated, and is characterized by serous stools, absence of tenesmus, a feeling of weight in the rectum, absence of fever and of anorexia, and is followed by gradual weakness and wasting. 3. Beri-beri is ascribed by MacLean to scurvy, but Barcones considers it of microbial origin. The name is derived from a Singhalese word meaning weakness, and the Tagalos call it *Mausas*. It is found in both hemispheres between latitudes 45 degrees N. and 35 S., and during both the wet and dry seasons, but more frequently in the former. It occurs chiefly among rice-eating people, and by some authors is ascribed to damaged rice. The mortality varies in different years and localities from 10 to 70 per cent. It runs a rapid course and is characterized by serous anasarca without albuminuria, but with torpidity and weakness of the lower limbs. The blood is altered as in anemia or scurvy. Three forms are found, the marasmic, dropsical, and polysarctic. The first is marked by a rapid invasion of symptoms, viz., difficulty of locomotion, diffused anesthesia, atrophy of skin and muscles, periodic attacks of palpitation and depressed circulation. The anesthesia and atrophy gradually extend to the trunk, and general paralysis slowly causes death. The dropsical form is the usual one in the Philippines. Its course is more rapid because of effusion into the pericardium and pleura. The polysarctic form is marked, in addition, by an extreme obesity and a terrible aspect of the countenance. All the forms have fever. Sometimes the disease proves abortive, but convalescence is slow and relapses are frequent. The patient remains anorexic and has a peculiar strutting walk like a rooster. Often it is acute and fulminant, the rush of symptoms being overwhelming and death ensuing in from twenty-four to forty-eight hours. The points for diagnosis are: the irregularities of heart and circulation, the absence of

albuminuria, local anesthesia, the mode of walking and alternating edemas of the extremities. 4. Erysipelas is frequent among the natives, and in spite of their dark skin is easily recognized.

Bradytrophic arthritis.—1. Acute articular rheumatism is frequent, especially on the coasts. Like typhoid and pneumonia, it diminishes after the typhoons. The chronic form is also common, especially in females. 2. Gout, both acute and chronic, is found among foreigners and well-to-do natives who indulge excessively in eating and drinking, and lead idle, sedentary lives. 3. Obesity is prevalent among natives and Europeans, both sexes and children, and is due to the food being largely farinaceous and sweet, and to the inactive life imposed by the climate. 4. Phagedenic ulcers are numerous and are called *lagas de Cristo*—wounds of Christ—by the natives. The tissues around the sore are atonic and anesthetic, and undergo progressive molecular destruction. They resist healing measures and not infrequently require amputation. A specific microbe is probable, but has not yet been discovered. Concurring causes are the abundance of insects which cause lesions, the excessive perspiration which causes maceration, and the racial anemia and weakness of constitution.

Dyscrasias.—1. Anemia is the most wide-spread pathologic condition in the country. It not only accompanies all diseases, and attends convalescence, but it is often primary. Primary anemia is not a malarial cachexia, because not attended by enlarged spleen or protozoa. It seems to be, like the febrile attacks and the diarrheas, a part of the process of acclimatization, and hence its special victims are foreigners. Barcones thinks that the climate—heat and moisture—by diminishing the respiratory field, impairs hematosis, debilitates the digestive functions and disturbs nutrition. 2. Leukemia is frequent among those who suffer from the prevalent forms of dermatosis and furunculosis. It is also a transitory symptom in all the microbial diseases, including tuberculosis and the native dysentery. The white blood-corpuscles increase in number, and the adenoid tissue proliferates even in organs normally possessing little or none, so that lymph adenomata are formed in the liver, kidneys and serous surfaces. 3. Diabetes is rather rare, but does occur. 4. Rachitis is very common among the natives and the offspring of foreigners. Barcones says: "All the native races are excessively rachitic. It seems as if nature, which is otherwise so exuberant in its manifestations, had attempted in this land to belittle the human race by making men little, weak and rachitic both physically and morally."

EPIDEMIC DISEASES.

1. As to cholera, the pandemics of 1819 and 1865 involved the Philippine archipelago with the rest of the world, but it escaped the epidemics of 1830, 1848, and 1854. In 1882, cholera destroyed 25 per cent. of the population of Zamboanga in one month, and decimated that of Manila. It seems that it has not been extirpated since, for cases occur every hot season, and in 1884 and 1889 there were frequent outbreaks. 2. Smallpox exists the same as elsewhere, and the hemorrhagic or black pox is the most frequent. Vaccination is largely practiced by the natives, but immunity is lost by the failure of the adults to be re-vaccinated. 3. Varicella is common, sometimes assuming a pemphigoid form. It is trifling in children, but may be serious in adults. Travelers, who speak of seeing children with smallpox, in their mothers' arms, on the street-cars in Manila very likely

saw cases of varicella. 4. Scarlatina, measles and roseola occur. 5. Diphtheria is abundant in all the islands, often malignant, and sometimes epidemic in the dense city populations. 6. La grippe invaded the Philippines in 1889-90, in its tour around the world, and reappeared in several following years. Barcones saw many cases in the hospital of Joló in January and February, 1894. Convalescence was shorter and more complete here than in Europe. 7. Dengue, being native in Indo-China, easily passes over to the archipelago. It occurs usually at the change of the monsoons. 8. As to scurvy, Barcones had not a few cases among sailors who had been on long voyages. An outbreak occurred in the Spanish army on Mindanao in 1890. It is frequently found among the native boating population and in the prisons.

SPORADIC DISEASES.

Skin diseases.—1. Lichen tropicus, rosy papules becoming vesicles and attended by severe pruritis, besets the newly arrived, and is probably due to hyperidrosis. 2. Acarus itch occurs not only among the poor and unclean, but also among the better classes. Among the Moros, it is so severe that the skin becomes even corrugated. 3. Phthiriasis or morbus pedicularis is very prevalent. 4. Syccosis is found often among foreigners, but the natives, having little or no beard, do not suffer from it. 5. Pellagra has been common among the agricultural population since the introduction of maize. 6. Herpes occurs frequently and in great variety. 7. Leprosy exists, especially in Mindanao, Paragua and Joló. Barcones studied it in the Leper Hospital at Manila, where he met the true tuberculous form. 8. Elephantiasis was found in the Leper Hospital.

Diseases of the intestinal tract.—1. Stomatitis, muguet, etc., are plentiful among the natives and are due to lack of attention to the mouth, to the abuse of tobacco, and to the constant chewing of bullo—a mixture of betel leaves, bonga fruit and lime. Bordier, in his "Geographic Medicale," claims that bullo is an astringent and intestinal disinfectant and a preventive of tropical diarrheas. 2. All forms of gastritis and intestinal inflammations occur with extreme frequency and are difficult to treat because the milk-supply is inadequate and poor in quality. 3. Dysentery is always present, either sporadic, endemic or epidemic. 4. Acute congestions of the liver are very common and are the chief cause of mortality among foreigners. 5. Cholelithiasis is frequent, especially among women and the sedentary classes. 6. All forms of intestinal parasites are found, due largely to the use of water from sluggish streams. This class of ailments is produced by sedentary life, abuse of the bath, overeating and indulgence in alcohol.

Diseases of the respiratory system.—1. Acute coryza occurs among foreigners, and is attributed by Barcones to the practice of removing the hat in the shade after exposure to the sun's rays, in order to wipe off the copious perspiration. 2. Ozena was found only among the Chinese and was ascribed to the fact that their wide and presenting nares are easily accessible to infecting germs. 3. Epistaxis occurs often among the soldiers after exposure to the sun. It is also an accompaniment of liver diseases, eruptive fevers, malaria and anemia. 4. Catarrhal anginas are common, especially among the women, who are wont to wear but scant covering on the neck and upper thorax. 5. Laryngitis in all forms is produced by the excessive use of tobacco. The tuberculous form is as prevalent as in Europe, and is largely

found among the young women who work in the tobacco factories. 6. Acute bronchitis is frequent during the rainy months and at the change of the monsoons, but its duration is shorter than in the temperate zones. The chronic form afflicts almost all adults, both native and acclimatized. It is due to tobacco and alcohol, and to the rheumatic and arthritic diatheses. 7. Asthma is common. 8. In spite of the comparatively even temperature, pneumonia occurs as freely as elsewhere, not only in the cold season, but also in the hot months. 9. Phthisis pulmonum is as prevalent in the Philippines as in any country of the globe. Acute miliary tuberculosis occurs with unusual frequency among the young, and especially among the newly-arrived soldiers. 10. Acute pleurisy was found very often.

Diseases of the circulatory system.—Barcones met all forms: endocarditis, myocarditis, functional hypertrophy, etc., the last-named being caused by the abuse of liquor, tobacco, tea and coffee. He saw no aneurysm. Exophthalmic goiter is found chiefly in the negro tribes, and especially among the dysmenorrhœic and hysterical women.

Diseases of urinary and genital apparatus.—Acute and chronic nephritis occur as elsewhere. Renal lithiasis is not rare in Manila, and Barcones attributes it to the character of the drinking water. Cystitis is frequent and is due to the abuse of the bath. Gonorrhœa and syphilis are wide-spread, the latter being generally violent in character and attended by a rapid march of the stages. Affections of the testicle and scrotum are the same as elsewhere, except that the natives generally suffer from atrophy of the testicle and even of the penis, due to early use and subsequent abuse of the sexual relation. This condition they call *colo-colo*. The women are usually anemic and chlorotic. The genital functions develop early, and the duties of marriage are assumed before puberty is well established, and before the organs are ready for the task of maternity. The menses are more profuse and closer together than in colder climates. Women suffer all the ailments that their sisters elsewhere endure.

Diseases of the nervous system.—Among these, Barcones saw cerebral congestions, gummata, meningeal inflammations, myelitis, locomotor ataxia, progressive muscular atrophy, and infantile paralysis, but no case of paralysis agitans. Epilepsy is frequent among all the races. Hysteria occurs among the natives, both men and women, and sometimes spreads by imitation. They call it *nagalit*, which means "hot-head" or getting crazy. Chorea also sometimes spreads by imitation. He saw no case of tetanus, though he treated many wounds, especially of the feet, these being frequent, on account of the habit of going barefooted. All forms of neuralgia and facial and other kinds of paralysis are met as often here as in other regions. Gangrene of the extremities is peculiar to this country, especially among the Chinese and Moros, and in women who have repeated attacks of malaria. It is a local, symmetrical asphyxia.

INTOXICATIONS.

Barcones is very severe in his condemnation of "the inhuman spirit of speculation," which introduced alcohol and opium to the natives. "The evil has borne its fruit and the inhabitants of these remote lands have adopted our vices, adding them to those possessed from time immemorial, and producing the physical and moral impoverishment of a race already of itself weak and miserable." He declares it is no exaggeration to say

that the use of alcohol in hot countries is the constant promoter of almost all the diseases known in them. The clinician and the hygienist, as well as the moralist, must recognize it as the fount and origin of diseases, both acute and chronic, of tissue degeneration and cirrhosis, of insanity and of crime. The practice of drinking a "bracer" during the morning fast was copied by the natives from the Spaniards, and is now almost universal. The latter take their *aguardiente*, and the former their *tuba*—wine of coca. The custom is even more injurious than the use of alcohol at meals.

The opium intoxication was introduced by the Chinese, and is largely practiced by them. Their dens were licensed by the Spanish government.

Tobacco intoxication or nicotineism, which is a frightful abuse found among the Filipino men and women, is the cause of laryngeal, bronchial and gastric troubles.

This summary of Philippine diseases is the authoritative report of a practical, scientific man, and it enables us to correct the errors of other writers. For example, the "Dictionnaire Encyclopedique"—which has an excellent article on the Philippines—says that primary hepatitis is rare, that typhoid fever is exceptional, that dengue does not occur, and that tetanus is quite common. Davidson says that pneumonia, pleurisy, influenza and pertussis are rare, and that he nowhere finds mention of scarlet fever. On the other hand, I find, in Barcones, no mention of sun-stroke. Stevens, a layman, who spent two years in Manila, says that it is uncommon. Nor does Barcones mention the bubonic plague, which has appeared since his book was written, and which quite recently—according to press reports—has gained a foothold in Luzon. Cavada speaks of the prevalence of buboes and of their being hereditary in families, but he no doubt refers to the enlarged glands of scrofulosis, and not to a rapid, infectious and fatal disease.

Since the bubonic plague must now be included in the nosology of the Philippines, the following statement, excerpted from Manson, is in place. Its bacillus has been identified by Kitasato, and rats and other vermin are recognized as its usual carriers. The incubation period is usually from two to eight, rarely to fifteen days, but in malignant forms it may be only a few hours. The prodromata are depression, anorexia, aching, chilliness, giddiness and sometimes a dull pain in the groins. The onset is rather sudden, with fever, great lassitude, headache, aching and drowsiness. The face is drawn and haggard and the eyes bloodshot. Sometimes after one or two days of invasion, and sometimes suddenly, the temperature rises rapidly, followed by its cortege of symptoms—thirst, weakness, delirium, subsultus, coma, and convulsions. The spleen and liver are enlarged. The urine is scant, and rarely shows more than a trace of albumin. The pulse becomes weak, dicrotic and intermittent. In most cases, usually in twenty-four hours, the characteristic bubo forms in one or both groins, sometimes in the axilla or cervical angle and is occasionally multiple. The buboes go on to suppuration and heal indolently. Convalescence is generally slow. Death usually takes place between the third and fifth day, and the mortality varies with the degree of virulence of the epidemic, from 20 to 95 per cent.

It may be useful to add a word about the time of the year at which the various disorders occur. Foreman says that many deaths take place in the spring from acute indigestion, caused by eating the new rice too plentifully. Stevens says that the cold season is the most healthful,

and that the hot, dry months in the lull between the monsoons are the most unhealthy. Cavada states that smallpox occurs in the early months of the year, cholera and gastric disturbances during the southwest, and malaria and catarrhal fevers during the northeast, monsoon. Generally speaking, morbidity is greatest at the changes of the seasons, and mortality highest in the cold season and at the onset of the rains. Barcones notes that rheumatism, malaria, pneumonia and typhoid diminish after the occurrence of hurricanes, because these storms either destroy or sweep away the germs. Acute gastric fevers and dengue develop at the change of the monsoons. Pneumonia and beri-beri occur in both the wet and dry seasons, but are more frequent in the former. Pernicious fevers and cholera occur in the hot months.

Finally, the important question of treatment remains to be considered. Among the natives, especially in the interior, there are numerous *curanderos*. These men do not constitute a class or caste like the medicine-men of savage tribes, but they are somewhat akin to the barber-surgeons of villages in Continental Europe in which doctors are not located. They use the native plants in all manners; infusions, decoctions, embrocations, powders, etc. In general, we may say of their treatment what can not be said of some of our pharmacopoeial drugs, that if it does no good it probably does no harm. As an example, for neuralgias they use *tangan-tangan*, a ricinus plant. Not long since I read a commendation of the castor-oil treatment for obstinate neuralgias, and I have several times since used it with excellent results. The *curanderos* who suck the bites inflicted by venomous reptiles are called *chanas*, and their antidotes *panaad*. Barcones says that their results are often marvelous. The natives also have a custom of applying ligatures around the limbs in beri-beri, in order to prevent the edema from ascending to the trunk. Another singular custom of their women is that of kneading and massaging the abdomen of pregnant women during the two weeks preceding the expected delivery. They say it makes parturition easier and places the child in a better presentation.

Treatment, as practiced by educated Filipino and Spanish physicians is precisely the same as with us. But Barcones emphasizes the necessity of always adding tonic treatment in order to counteract the debilitating influences of the climate. They also realize that the best treatment is prophylactic, and that prophylaxis must be public as well as private. As a matter of historic justice it should be recognized that, whatever the political failings of Spain may have been, she should not be charged with neglect of the sanitary and hygienic needs of the Filipino people. This was natural, since medicine exercises a witchery over the minds of its devotees and compels study, investigation and work. The Spaniards could not have been alone obtuse to her charms. We Americans are not familiar with Spanish writings. We know those of the English, the Germans, the French and to some extent the Italians, but it may readily be admitted that Spanish medicine occupies the same high level as that of the other nations.

The archipelago was controlled, as to sanitary matters, by a department of charity and health, which included bureaus of maritime hygiene, baths, medicine and pharmacy, vaccination and hospitals. Manila was divided into fifteen districts, each in charge of a physician and under control of a superior sanitary committee and a central bureau of vaccination.

According to Trübner's "Jahrbuch der Universitäten der Welt" (1898-99), the University of Manila had 404 medical and 51 pharmaceutical students out of a total of 1144, and for many years, if not for generations, it must have sent forth a supply of physicians. Its teaching staff was complete, and in the list of its professors, I note the name of Dr. Manuel Rogel, professor of hygiene, who is known by his work on "Lepra en Visaya." There must have been some medical journals published in the islands, for I find reference to the *Boletín de Cebu* and the *Cronica de Ciencias Med. de Filipinas*.

Barcones gives a list of ten hospitals and ten infirmaries scattered through the islands, some of which were civil and some military and naval. The most notable are those of St. John of God, in Manila, in charge of the Sisters of Charity; St. Joseph's Asylum for the Insane, located on an island in the Pasig River, and the Leper Hospital of St. Lazarus, in charge of the Franciscan Friars. The origin of the last-named hospital is noteworthy (I quote the story from Foreman): In 1633, the ruler of Japan, being hostile to Spain and resisting the missionaries' attempts to Christianize his people, sent to Manila a shipload of lepers—about 150 in number—with a message that he did not permit Christians in his country, but knowing that the priests professed charity for the afflicted, he committed these unfortunates to their care. Instead of adopting a modern "shot-gun" quarantine, the monks accepted the gift and built for the lepers a shelter which has grown to be the richly endowed leper hospital of Manila.

Vaccination was early introduced into her colonies by Spain. In 1803, five years after the procedure was made known, though the country was involved in the turmoil of the Napoleonic wars, she sent an expedition to vaccinate her subjects in all her colonies—a task that occupied three years. There stands in Manila a statue to Charles IV, which bears the inscription "In Gratitude for the Introduction of Vaccination into the Philippine Islands." Jenner himself did not get a statue till 1858, or sixty years after his discovery was announced, and thirty-five years after his death. Since that date the practice of vaccination is widespread in the archipelago, and the Dict. Encycloped. says that the natives are favorably disposed to it. At any rate, according to Cavada, in almost every village there was a public officer styled vaccinator, who was usually not a physician.

Quarantine was enforced as occasion arose. A frequent complaint in Stevens' book is that the mails and shipments were delayed by quarantine. However, the quarantine of 1200 islands, with a tariff inviting smuggling, is not an easy task.

So much for public prophylaxis, which, though essential, should not render unnecessary the far easier individual prophylaxis. The essence of this latter may be expressed in that fine German motto: *Nur mässig*—be moderate! Moderation is the substance of the following advice given by Barcones, Hoess and other physicians who have lived and practiced in the tropics.

Food.—In hot climates digestion is slower and all secretions, except the sudorific, are less than in the temperate zones, hence the visitor to the tropics should leave behind him his former habits of eating and should accustom his digestive tract to the foods of the country, which are largely pleasant fruits. He is tempted to overindulge or to eat as freely as in his former environment, and as a result he is liable to acquire dilatation of the stomach, gastric catarrh, etc. These fruits ripen

quickly and decay soon, hence the danger of diarrheas and other infections. They are acid, and hyperacidity is an obstacle to the absorption of lime and other salts needed by the system.

Exercise.—The heat inclines one to avoid exercise, but the latter is necessary to prevent the system from becoming enervated and the nutrition from being impaired. On the other hand, overexercise in a hot climate is injurious, and he will be a fortunate man who can wisely strike the happy mean.

Baths.—The heat likewise tempts one to overindulge in cold baths, that lead to frequent congestions of the stomach and bowels and afterward to a chronic condition. Baths for cleanliness are necessary; and brief ones, that are not too cold, may be moderately used for cooling the body.

Drinks.—Alcohol—whisky, beer, wine, etc.—is surely poison in the tropics if not elsewhere. I have already given Dr. Barcones' judgment on the subject. Dr. Hoess says: "Nothing is more foolish than the notion of the laity that alcohol is the best preventive of malaria." He bases his judgment on his personal experience. Coffee, tea, milk and water, which Nature provides in those climates, are the drinks which Nature meant man to use.

Sterilization.—Since germs multiply rapidly in hot, moist climates in every organic tissue, all articles of food and drink should be sterilized before being taken into the body, and this is best done by cooking. Fresh fruit with its rind not removed is sterile, but if it has been peeled or has stood long, it may easily become a nest of germs. Finally, Barcones gives the homely advice, to wear flannel belts, not to stay in the fields after sundown and not to sleep on the earth or in low dwellings with the windows open.

Here, if anywhere, the Americans should follow "plain living and high thinking," as well for their own sake as for that of the people toward whom we have now assumed responsibilities. Some foolish Padre—quoted by Worcester—said: "The Filipinos are big children who must be treated as little children." It would be unwise to accept a *bon-mot* as a philosophic aphorism or a political rule. The father who constantly threatens and beats his child to make it be "good" brutalizes both himself and his child, and since in the name of humanity we fought Spain, let us take care lest by being selfish and unjust we invite Nemesis and become as inconsiderate and cruel as the Spaniard is alleged to have been. It will require deep study, much self-control, great unselfishness and prayer to keep us as a nation pure-minded and honorable. In this spirit I submit this paper as my contribution in the work of learning the needs, and relieving the necessities of our new-found, dark-skinned brothers.

143 North Avenue.

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NEURASTHENIA: SOME POINTS IN ITS PATHOLOGY AND TREATMENT.*

BY G. W. McCASKEY, A.M., M.D.

Professor of Clinical Medicine and Nervous Diseases, in the Fort Wayne College of Medicine.

FT. WAYNE, IND.

The comparatively sudden recognition, through the work of Dr. Beard, about a quarter of a century ago, of the morbid state since known as neurasthenia, forms one of the curious chapters in the history of medicine. While there is ample proof and ample *a priori* grounds for believing that there has been a tremendous increase of the condition in recent times, it is also equally certain that it is older than the history of medicine. We find the familiar syndrome of insomnia, nervous anxiety, disturbance of vision, ringing in the ears, vertigo, and difficult breathing described by Hippocrates.¹ Passing over the intervening centuries, and simply noting a few suggestive titles in literature, we find one of Robert Whytt's, in the middle of the eighteenth century—"Observations on the Nature, Causes and Cure of those Disorders which have been Commonly Called Nervous, Hypochondriac, or Hysterical; to which are Prefixed some Remarks on the Sympathy of the Nerves." This was honored by a translation into French. Coming down to the present century, the "Erethism Nerveux" of Depau, 1819; the Neuropathie or Vapours of Doujens, 1824; the "Nevrose Proteiforme" of Cerse, 1841; and the "Cachexie Nevrose, Etate Nerveux," by Sandras, 1859; sufficiently indicate by their titles the confused recognition of the condition we are considering.

The complete pathology of neurasthenia can only be written when we fully understand the histochemistry and histology of fatigue, which are simply the chemical and structural changes incident to normal function everywhere, morbidly intensified and prolonged. I need scarcely call to mind how distant is the realization of this ideal; and yet we have sufficient information along these lines to form a substantial basis for the construction of a somewhat crude pathology, in accordance with obvious and legitimate analogies, which may serve as a useful working hypothesis to be tested and modified by further observation and study.

First in importance is the structural alterations in the ganglionic cells under the influence of overaction or fatigue, and the credit for our knowledge of this belongs to American medicine in the person of Dr. Hodge, whose investigations have been followed by similar work all over the scientific world, culminating in the recent tentative volumes by Barker and Van Huchten. The detailed discussion of these changes would lead me too far and I must content myself by pointing out that it has been satisfactorily proved that there are definite structural alterations of the neuron, as a result of fatigue, which can be positively demonstrated under the microscope by the proper technique. The most constant phenomena observed by different investigators are shrinkage or disappearance from the cell body of certain granular masses variously known as Nissl bodies or tigroid masses, the precise nature, function and significance of which still remain in doubt. Whatever views may be entertained with reference to the validity and importance of the neuron as an anatomic and physiologic unit, they can have no bearing on the authenticity of these observations, and their significance is of equal importance, compared with either the older or the newer conceptions of nerve structure.

*Read before the Chicago Society of Internal Medicine, March 29, 1900.

1. Mathieu, A.: Epulsemment Nerveux, Paris, 1892, p. 7.

In close juxtaposition to these observations come those of Nissl, Goldscheider, Dana, Lugaro, and others, on the effect of various inorganic and organic toxins on the structure of the cell body in the way of cell atrophy, morbid pigmentation, destruction of tigroid masses, etc.; these, while possibly, but not certainly, varying with the kind of toxin used, bear a general resemblance in character to those produced by excessive fatigue.

It is true that the loss and subsequent return of function do not precisely correspond with these demonstrable alterations within the ganglionic cells; but it can hardly be doubted that such alterations, though simply an exaggeration of those occurring in normal function, must have an important bearing on the functional integrity and resistance of the nerve-cell as a unit, and of the nervous system of which it forms a part. It appears quite probable, as suggested by Barker, that the loss of function is really in correspondence with minuter structural alterations, which our present means of research are not capable of recognizing.

If it be true that many toxins experimentally introduced into the circulation produce such important modifications in the ganglionic cells of the nervous system, then it is a legitimate inference that some of the toxins generated within the organism may have a similar influence. Indeed it is not altogether an inference, because in the acute and chronic infections there has already been demonstrated the association of analogous changes in the nervous system. With reference to the acute infections, it has heretofore been held by most observers that they were the result of the high temperatures incident to different morbid processes. Recent investigations have shown that these alterations in the ganglionic cells do not occur in high temperatures experimentally produced, unless the latter reach 104 F. or more; strongly indicating that in most cases the cell alterations, which are found with much lower temperature, are the result of poisons formed within the organism either in the strict and narrow sense, or in the gastrointestinal tract. Some observations made within the last year, my recollection of which is distinct but the reference to which is lost, have shown similar alterations in the anterior horns of the spinal cord from a number of children who died from acute intestinal disease which can be fairly attributed, and as I remember the cases, attributed only to intoxication from intestinal toxins.

Admitting the importance of these autochthonous poisons, we have to consider the accumulation of the chemical products of molecular changes within the cell structure always and everywhere resulting from cell activity, commonly known as function. For obvious reasons, these chemical products and the phenomena of their retention and removal are best understood with reference to the muscle-cell where they are composed of inorganic compounds—mostly combinations of phosphoric and carbonic acid, the potassium salts of which in excess are certainly toxic—together with many others, organic in character, such as creatinin, pseudoxanthin and other leucamins, as well as inosit and other non-nitrogenous extractives, all of which play an important, if not the principal rôle in the complex phenomena of muscle fatigue. The existence of these or analogous chemical products as a result of the functional activity of the ganglionic cells is an incontestable corollary of physiologic law; and it is more than probable that the condition of the ganglionic cell in the state of fatigue is such as to seriously impair those molecular changes by means of which it excretes, if I may so express it, its own toxic debris, and assimilates in exchange its nu-

trient supply from the pabulum which surrounds it. We have thus, viewing the cell as a unit, what may be justly regarded as a primary auto-intoxication in the strictest sense of the word. Going a step further, we may confidently affirm that under conditions of general fatigue the mechanism of elimination of poisons or their disposal by oxidation or other chemical processes is more or less seriously impaired. Chief among the factors which tend toward the retention within the organism of harmful products, is a lowered cardiovascular tension which not only impairs kidney function but removes from the local mechanism of tissues that normal *vis a tergo* on which the proper motion of the circulating fluids depends; and, finally, the same conditions of fatigue with impaired motility and secretion acting on gastrointestinal function leads to more or less imperfect elaboration of food products and, indirectly, to excessive germ action, more especially in the intestinal tract, although frequently in the stomach also, with the necessary production and absorption of bacterial toxins which still further overburden the already weakened defensive and eliminative machinery of the body.

From these and many other considerations of a like character it would appear that the symptom-complex known as neurasthenia, is due to, or at least associated with, disturbances of the most diverse character and wide-spread distribution; and that the numerous attempts to sharply define the condition—such, for instance, as Huchard's conception of it as an arthritic neurosis—and Glénard's overestimation of the importance of enteroptosis—as well as the vasomotor theory so strongly emphasized by Savill—are based on an imperfect and narrow conception of its complex and diverse pathology. These changes probably involve the minute structure and chemistry of the neuron as the principal, but not necessarily the primary, factor. Certain conditions are so strongly predisposing in their character as to be justly classed with the causes, properly so-called. In this connection various clinicians, among whom I may mention A. Matthien, speak of secondary neurasthenia in organic disease, such, for instance, as tuberculosis and heart disease, in which toxemia and malnutrition are conspicuous. Such disturbances are peculiarly liable to occur in connection with gastrointestinal disease. Some two or three years ago I published an article on what I then termed the neurasthenic symptoms of gastrointestinal disease. Subsequent study of a large number of cases in private practice, with a somewhat extensive review of the literature on the subject, has forced on me the conclusion that those presenting the symptoms referred to—really the symptoms of neurasthenia—should have been called neurasthenia of gastrointestinal origin, though I do not assume this to be true of all cases of neurasthenia with associated gastrointestinal disturbances. The opinion of Charcot, that the gastric symptoms were *always* the result of the neurasthenia, is undoubtedly true of a large contingent of cases, but his assertions have been altogether too sweeping. Savill, who was a pupil of Charcot, and translator of his works, says that he has searched his writings in vain to find adequate reasons for his opinion on this question, and declares that Charcot, contrary to his usual custom, has made assertions without sufficient proof. I have carefully examined his clinical lectures (*Léçons du mardi*) and can fully substantiate Savill in regard to this point.

It appears to me, in the first place, that the facts already cited in this paper furnish abundant *a priori* grounds for supporting the plausibility of the possible

gastrointestinal origin of neurasthenia. That profound disturbance of the digestive organs can exist for any great length of time without producing alterations more or less deep-seated in the central nervous system, is a proposition against which is arrayed a vast accumulation of physiologic and clinical facts. Enough has been said concerning the histologic and chemical aspects of the question; the clinical data will next engage our attention.

The clinical histories furnished by patients are frequently, it is well known, unreliable in many of their details. And whether the neurasthenic symptoms of indigestion, were precedent in point of time in any given case, may often be a matter of doubt. In some cases, however, the gastric symptoms are so conspicuous for so long a period of time before the distinct development of the neurasthenic symptoms, as to leave no doubt as to the order of development. Take for instance a case like the following: Mr. H., a merchant, aged 45, consulted me two years ago on account of a severe indigestion of about two years' duration. There was no free HCl with extreme atony of the stomach, considerable food being found in the morning, fifteen hours after the last meal, together with a large quantity of mucous secretion of a thick tenacious character, which was heavily laden with germs of diverse kinds. The case proved a very intractable one, but I persevered for months and was finally rewarded by a compensatory hypertrophy and a return of HCl secretion nearly up to the normal standard. This took about one year; and for several months of this period there was not a single symptom which could properly be classed as neurasthenic. During all this time, however, and especially during the very early period of treatment, there were found in the urine unmistakable evidences of a profound toxemia, which was, as the sequel showed, gradually producing alterations in the central nervous system, and so furnishing the groundwork, if not the very essence of the neurasthenic state which unexpectedly developed at a time when stomach function had vastly improved but was still sufficiently impaired to directly and indirectly produce and keep up severe autointoxication. The clinical picture of neurasthenia was somewhat suddenly, and without any adequate cause, added to the case; the result, as I fully believe, of the alterations produced in the central nervous system in the manner already indicated. Here was a case under constant study and observation in which the order of events was unmistakable. I have picked out at least twenty-five or thirty from my notes, of patients in whom the evolution of symptoms, while not personally observed, appeared unmistakably the same as in this one.

There is another method of studying this question—one which is more reliable than the clinical histories related by patients. I refer to the clinical study of the variations in the symptomatology of cases put to the therapeutic test. This brings up another question, or rather a modification of the one under discussion, as to the importance of gastrointestinal disease in the aggravation and perpetuation of neurasthenic symptoms in cases in which the neurasthenia is clearly the primary condition. For if it is true that primary gastrointestinal disease can cause neurasthenia, it follows, as a necessary corollary, that gastrointestinal disease, even when secondary to the neurasthenia, will act as an auxiliary etiologic factor. For this very reason the sequence of events in the evolution of any given case is a matter of subordinate importance from a clinical

point of view, although always of the highest scientific interest. The real practical question is whether or not the gastrointestinal disease is capable of exerting a prejudicial effect on the progress of the case.

In studying the question from this point of view, my methods have been as follows: Cases presenting gastrointestinal disease, irrespective of its priority, were subjected, so far as possible, to the most thorough clinical investigation of all secretions and excretions. The fast-ing stomach was uniformly examined and any contents obtained subjected to suitable chemical and microscopic study. The Ewald test-breakfast was administered and examined in the conventional time and method. The urine was carefully analyzed, twenty-four hour specimens always being procured, with a complete estimation of urea, uric acid, chlorids, phosphates and sulphates, the latter of which were either differentiated into fixed and ethereal sulphates or careful approximate estimates made of indican, phenol, and associated compounds. The feces and colon washings were constantly submitted to microscopic and recently to spectroscopic research, with a view of determining the evidence of excessive bacterial, protozoal, or other parasitic organisms which might prove a possible source of autointoxication as well as of abnormal coloring matter. The conditions thus ascertained were carefully connoted with the symptoms presented, and variations in each were studied with the view of noting correspondences or differences. It would be impossible at this time to do more than give the briefest sort of general statement, and I will simply say that on thorough disinfection of the stomach and large intestine I have seen the most remarkable and immediate amelioration of symptoms in many cases, and in some many times, where the syndrome was that of a typical neurasthenia. This has occurred so often under my own observation that it amounts, in my mind, to absolute proof of the etiologic relation of gastrointestinal disease to the condition known as neurasthenia. It appears perfectly clear that if these conditions can immediately and unmistakably intensify the symptoms of neurasthenia with equally immediate amelioration on their correction, then the possibility of such conditions acting as a primary cause is settled beyond a doubt.

The difficulty in determining whether the neurasthenia or the gastrointestinal disease was the primary condition in any individual, is often very great and frequently insurmountable, but from a practical point of view it does not appear to be important. If the gastrointestinal disease is purely neurasthenic in its inception, it soon becomes much more than this in a large number of cases, and requires much the same line of treatment whether it is primary or secondary.

In this connection, I desire to emphasize one fact to which I have repeatedly called attention, viz., the occasional latency of gastrointestinal disease. I have seen many cases and published reports of some of them, in which these conditions were entirely unsuspected, and yet were, as the sequel showed, the undoubted cause of more or less nervous disturbances. So that, even in the absence of conspicuous stomach symptoms, the possibility of latent disease should always be kept in mind. This general fact has been very forcibly stated by that acute observer, Dr. Beard, who said: "Indigestion, however complicated, or by whatsoever causes produced, may affect every part of the body except the stomach, and in ways beyond computation; . . . and very frequently patients chase up one symptom after an-

other until they get wearied, without either finding relief, or suspecting the true seat of disorder."²

One of the most important problems in the study of neurasthenic patients is that connected with the phenomena of tissue metabolism. I can not enter into a detailed discussion, but I wish to call attention to a group of cases in which the chemical processes of the body seem to fully share in, if not to bear the brunt of, the neurasthenic state. They are clinically represented by the phenomena of a more or less marked hypoazoturia. From my notes I have selected 40 cases, which are of sufficient importance to form a special group and be studied by themselves; in these the daily output of urea averaged less than 10 grams. The average is rather too high to adequately express the conditions, because of the inclusion of a few cases in which the urea was as high as 19 grams, that really should have been left out. The lowest quantity found was 2 grams in 1 case and 3.25 in another; 10 had 5 or 6 grams; and the remainder ranged from 6 to 19. The uric acid was estimated in 25 of these 40 cases, and was found to average .75 gram, or about the normal quantity; its ratio being high, about 1 to 13, because of the absolutely small quantity of urea. It might be thought that in at least some of these cases these conditions would be the result of renal insufficiency, but there was, in the first place, a complete absence of all signs of organic disease; and, in the second, the quantity of urea rapidly increased under suitable treatment. In 1 case, for instance, the record shows that during the first ten days of treatment three analyses were made—2.63, 8.58 and 9.84 grams. The treatment in this case consisted of a modified rest cure, the patient remaining in bed until 11 a.m.; a very little gastric lavage, with hot and cold douches over the entire body; and static electricity. The largest quantity of uric acid found in this series of cases was 1.77 grams, or about 25 grains; the smallest .32 grams, or about 5 grains. In regard to the uric acid excreted generally in neurasthenia, while I have not yet found time to study the notes of a larger series of cases with a normal or excessive excretion of urea, an excess does not appear to be directly connected with the neurasthenic state, but every now and then occurs in very large amounts, apparently as the result of some particular perversion of metabolism, the exact nature of which is at present obscure; and, I have found the same occasional excess quite as frequently in groups of cases of chronic nutritional disease, other than neurasthenia, e. g., diabetes mellitus. I use a modification of the Hopkins method in which I have the fullest confidence, as I have many times verified it with standardized solutions of uric acid.

In this same series of 40 cases the gastric juice was examined in 24 with the following results: In 6 there was no free hydrochloric acid; in 10 there was subacidity varying from 5 to 25 degrees; in 6 it was strictly within the normal range, from 30 to 50 degrees; while in 2 it was in excess, in one 65, the other 70. In all of these cases, including the 6 in which the hydrochloric acid was normal, there were more or less distinct signs of gastric disturbance, and the microscopic examinations of the fasting stomachs invariably showed pathologic debris.

The discussion of the treatment of neurasthenia must be greatly abbreviated owing to the details already entered into with regard to other questions. Rest must form the essential and rational basis of any and all lines of treatment, and everything else must be subserv-

ient. It should be, in practically all cases, of a modified type, rarely absolute, but this must be determined by the individuality of every case; the object being to secure a proper combination of rest and open air exercise, with massage in cases in which the strength does not permit of adequate exercise.

Hydrotherapeutics has served me well. The precise form and vigor of the hyriatic procedure must be regulated entirely by the clinical picture presented, and by the undetermined factor of reaction, which can only be learned by experimental observation. A hot douche or spray of the entire body, from 110 to 120 F., according to the reaction on the part of the patient, followed immediately by a cold douche at from 90 degrees in delicate patients, in the beginning of a course of treatment, down to 50 or less, has given me best results. Ordinarily this procedure is to be applied every other day. There are others more or less severe, the availability of which can only be determined by a careful study of the particular case in hand with reference to the processes of nutrition and secretion, and constructive and destructive metabolism, which are thus modified in a manner and to a degree which nothing else, so far as I know, can accomplish.

Electric treatment is also of great value. Static electricity, in so far as its effect on the general organism is concerned, appears to head the list. For the treatment of local neurasthenic symptoms, such as morbid cephalic sensations, rachialgia, extreme intestinal atony, neurasthenic weakness of the sexual organs, etc., faradism and galvanism properly combined or alternated have served me best.

I come now to what appears to be a matter of supreme importance, viz., the treatment of local morbid conditions of special organs. In this connection the gastrointestinal tract unmistakably ranks first, for many and obvious reasons, and this statement will hardly be disputed by those who have found, as I have, along with Blocq³ and many others, that gastric symptoms are rarely absent in neurasthenia.

The one difference of opinion is likely to be in reference to the proper methods applicable to the individual case. My own conclusion is that gastric disease in the neurasthenic patient requires, with slight modifications, precisely the same treatment that it does under other circumstances. If it is the judgment of the physician that such diseases are best diagnosed and treated by empirical instead of exact methods, relying on drugs and regulation of diet, then that is the best thing here; but if he believes that it is incumbent on him to positively know, instead of vaguely guess at, the pathology of any given case, then here as elsewhere he will in the majority of cases, proceed first to make a full diagnosis according to the most approved methods. The logical sequence of such a diagnosis can only be the formulation and adoption of such a method of treatment as appears best adapted to meet the conditions thus determined. In most cases there will be found defective digestive secretion, atony, excessive mucous secretion and, in many, or perhaps most cases, a local expression of that irritable weakness which forms so salient and conspicuous a feature of the general clinical picture. Proper regulation of diet, thorough mastication of food, ample supply of fluid for the purposes of tissue metabolism, preferably taken an hour or more before meals, together with a general line of treatment suitable to the neurasthenia, will frequently be all that is necessary to dispose of the

2. Beard: Nervous Exhaustion, 1894, p. 126.

3. Blocq, Paul: Neurasthenia (Translation of critical digest), Brain, 1891, p. 315.

stomach symptoms in the milder grades of cases. The exhibition of bromids in neurasthenic dyspepsia, while lauded by many authorities, has for the most part proved disappointing in my hands; and as a general proposition it is true that in the gastric disease of neurasthenia, as in other cases of gastric disease, drug treatment is for the most part futile and frequently sinister in its effects.

It appears that in the severer grades of stomach disease, it matters not whether the case is one of neurasthenia, diabetes, or something else, there is but one rational method, and that the direct one, with such modifications and additions as the case may require.

The irritable weakness to which I have already referred will occasionally produce a morbid reaction on the part of the patient, which will make either the propriety of the continuance of this line of treatment a matter of doubt or its discontinuance imperative. I have found this true in several cases; those, too, in which the treatment was clearly and unmistakably indicated. I remember one of a young physician who was apparently born neurasthenic, but the gastric symptoms were the most conspicuous and troublesome features in the case. The fasting stomach contained about two ounces of pathologic fluids and food debris, and yet every attempt at direct intragastric medication produced such a reaction on the part of the patient as to make his condition distinctly worse. I know of no way to positively determine whether or not such methods are available except by the test of experience. In many of the cases apparently unfavorable from this point of view, local stomach treatment has been borne without undue reaction, and with conspicuous benefit. Many a time I have seen insomnia and the various forms of cephalic and abdominal distress disappear in a few days after the institution of intragastric treatment, and this after other methods had been followed for weeks in the vain hope of saving the patient the unpleasant ordeal of such treatment.

Cases like the one referred to are in my experience exceedingly rare, but a few such would explain the sweeping condemnation of Charcot in regard to local gastric medication in neurasthenia. He said that he had seen bad results from its use. What physician, experienced in such methods, has not? We can no more reckon with the idiosyncrasies of the stomach in neurasthenia with reference to local treatment, than we can with the same sort of idiosyncrasies in syphilis with reference to the iodids, or in anemia with reference to iron. But we will not condemn the iodids in the one instance, nor the iron in the other, because of an occasional intolerance; nor is it any more rational to condemn intragastric methods in neurasthenia because of similar exceptional results.

I will refer to only one other question in the treatment of the digestive organs, viz., the management of the colon. As the result of the gastrointestinal indigestion and atony, we have a local infection of the colon with accumulations of mucus, epithelium, food debris, etc., which act on the nervous system by reflex irritation, and furnish indefinite quantities of bacterial toxins for absorption. These add to the auto-intoxication and render more arduous the struggle of the organism in the processes of elimination. Inasmuch as it is a very simple matter to clear this material out of the colon by suitable local treatment, this should be done in all cases in which a proper examination shows that it is indicated. The patients can not do this satisfactorily; either the physician or a trained assistant should personally attend to it, and see that these accumulations are removed. More

than this, by using extremes of temperature for the irrigating fluid, atony of the intestinal wall can be directly counteracted; and, in fact, the entire nervovascular mechanism of the splanchnic area stimulated and modified in a favorable manner, which has an important bearing on all the principal functions of the abdominal and thoracic viscera.

I do not wish to be understood as advocating the use of the stomach-tube in every case of neurasthenia, although as my experience widens, the tendency is to use it in a larger and still larger number of cases. I have no doubt that many patients with mild, and some with severe, stomach symptoms, will do very well without it, but an honest study of somewhat extensive clinical data, has forced me to a more aggressive line of treatment in this direction; and in many cases in which I thought it would be illy borne or not tolerated at all, everything has gone smoothly and the most signal benefit has accrued.

I need hardly say, in conclusion, that my intention has not been to formulate a definite pathology, for this can only be done with post-mortem data which are not yet available, and probably will not be for some time. I believe, however, that a good working hypothesis, based on well-known analogous facts, which come very close in this instance to removing it from the domain of hypothesis to that of respectable theory, is infinitely better than pathologic nihilism. It gives us a tangible conception which can be tested by experience and study; and if it should not prove to be the whole truth, as it probably is not, it will at least help to lead us in that direction.

DISCUSSION.

DR. EDWARD F. WELLS—I am not prepared to discuss this paper *in extenso*, but some of the observations mentioned impress me with peculiar force, inasmuch as my attention has long been directed to a class of women mostly from 40 to 50, or more, years of age, in whom careful observation, for months and years, has shown the excretion of urea to be constantly materially reduced. Women of average size, and taking an average amount of exercise, have been passing only from 150 to 200 or 250 grains of urea a day, and the long time which these patients have been watched renders the observation quite significant in this connection. My cases have not been accompanied by albuminuria, and casts have not been found in the urine except accidentally. I always have endeavored, by every means at my command, to increase the excretion of urea in these patients; I have tried exercise, massage, diet, forced feeding, rest, etc., and I have absolutely been unable to make any material change in the amount of urea excreted in those cases that would continue for any length of time. Often, following the therapeutic measures adopted, an increased output of urea would be noted and I can easily understand how, if one saw cases of this kind, and judged their condition as reactive capabilities for a short time, the apparent improvement might have been the result of treatment, and that it would be permanent, but I will venture the assertion that if these patients are closely watched for six months or a year afterward it will be found that their condition will be found much the same as before the treatment was begun. My patients of this class have been uniformly nervous; however, I would scarcely consider any of them as being strongly neurasthenic, but they have been always ailing, constantly chasing symptoms, seldom very sick, or if overtaken by a serious illness they were rather sure to recover.

When I first began to study these I looked on them with much apprehension. I feared the condition was the beginning of Bright's disease and that the failure to detect casts, etc., might be due to fortuitous circumstances, but I now feel reassured that this condition is not incompatible with long life.

One of my patients is now 55 years of age, and has been under observation for nine years, and the condition still continues.

I would ask the essayist, in closing the discussion, to give the means that he makes use of in order to increase the excretion of urea in these cases, or in any in which the amount of urea is constantly low.

DR. JOS. M. PATTON—I am inclined to agree with Dr. McCaskey in his estimation of the importance of gastro-intestinal conditions. I have always looked on the derangement of the gastro-intestinal tract as probably a principal, primary factor in the production of nervous conditions. Nearly all of these patients give a history of disturbance of the stomach and intestinal indigestion, and subsequently the production of a chain of nervous symptoms which would indicate autointoxication. I hardly think we are warranted in going as far as Bouchard has done in enunciating his views with reference to autointoxication, but we often find disturbed action of the heart and of respiration, abnormalities in the peripheral sensations, inequalities in the peripheral circulation which appear to be so directly connected with intestinal conditions where the digestive functions have been at fault, that it seems difficult to escape the conviction, judging from a clinical standpoint, that this is the most important factor in the production of the subsequent train of nervous symptoms. We may make a mistake in doing so, but the clinician can hardly escape that ground. It seems forced on him, both from the sequence of events and the results which he gets from treatment directed toward the gastro-intestinal tract. I can corroborate the belief of the essayist in the efficiency of such treatment, though I have not followed it as thoroughly as he has indicated. As far as I have gone the relief has been proportionate to the efficiency of the means employed.

DR. FRANK S. CHURCHILL—I am not so much interested in the cases of neurasthenia themselves as I am in finding out, if possible, what are the conditions which have gradually led to this affection. In other words, I have been much interested in studying the children of neurasthenics and in finding out, if possible, the tendencies in those children—when they reach adult life—to acquire this disease. We rarely, if ever, see neurasthenia in children. If I have seen it, I have not recognized it. A study of the various nervous conditions in children may result in much good in preventing the subsequent development of neurasthenia in later life. Our work should not only embrace a very careful study of the family history, but we should endeavor to find out what abnormalities have occurred in different members of the family, especially in the father and mother, in the grandparents, in the uncles and aunts. By so doing we shall find out the tendencies with which the child starts in life. A careful study of the children of neurasthenics, inquiring into hereditary tendencies, the family history, careful attention to the physical, mental and nervous development of children, will do much toward the prevention of the development of neurasthenia or neurasthenic symptoms later in life.

DR. G. W. McCASKEY, closing the discussion—With reference to the question asked by Dr. Wells, as to the best means of increasing the amount of urea excreted, forced feeding is the most important point; next to it out-door exercise. Other measures are the use of hydrotherapies which can influence metabolism to a remarkable degree, electricity, massage, etc. In every one of the patients treated by me the urea excretion has increased during the progress of treatment; although they nearly all of them have stopped it with only a relative or symptomatic cure before reaching the physiologic standard. The inherent weakness of the nervous system, which constitutes the essential basis of the neurasthenic state, has its influence directly or indirectly on tissue metabolism, and it is this which has to do largely with the lowered excretion of urea. Whatever will strengthen the nervous system; whatever will improve cardiovascular tension; whatever will quicken the chemical processes of the body, taken in connection with forced feeding in these cases—these are the measures which will give the best results. Yet there may be cases in which this tendency will return and persist and will

perhaps be one of the most important neurasthenic features. I see no reason why the neurasthenic picture itself may not be accentuated in this way with defective tissue metabolism expressed clinically by an insufficient urea excretion. Whatever will improve tissue metabolism in other ways will improve this condition, if an adequate amount of food can be taken, with suitable improvement of the digestive organs.

In regard to the importance of autointoxication, while Bouchard's views may have been a little extreme, the more I have studied these cases and this question, the more important in my estimation, autointoxication becomes. It seems to me that almost every morbid process is necessarily associated with what might be called a sort of autointoxication. If any cell in the body becomes impaired in functional activity, that cell is relatively unable to dispose of the injurious elements resulting from the molecular changes within itself, and these accumulations constitute a veritable intracellular autointoxication—the fundamental and primary expressions of this morbid phenomenon.

The point made by the last speaker with reference to a study of these conditions in children is an important one. It opens up the question as to whether in many instances, instead of an inherent weakness of the nervous system, we have not an acquired weakness of the nervous system, which is due to bad training in childhood, to improper feeding, unhygienic surroundings, and various prejudicial influences which tend to weaken the nervous system.

With reference to the possibility of neurasthenia developing in children, so far as I recall, the youngest case on record is that of a girl, 12 years of age. In nearly all the cases has not been what it usually is in the adult, viz., worry and mental strain, but merely shock. Charcot says that neurasthenia hardly ever develops in people under 16 or 18 years of age.

REPORT ON MASSAGE.

BY DOUGLAS GRAHAM, M.D.

BOSTON.

When we come across good things in medical literature it should be our duty and pleasure to pass them along to those who have not easy access to the same. Hence the need of occasional reports. That distinguished old mirror of the profession in England, *The Lancet*, has been rather slow in waking up to the merits of massage, yet what it has had to say of late on this subject is of so much importance that we can afford to let French and German literature rest for a time while we briefly report what our English cousins have been doing in this line.

In 1884 your reporter wrote that no more fertile field awaits the investigations of physiologists than that of ascertaining the similarities and differences existing between exercise and massage.¹ Partly in fulfillment of this prophecy we present the following:

THE EFFECTS OF BATHS, MASSAGE AND EXERCISE ON THE BLOOD-PRESSURE.

In *The Lancet* for June 10, 1899, Drs. Edgecombe and Bain have given a detailed account of their experiments to determine the effects of baths, massage and exercise on the blood-pressure. For arterial pressure the radial artery was taken, the subjects being in the recumbent posture, with the arms extended in a line with the heart. For venous pressure the veins in the back of the hand were taken in some, in others those of the forearm. Ten subjects were experimented on, and the results were confirmed by repeated observation.

Cold.—The effect of the cold bath was to raise the arterial and to lower the venous pressure. When to cold, perussion was added in the form of a strong needle douche applied simultaneously to the surface of the

1. A Practical Treatise on Massage, 1884.

whole body, the arterial pressure became raised to a greater extent than with cold alone.

Heat.—The effect of warm baths of plain water, on the other hand, was to reduce the arterial pressure to an extent roughly *proportionate* to the increase of temperature. The fall in venous pressure was in greater proportion than the fall in arterial.

Heat and cold alternately.—In the alternating needle-bath or Scotch-douche, where the temperature is made to rapidly oscillate between warm and cold, the net result was a rise in arterial with a slight fall in venous pressure.

Massage.—Observations led Drs. Edgecombe and Bain to the conclusion that general dry massage, in the form of *pétrissage*, while it may cause an initial rise of blood-pressure of brief duration, produced as the net result a fall in arterial pressure both mean and maximum, provided the abdomen was not *masséed* too vigorously. Deep massage and compression of the abdomen caused an immediate rise in blood-pressure by dispersion of blood accumulated in the splanchnic veins into the systemic circulation. The venous pressure was observed to be always relatively, and in some cases actually, raised; the amount of rise appearing to depend to some extent on the temperature of the room, being greater in a warm atmosphere. This confirms the experiments of Drs. Brunton and Tunnlicliff on cats, made some years previously, that massage of a considerable muscular area caused first a rise in the general blood-pressure, which was followed by a fall, in some instances as much as one-fifth of the original pressure.

Wet massage in the form of the Aix douche, in which massage is administered under a warm douche conveyed by a flexible pipe playing between the hands of the masseur, causes an increased effect—temperature added to massage. Here was observed a greater fall in arterial pressure than was obtained with dry massage, and coincidentally an actual rise of venous pressure.

On the other hand, wet massage in the form of the Vichy douche, in which massage is administered under a warm needle spray, the patient being in the recumbent posture, causes a rise in all pressures, maximum, mean, arterial and venous. The difference between this bath and the preceding is due: 1, to the percussion of the needle-spray tending to raise the pressure, and 2, to the fact that the patient being in the recumbent posture abdominal massage is more efficiently performed and hence a rise in pressure results. Vigorous abdominal massage would seem to abolish the fall produced by massage of the limbs and the rest of the body, and when this was but slightly performed, the net result was a fall. The influence of warm temperature plus massage was to considerably augment this fall. In all probability the factor primarily and chiefly disturbed by massage is the peripheral resistance rather than the output of the heart, and the result is to be attributed mainly to diminished resistance from arteriolar dilatation.

Exercise.—The effect of exercise on the blood-pressure depends on the severity of the exercise. In all forms an initial rise in arterial pressure occurs; if the exercise be mild there is a fall during its continuance; if severe, the rise is maintained; after exercise, moderate or severe, a fall takes place. The venous pressure is raised during all forms of exercise and remains raised during the subsequent arterial fall. The return to normal after exercise takes place more or less rapidly according

to the gentleness or severity of the exercise and the temperature of the atmosphere.

MECHANOTHERAPY OF MOVABLE KIDNEY.

In *The Lancet* of Jan. 29, 1898, Dr. A. Symons Eccles gave an interesting report of the treatment of movable kidney by means of mechanotherapy. Since 1892, 21 cases of floating kidney attended with local pain and tenderness have come under his observation and treatment. Of the 21 patients, 5 were greatly improved by abdominal massage, exercises and the application of a pad and belt, and 1 of these has been free from all discomfort for five years, another for two, whereas both had before suffered from pain and general disturbance at intervals for prolonged periods. Sixteen have been treated by "the rest cure" for periods ranging from fourteen days to eight weeks, and of these 7 were lost sight of within four months after treatment; 1 was a complete failure, and 8 he has recorded in detail, having selected them as typical of the varying conditions under which, in males and females, movable kidney may give rise to very marked suffering, often without any knowledge on the part of the patient that nephroptosis existed or could cause the gastric, hepatic and nervous symptoms of which they complained. The results obtained in these 21 are for the most part so satisfactory that they bear favorable comparison with records of those treated by operation, and in view of certain cases which have occurred there is something left in favor of employing milder means for the relief of nephroptosis than surgical interference involving either nephrorrhaphy or nephrectomy. Early diagnosis, reposition and the maintenance of the organ in its normal place by methods which also conduce to the improvement of general health would appear to go far toward the relief of the patient from the necessity of having the kidney stitched into its place or removed from the body, as the advocates of early operation advise.

At any rate, sufferers from freely movable kidney should first be subjected to treatment by rest and massage followed by exercises devised for improving the muscularity of the abdominal walls before they are exposed to the risks which exist, however small they may be rendered by the skill of the operator. No harm arises from the delay which may be fairly entailed by the "rest cure, and if any local surgery should afterward prove to be necessary because of failure to relieve pain by the means here advocated, the sufferers will be rather better than worse able to undergo the operation. Especially does this appear to be the case when it is remembered that the best results obtained after operation can be secured only if we should keep the patient lying in bed for at least six weeks, no matter whether the wound has healed by first intention or not.

In these cases of floating kidney, no less than in other forms of enteroptosis with so-called functional disorders of digestion, the indications are to restore healthy tone and to induce the redeposition of fat and flesh to the abdominal walls, as well as to improve the nutrition of the viscera and replace the packing material of fat, which in many cases has vanished. This in most instances can be done by judicious combination of frequent massage of the abdomen and loins, carefully regulated diet, and finally gradually increased exercise, precautionary measures meanwhile being adopted by posture, rest, and mechanical support to prevent and counteract the tendency to displacement and undue mobility engendered by lack of proper support for the viscera.

MESSAGE IN RECENT FRACTURES.

The use of massage in the treatment of recent fractures finds an earnest advocate in Dr. Wm. H. Bennett,² of St. George's Hospital, London, who has had practical experience of its benefits in a number of cases. This method has not received the general attention in England which it deserves, owing to the traditional belief in the necessity for complete rest and immobility. Massage in ordinary cases of fracture can be used without producing any movement between the ends of the bones worth mentioning, but the question is very appropriately raised whether slight movement between the fragments is not conducive to union rather than the reverse, in view of the fact that in many cases of fractures in which the union is slow, consolidation rapidly takes place when some mobility between the ends of the bones is brought about by the use of the limb or by passive motion.

The stiffness and pain which follow in many of these cases is often erroneously attributed to adhesions in or about the joint, but Dr. Bennett believes that this is practically always due to matting of the soft issues about the line of fracture, and the opportunity of dissecting a case forcibly confirms this belief. It was one of fracture of both bones of the leg three inches above the ankle, two months previously. The fractured parts were firmly united and the position of the fragments fairly good. No movement beyond a little springing of the ankle-joint could be produced by force sufficient to break down joints." The ankle-joint was healthy and the stiffness was entirely due to the state of the soft parts about the fracture. The anterior tibial muscle at the point of junction with its tendon was firmly adherent to the bone; the muscular structures at the posterior aspect of the fracture had apparently been slightly torn and were with their tendons intimately adherent to the bone by cicatricial tissue, in which the posterior tibial nerve was involved and could be liberated only by careful dissection; the nerve showed no signs of having been damaged at the time of the accident. All movements of the ankle-joint beyond that allowed by the mere elasticity of the parts appeared to be checked by the adhesion of the tissues mentioned. When the adherent structures had been loosened by dissection, the ankle-joint could be freely bent and moved with comparative ease. The implication of the posterior tibial nerve affords an explanation of the acute nerve pain caused by attempts at movement of the ankle-joint in walking after some cases of fracture of the lower part of the leg. In the treatment of cases of recent fracture, by massage, this matting of the soft parts is impossible; the tendons are prevented from becoming adherent, the muscles do not waste, the joints are kept supple and nerves can not become implicated in adhesions.

Nothing tries the endurance of the patient and the resources of the surgeon more than the distressing muscular spasm which so often occurs in the early stages of cases of fracture, and which in spite of anesthetics and minor operations—tenotomy, etc.—is in some instances practically uncontrollable until it wears itself out in the course of some days. Massage is a means by which this spasm may be frequently, if not always, controlled in a way which is remarkable to those who have not seen the effects of it. In illustration of this he mentions the case of an old woman with a comminuted fracture of the right femur. The thigh was

tense, swollen and discolored, and every few minutes she shrieked with pain as the spasms occurred. At the end of ten minutes' massage, the spasms were less, and in fifteen minutes had ceased entirely, and the patient fell into a sound sleep. After this she begged for the massage, as it stopped the spasms, which soon disappeared not to return and allowed the limb to be manipulated freely. Another case is mentioned of fracture of both bones of the leg, in which there was very acute muscular spasm that was speedily allayed by massage, and then the fracture could be kept in place; before the massage this was impossible. The soothing effects of the local massage seem to be the rule in these cases, and patients otherwise constantly restless fall asleep while it is being given. The effect on the bony union seems to be to hasten the process of consolidation. The massage should be continued until the union has fairly consolidated, which varies in different cases. In a simple uncomplicated fracture of both bones of the leg a month is the approximate time. It is especially adapted for patients getting along in years, in whom circulation and nutrition are poor. The use of passive motion by which the soft parts are prevented from becoming adherent may appear objectionable, since in many cases the parts must be more or less torn. Early movement might seem likely to produce weakness, but in practice no defect of this nature appears to be brought about when ordinary care is observed. If some weakness should arise, it would be far less detrimental than the crippling which ensues on matting of the torn structures.

The difficulties connected with the application of this treatment are: 1. The large amount of time required of the practitioner in the earlier stages, during which the treatment must be carried out under his immediate supervision unless a particularly skilled person is available. 2. The difficulty of finding in all places a person capable of safely undertaking the manipulations in the later stages, which would absorb more time than busy practitioners could afford, besides other minor difficulties not worth mentioning, such as expense, etc.

REPORT OF CASE OF SPLENECTOMY, WITH ATTEMPTED SURGICAL CURE OF ASCITES DUE TO CIRRHOSIS OF THE LIVER.*

BY T. N. RAFFERTY, M.D.
ROBINSON, ILL.

Mrs. T., an American and a widow, 31 years of age, consulted me on Aug. 6, 1899, with the following history: She began life, and has mostly lived, in a malarious district; and from the age of 8 to 17 she had chills frequently—none since. Her family history was good and no history of syphilis. She began menstruating at 16; it has been painless and regular. She was married at the age of 22, one year afterward had a miscarriage, supposed to be the result of a fall, and was in bed for three weeks, with fever; she was delirious part of the time. Her menses were irregular from that time, and ceased entirely four years ago, the patient then being 27 years of age. About six years ago she began to have dull pains in the left hypochondrium, but gave little attention to them until two or three years later, when her physician told her that she had a tumor in the left side of the abdomen; he was not certain of its nature.

*Read before the Esculapian Medical Society at Paris, Ill., Oct. 26, 1899.

Two years after this she began to have abdominal dropsy.

When seen she was fairly well nourished, her skin and conjunctivæ slightly jaundiced. Her abdomen, at the umbilicus, measured fifty inches in circumference; from the ensiform cartilage to the umbilicus, fifteen inches, and from the latter to the symphysis pubis, six inches. On account of ascites no tumor could be made out with certainty. Liver dulness was increased. Examination of the urine showed a few hyaline casts, but no albumin. The specific gravity was 1.018. Examination of the blood, made some days later, showed an excess of leucocytes, but no blood count was made. There were no glandular enlargements.

On the next day her abdomen was tapped by Dr. H. N. Rafferty, and three gallons of fluid withdrawn, leaving, as we supposed, some two gallons. A large solid tumor could then be felt, filling the left half of the abdomen, and extending down into the pelvis. The hand could be pressed down behind the upper end of the tumor, but not below the lower end. The arrest of menstruation, the ascites, and the absence of cachexia presented a typical picture, as given by Kelly, of ovarian fibromata. Everything else, as well as the shape of the tumor, pointed to an enormously hypertrophied spleen. Five days later an exploratory incision was made in the median line below the umbilicus, two or three gallons of fluid were evacuated, and the abdominal cavity thoroughly explored. The tumor proved to be the spleen with numerous adhesions. The omentum was thick and large, and contained many veins as large as a lead pencil. The right lobe of the liver was found to be enlarged, covered in many places with hard nodules, and with many adhesions to the diaphragm; the left lobe was atrophied. The peritoneum and intestines were apparently healthy, the uterus and ovaries very much atrophied.

After this thorough exploration the wound was closed, and the patient's recovery from the operation was uninterrupted. The ascites, however, returned so rapidly that on the fifteenth day after the operation tapping had to be resorted to and three gallons of fluid were removed. The woman was now clamoring to have the offending spleen removed, notwithstanding the fact that I told her such an operation would not be considered a justifiable one by most surgeons; that it would almost certainly prove fatal, and even if it did not, she would still have a fatal cirrhosis of the liver left. She said she would get well, and insisted on the operation. Just at this time my attention was called to the advisability of attempting a surgical cure of ascites, due to cirrhosis of the liver, by an "operation directed to the establishment of an adequate collateral circulation for the omental and peritoneal vessels."¹ I at once determined to remove my patient's spleen, and if she did not die at once from hemorrhage or shock, to try what could be done in establishing an anastomotic circulation between the omentum and parietal peritoneum. The surroundings were about as unfavorable as could be for an operation of this magnitude, the operating-room being the living-room of the patient and her sister. On September 1, twenty days after the exploratory incision, assisted by Drs. C. H. Voorheis, of Hutsonville, Ill., O. G. Taylor, of Palestine, Ill., and James Miles, of Merom, Ind., I made an incision seven or eight inches long in the left semilunaris, beginning an inch above the level of the umbilicus and extending upward, curving the upper two

inches of the incision to the left. With some difficulty the spleen was delivered. Most of the adhesions were easily broken. The pedicle, however, was enormous, being $\frac{1}{2}$ by 3 inches, a mass of mesentery and large blood-vessels, held together by dense connective tissue. Six or eight heavy silk ligatures were used in tying it off in sections, then another around all. The pedicle was now cut through, and the mouths of two or three of the larger vessels were caught and tied separately. There was no hemorrhage whatever from the stump, and it was dropped back into the abdomen, without any sponging or unnecessary manipulations, for it was very noticeable that any dragging or twisting of the pedicle produced immediate unfavorable effects on both the pulse and respiration, and several hypodermics of strychnia and whisky were necessary. As soon as the pedicle was dropped, the abdomen was flooded with hot normal salt solution, and sponged with clean gauze sponges. Attention was then given to Talma's operation for the cure of the ascites. There being already extensive adhesions between the right lobe of the liver and the diaphragm, no sponging or scratching of their surfaces was done. The peritoneal covering of the anterior abdominal wall was somewhat roughly sponged with gauze and the omentum sutured to it in half a dozen places, with fine catgut. The wound was now closed in the usual way, and the patient was put to bed in fairly good condition, having had a rectal injection of one quart of hot normal salt solution, while still under the influence of the anesthetic, as suggested by Howard Kelly, to prevent the inordinate and distressing thirst which follows intra-abdominal operations.

The anesthetic used was chloroform; the time of operation, one hour and thirty minutes. The temperature was 98, pulse 120. When seen by Dr. Miles, eight hours later, the temperature was 97.5, the pulse 160 and almost imperceptible. The Doctor gave $\frac{1}{20}$ gr. strychnia hypodermically. At noon next day the pulse was 120, temperature 100.8, with no pain or vomiting, but some nausea, and she wanted water. I gave calomel and soda to move the bowels. The patient had been able to void her urine without trouble. The next day the temperature was 99.4, the pulse 115, and the bowels had acted freely, the patient was cheerful and had no pain. During the next two days the pulse and temperature were 100, on the sixth, seventh, and eighth pulse 96, temperature 99.6; on the ninth and tenth, pulse 96, temperature 99; on the eleventh day the pulse was 90, temperature 99. The stitches were removed and the wound was perfectly healed, so I made no arrangements to return.

The patient was then cheerful, with a fair appetite, and slept well. She was still jaundiced, but there had been no reaccumulation of ascitic fluid. She was seen the next two days, the twelfth and thirteenth, by Dr. Miles, and he thought her doing well. On the morning of the thirteenth the pulse was 96, temperature 98.4 and on the morning of the fourteenth day her pulse was 100, temperature normal. At 3 p. m. of that day she was suddenly seized with symptoms of pulmonary embolism and died at 10 p. m. No post-mortem was made.

The spleen, when drained of blood, weighed $4\frac{1}{2}$ pounds, and was eleven inches long, six wide and $3\frac{1}{2}$ inches thick.

Removing the organ in this case was probably not a justifiable operation, although the precise indications for splenectomy have not been definitely settled. In

1. N. Y. Med. Record, Aug. 26, 1899.

this instance, however, it was the deliberate choice of a woman who knew she had an incurable disease, and who made the choice after she fully understood the probable result. She simply preferred this manner of death to the other. The operative treatment and cure of one of the most troublesome symptoms of an incurable disease opens up a field in surgical procedure that is well worthy investigation and trial. The operation seems to have been suggested first by Talma, of Utrecht; the suggestion being that if the interrupted portal circulation could be surgically re-established the ascites would be relieved.

LARYNGEAL PAPILOMATATA REQUIRING A SPECIAL INSTRUMENT.

BY SETH SCOTT BISHOP, B.S., M.D.

Professor of Diseases of the Nose, Throat, and Ear in the Illinois Medical College; Professor in the Post-Graduate School. CHICAGO.

The following case presents a unique feature, in that it was impossible to remove all of the laryngeal growths with any instruments that were obtainable, but that no difficulty was found operating with the special instrument shown in the illustration.

The case was that of a harness manufacturer, 50 years old, who had been in his present business thirty-two years. In 1895 he had experienced some annoyance from hoarseness; in December, 1897 he had a "cold in



FIG. 1.—Laryngeal papillomata.

his throat," resulting in a loss of voice for two days; in the following summer the hoarseness returned and grew worse until, in November, 1898, there was complete suppression of the voice. The aphonia remained until the last of the papillomata were removed in January of the present year. The patient had been under the care of Dr. J. L. Eger, of Delphos, Ohio, who recognized the character of the tumors and referred the case to me for their removal.

Examination disclosed the condition shown in Figure 1. The anterior commissure was filled by a pale pink, lobulated mass resembling certain adenoid growths in the vault of the pharynx. Adjoining this mass was a growth on the left vocal cord, situated a little nearer the anterior than the posterior end. Nearly opposite this was a similar, though larger, tumor having a broad base, and projecting from the border of the band to meet the opposite tumor in such a manner as to bring its anterior surface in contact with the posterior surface of its fellow. The pressure of these two papillomata against each other produced a marked depression in the right one.

These twin tumors presented the appearance of gray warts of a minutely cauliflower formation, and together with the third growth occasioned not only suppression of the voice, but obstruction to the column of air, although the respiration was not yet embarrassed sufficiently to cause great distress.

My first efforts were directed toward the removal of the mass filling the anterior commissure. I attacked it

with Mackenzie's biting forceps and with the crushing forceps, but found that none of the usual instruments would reach them, then I bent an electrode in such a way as to afford a very long laryngeal extremity, and with this I destroyed the large mass.

However, the patient was averse to the use of the electrode, and conceived the idea of having an extralaryn-



FIG. 2.



FIG. 3.

geal operation, but fortunately was convinced that the results of endolaryngeal operations were far superior to those obtained from entering the larynx from without. By using the longest Mackenzie biting forceps obtainable I removed the mass shown at the actual size in Figure 2. The larynx was situated so low that it was necessary to press with extraordinary force on the forceps in order to reach low enough to obtain this much of the growths and it was impossible to reach more with the instruments then in use. Dr. O. J. Stein kindly made attempts with his and had the same results.

Then I had an especially long biting forceps made, with which I was able to remove the remnants of the two neoplasms. After the one on the right cord was taken away, there was revealed a growth below the cord, which was readily reached and removed by directing the long cutting blades of the forceps well under the band. Figure 3 shows the actual size of the growths that were taken entirely by the special instrument, Figure 4, which is three-quarters of an inch—18 millimeters—longer in

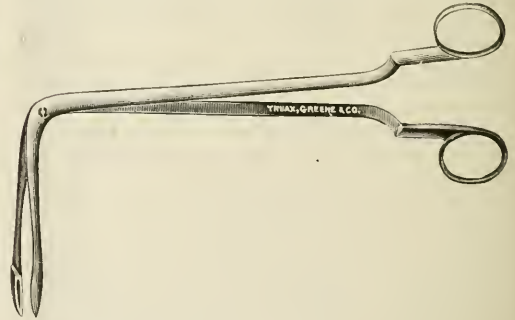


FIG. 4.—Special Laryngeal Forceps.

the laryngeal extremity than the longest instrument I could find.

Since the operation the voice has gradually improved in strength and timbre, and under date of March 11, 1900, the patient reported as follows: "I am most delighted to inform you that my voice continues to improve; it is now almost normal, or as good as it ever was. I can halloo and, I believe, make a very fair stump speech," etc.

103 State Street.

THE BERLIN authorities have instituted a three weeks' course in the Deaf and Dumb Asylum, for physicians engaged in work among the deaf and dumb.

Therapeutics.

Pneumonia.

Walton advises the avoidance of exposure to other cases, confining of the patient to bed, avoiding all unnecessary exertion of any kind, the use of white flannel clothing, one or more daily spongings with tepid water and vinegar, and a diet consisting of milk, soups, lemonade, etc. In a robust patient at an early stage the lancet will sometimes cut short the disease, and a brisk purge and one or two large doses of quinin may be of value. The drug he most depends on is the Norwood's tincture of veratrum viride, 2 to 4 minims every two hours or oftener, watching its effect on the pulse and bringing it down to 70 or 80 and holding it there. He has never seen any untoward effects and if the treatment fails to arrest the disease it makes it milder and more easy to manage. If it goes into the second stage give ammonium carbonate, 5 gr., every two hours as a stimulant and absorbent. Strychnia is the best stimulant and tonic we have and should be used freely when indicated. Digitalis is of service when the pulse is weak and rapid. Transfusion of normal salt solution should be used in bad cases and opiates to relieve pain if necessary.—*Va. Med. Semi-Monthly*.

Intestinal Antisepsis by Chlorin Water.

Fitzgerald's treatment for typhoid fever is the one recommended by Yeo. The following is the formula for the preparation: Forty minims of strong hydrochloric acid is introduced into a 12-ounce bottle, containing 30 grains of potassium chlorate. The chlorin gas is at once liberated. The bottle should be tightly corked from the first. After it has become filled with the greenish-yellow gas, pure water is poured into the bottle little by little, shaking well after each addition, until the bottle is filled. To disguise the acridness of the chlorin, one ounce of syrup of orange-peel may be added, if desired. Of this mixture, one or two tablespoons may be given, in a little water, every two, three or four hours, according to indications. The odor of the chlorin is often detected in the breath and exhalation from the skin where the medicine has been properly given and it is desirable that it should be so. If necessary in any given case 24 to 36 gr. of quinin muriate may be added to the mixture, but usually it is hardly necessary. In some cases it may be well to give strychnin or digitalis, and for insomnia, codein will be of benefit. Fitzgerald has made this his standby to secure intestinal antisepsis, and he gives it night and day from the first until the temperature falls to normal and remains there. The bowels must first be freely moved by small, and often repeated, doses of calomel, followed by saline laxatives if necessary. He says give calomel—to prevent diarrhea if there be none, to cure it if it be present. Other methods of treatment are mentioned, but these are, he thinks, the most certain remedies.—*Medical Mirror*.

Typhoid Fever.

The physiologic treatment of typhoid fever is summarized by Dabney as follows:

1. Clean intestines by mild cathartic.
2. Stimulate the vasomotors by the regular application of cold water with constant friction.
3. Colonic flushings.
4. Abundance of cool water to drink.
5. Clean sheets, clean gown daily.
6. Sunlight and air in abundance.
7. Spare and readily assimilable diet at long intervals.
8. Eternal vigilance for complications.
9. Careful study of pulse and temperature.
10. Never give any remedy that increases vasomotor paresis: the coal-tar series in particular are to be avoided.
11. Avoid the use of all stimulants as a routine practice. I refer especially to alcohol, strychnin, nitroglycerin, and ammonia. There are times when we may need stimulants badly, but the average cases, if properly treated, seldom need them. The use of digitalis, though indorsed by many good men, I deem unphysiologic, and at times positively dangerous in this disease.—*Va. Med. Semi-Monthly*.

Berberin in Malarial Swelling of the Spleen.

Typaldo Lascarato (*Grâce médicale; Independence médicale*) says that berberin, in addition to its bitter tonic action, has the faculty of causing the elastic fibers of the spleen to contract, especially when that organ is enlarged, in a manner similar to that of ergotin on the muscular fibers of the uterus. This is not

entirely free from danger as, if it is not administered with caution, its action may be so severe as to rupture the swollen spleen and cause fatal hemorrhage. But berberin, by rapidly and abruptly contracting the parenchyma of the spleen, drives from it *en masse* the paludal parasites which swarm in it, toward the general circulation, from which arises a fresh access of pyrexia. The administration has often been known to be followed by a brusque elevation of temperature. Many physicians have on this account considered berberin more harmful than useful. However, the author points out that this action of berberin in driving the parasites from the spleen, which is their place of election, into the general circulation is very favorable to the complete destruction and disappearance of the paludal miasm from the entire organism. The parasites expelled from the parenchyma of the spleen are spread through the general circulation at a very inopportune period of their evolution, when they engage in a deadly struggle with the phagocytes of the blood, to which they easily succumb. To aid this result, the Italian physicians, who have had considerable experience with this remedy, advise its use almost simultaneously with quinin, which attacks them more rapidly in the blood driven out by the berberin from the spleen. In all cases of swollen spleen, therefore, save those of too old standing or the ultimate result of advanced hypertrophy or degeneration of the organ, berberin is highly commended by the author. It is given in a daily quantity of from 1½ to 15 grains, according to the age of the patient, and always in combination with quinin. A favorite Italian prescription is as follows:

R. Hydrochlorid of berberin.....gr. xv
 Bisulphate of quinin.....gr. viiiss
 M. Sig. To be divided into four powders and one taken every half hour or hour, for an adult.—*N. Y. Med. Jour.*

Treatment of Migraine.

Dr. Henry Hanford, in an article on migraine and the vasomotor theory, speaks of the treatment as follows:

It is well known that when with headache the extremities are cold, some relief is obtained by warming the feet and hands at the fire. In many cases the recumbent position is required in addition. In a large class of patients the attack may be cut short by many hours by going to bed, applying hot bottles to the extremities, and taking a hot drink—as soon as the stomach will retain it—some hot tea or milk. A glow soon pervades the surface, and the spleen is relaxed. Relief so obtained is not very liable to relapse. After a few hours the ordinary duties of life may be resumed and, although sleep is the best completion of the cure, its place may sometimes be taken by a good dinner. I believe this treatment, when it can be carried out, to be far superior to any drug treatment, although it may be aided by a good dose—thirty to sixty grains—of potassium bromid. It is a curious fact, and may be taken as the exception which proves the rule, that a few patients find that the recumbent position aggravates their pains and often prefer to spend the night in an armchair rather than go to bed. And also, in the last stages, moving about sometimes seems to hasten the end of the attack more than remaining quiescent.—*Edinburgh Med. Jour.*

Neuralgia.

R. Ammonii chloridi.....ʒiij
 Tinct. gelsemii.....ʒii
 Ext. glycyrrhiz. liq.....ʒss
 Aquæ chloroformi, ad.....ʒvi
 M. Sig. Dose ʒss every four hours until the pain is relieved.
 R. Butyl-chloral hyd.....ʒi
 Ext. cocæ liq. (miscible).....ʒvi
 Glycerini.....ʒii
 Tinct. aurantii.....ʒii
 Aquæ dest., q. s. ad.....ʒvi
 M. Sig. Dose ʒss every four hours.
 R. Antipyrin.....ʒiij
 Tinct. cascariæ
 Tinct. card. comp.
 Glycerini, aa.....ʒss
 Aquæ ad.....ʒvi
 M. Sig. Dose ʒss every four hours.

TO RELIEVE NEURALGIA OF PHTHISICAL PATIENTS.

Capitan prescribes the following ointment. A very small quantity is lightly applied, and the part covered with some impermeable material and absorbent cotton. The application

must be discontinued as soon as the skin becomes even slightly reddened:

R. Guaiacol	
Methyl salicylatis aa	.....gr. lxxx
Ext. belladonnæ	.....gr. iiiss
Ext. opii	.....gr. iv
Vaselinii	
Lanolini, aa	.....ʒss

M. Sig. External use.

In very acute cases, menthol (15 grains), antipyrin (30 to 40 grains), or potassium bromid (80 grains) may be added.—*Louisville Monthly Jour. of Med. and Surg.*

Ochritis.

R. Hydrargyri chlor. mitis	.....gr. iiii
Pulv. ipeacac.	.....gr. x
M. Sig. Take at once.	
R. Hydrargyri ammoniat.	.....ʒi
Cerati simp.	.....ʒi
M. ft. ungt. Sig. Apply as directed.	— <i>McElroy.</i>
R. Ammon. muriatis	.....ʒiii
Spir. vin. rect.	
Aque, aa.	.....ʒiii
M. Sig. Use as a lotion.	
R. Morphin sulphatis	.....gr. viii
Hydrarg. oleatis (10 per cent.)	.....ʒi

Treatment of Congestion of the Liver.

Monin (*Indépendance Médicale*) gives the following formulæ:

1. R. Sod. bicarb.	
Sod. sulph., aa	.....parts 6
Sod. phos.	.....parts 4
Sod. benzoate.	.....parts 2
M. Sig. A teaspoonful in half a glass of warm water, to be taken daily.	
2. R. Powd. ignatia	
Powd. squills, aa	.....gr. 1½
Sparteïn sulph.	
Amorph. gossia, aa	.....gr. ʒ4
Theobromin	.....gr. 3ʒ4
M. Sig. Two such cachets to be taken daily.	
3. R. Glycerin	.....parts 200
Tinct. of boldo	.....parts 100
Lactic acid	.....parts 15
M. Sig. A teaspoonful in half a glass of water, to be taken after each meal.— <i>N. Y. Med. Jour.</i>	

Quinin Sulphate in Complete Abortion.

Schwab (*Rev. Med. Chir. des Mal. des Femmes*), points out that obstetricians are not agreed as to the best treatment of incomplete abortion, some leaving matters alone unless hemorrhage or sepsis appear, others proceeding at once to the clearing out of the uterus with finger or curette. He is of the opinion that, save in cases in which the medical men can keep the patient under constant supervision, in which antiseptic precautions have been carried out since the commencement of the abortion and in which the os is still closed, the uterus ought to be emptied at once. He admits, however, that the curette has its dangers, and that ergot is inconvenient, so he recommends quinin sulphate. He has used it with success in seven cases of incomplete abortion. It is quite safe; it does not set up a tetanic condition of the uterine muscle; it may be given in two doses of eight grains at an interval of ten minutes, and it usually causes emptying of the uterus in about four and a half hours.—*The Times Register.*

Palatable Quinin Mixture for Children.

Dr. W. J. Greenelle gives the details for the preparation of such a mixture which will be readily taken by children. It is designed as a tonic and malarial prophylactic for children living in malarious sections. It will serve for active medication in acute cases of malarial disease of three years or younger by giving the dose at hourly intervals:

R. Quinine hydrochlor.	.....gr. v-x
Alcoholis	.....ʒi
R. Ol. cinnamonii	
Ol. anisi aa	.....m. xxx-xl
Magnesia, q. s.	
Aquite	.....ʒi
M. Let stand for some hours; filter.	

Mix one and two and add:

Syr. simp.	.....ʒiii
Carmin or cocineal sol.	.....m. v.

Sig. One or two drams as directed.

Saccharin in small quantity helps to disguise the larger dose of quinin. Fowler's solution may be added if indicated, or sodium bromid for children made irritable by quinin.—*Med. Seminary.*

Treatment of Influenza.

Dr. Bartholow writes that his practice is to administer at the beginning of the local inflammation, 1/6 of a grain (adult dose) of one of the salts of pilocarpin. Pilocarpin sets up a brief stage of dryness immediately followed by increased secretion and presently the mucous glands, the salivary and cutaneous sweat-glands pour forth an abundant secretion. A sufficient dose of pilocarpin, administered at the right time, will often abort an acute catarrh or common cold. One dose should be given about two or three hours before retiring for the night so that the process of salivation and sweating is ended before sleep begins.

On the second day duboisin should be given, from 1/300 to 1/200 of a grain, for it is not desirable to induce its full physiologic effect. This quantity given once or twice in twenty-four hours will cause some dryness of the throat and nasal and faucial mucous membrane and slight dilatation of the pupil. It is important to maintain only a moderate degree of impression by duboisin; beyond that the result will be disagreeable without contributing anything to the curative action.—*Med. Summary.*

Medicolegal.

What Constitutes an Insane Delusion.—In ordinary language, a person is said to be under a delusion who entertains a false belief or opinion which he has been led to form by reason of some deception or fraud. But, the Supreme Court of California goes on to say, in *Re Scott's Estate*, it is not every false or unfounded opinion which is in legal phraseology a delusion, nor is every delusion an insane delusion. If the belief or opinion has no basis in reason or probability and is without any evidence of its support, but exists without any process of reasoning, or is the spontaneous offspring of a perverted imagination, and is adhered to against all evidence and argument, the delusion may be truly called insane. But if there is any evidence, however slight or inconclusive, which might have a tendency to create the belief, it can not be said to be a delusion. One can not be said to act under an insane delusion if his condition of mind results from a belief or inference, however irrational or unfounded, drawn from facts which are shown to exist. A suspicion which rests upon evidence can not be held to be a delusion. A suspicion which has no evidence to support it is only an unsettled condition of the mind indicating doubt or mistrust, and does not constitute a delusion unless it shall develop into a fixed conviction of the existence of the fact suspected. In determining whether there was in a given case this fixed belief or conviction, the nature and temperament of the person, the circumstances under which he made the statements alleged to show an insane delusion, the habits of his life and association with others and also his conduct toward the relative or other person concerning whom they were made, and the nature of the intercourse maintained with the latter during the period within which they were made, it would seem, should be considered.

Proof of Sanity by Letters.—The Supreme Court of Indiana says, in *Blume vs. State*, that written communications, as well as oral conversations may afford evidence of the soundness or unsoundness of the mind of the writer, and may constitute a sufficient basis for the opinion of a skilled physician or alienist upon that subject. Here, in a homicide case, some twelve letters, extending in time over about eleven months and covering at least a portion of the period during which it

was claimed that the accused was of unsound mind, were read in evidence and submitted to the examination of a physician as an expert witness for the purpose of obtaining his opinion upon the question of the sanity of the accused at the time of the homicide and shortly before that occurrence. In this, and in permitting the witness, after such examination, to give his opinion as to the sanity of the writer, the court finds no error. The witness, who, as the court says, showed himself thoroughly competent, described the characteristics of the written compositions of the insane, and called attention to the absence of these peculiarities in the letters in question. And, upon the basis of the coherency and consistency of these letters, the omission of everything fantastic or absurd, their apparent adherence to the facts of the situation of the writer, the quality and regularity of the handwriting, and other features pointed out by the witness, he expressed the opinion that at the time they were written the writer was of sound mind. That this evidence was competent, the supreme court declares that it entertains no doubt, the foundation on which the opinion rested having been fully made known to the jury, and the latter having had the means of estimating its weight and value. The objection that there were other letters in the possession of the state, written by the accused, and that all should be read or none, it says was not deserving of serious consideration. The state, it holds, had the right to introduce such of the letters as it deemed necessary, and to withhold all others in its possession.

Assault and Battery in "Magnetic" Treatment.—The Supreme Court of Wisconsin has affirmed in *Bartell vs. State*, a conviction of assault and battery, charged of a man who claimed to be a magnetic healer in the regular practice of his profession. He treated a young girl about 18 years of age, the person upon whom the offense was committed, at her request and with the sanction of her father. She was afflicted with some nervous trouble, and was ignorant of what was necessary on her part in receiving the massage treatment, which was the accused's method of operating. He went into a room alone with her, caused her to remove all of her clothing and then, while her naked body was wholly exposed to his view, he gave her a massage treatment lasting some fifteen minutes. The evidence also tended to show that after the treatment he took some indecent liberties with her. After stating the facts, the supreme court declares that the law relating to physical violations of the persons of females accomplished by such a species of fraud or imposition as may be exercised by a person under the pretense of necessity or authority, where the violator, because of his position, has exceptional opportunities for thus imposing upon his victim, is well settled and is not liable to be too often or too rigorously enforced. The jury was told, in substance, that if the accused treated his patient in good faith, for the purpose of curing the disease with which she was supposed to be afflicted, and in good faith caused her to expose her body to his view for the purposes of such treatment, his conduct did not constitute the offense of assault and battery; but if on the other hand, he needlessly caused such patient to expose her person to his view for his evil purposes, and she submitted because of her ignorance, and that under such circumstances and for such purpose he secured the opportunity of laying his hands upon her body, he was guilty of the offense of assault and battery. In such charge, the supreme court holds, there was no error. Nor does it consider that there was error in excluding evidence as to the accused having cured a person, by his method of treatment, afflicted with rheumatism, the jury having been distinctly instructed that whether he possessed the power he supposed or pretended he possessed was not a subject for its consideration, the only question for the jury to decide being whether, in the manner he proceeded to treat his patient on the occasion in question, he acted in good faith, or because of the manner he administered treatment to the patient he needlessly caused her to submit her body to him for the gratification of his evil desires. To this the supreme court adds that the question was, as in substance stated by the trial judge, whether he so violated rules of propriety by needlessly causing his patient to submit herself to him, pretending, and causing her to believe, that such submission was

a necessary incident of the treatment for curative purposes which she solicited at his hands, that his conduct assumed the character of a trespass on her person. Two doctors were allowed to testify as experts on the part of the state regarding whether it is reasonably necessary, in giving the massage treatment to a woman, to require her to expose her person to the view of the operator and whether it is customary where the operator is a man. The witnesses testified that they, as physicians, were familiar with the massage treatment, the methods employed in giving it, and the reasonable requirements on the part of the patient in order to receive such treatment. That, the supreme court holds, sufficiently demonstrated that the witnesses possessed special knowledge of the subject upon which they were allowed to testify, and were competent to testify thereon as experts.

Employers Not Liable for Doctors' Bills.—An employee in a bank, store, or shop, or upon a farm, may become suddenly very ill, or in some way seriously injured so that some foreman or other employee might properly deem immediate medical attendance necessary and, in the absence of the employer, summon a physician. Is the employer liable? The Supreme Court of Michigan says, in the case of *Holmes vs. McAllister*, that it was cited to no authority which so holds. To this it adds that it is doubtful whether such an employer would be liable if he himself sent for the physician to attend one of his employees, though the authoritative force of this statement is taken away by the remark that it was unnecessary upon this point to express an opinion in this case. But, be that as it may, the court declares that it does not hesitate to hold that in those avocations of life unaccompanied by dangers an employer is not liable for the services of a physician summoned by his manager or foreman or other servant to attend an employee in a case of sudden illness or injury, whatever his moral obligation may be. The case directly before the court was one of a girl having her hand seriously injured while working in a laundry. The forewoman sent a boy for the doctor, not designating any particular one. The one called immediately responded, dressed the wound and treated the girl, first at her home and then at his office, until the wound was healed. Thereafter he sued the girl's employers for the amount of his bill, and recovered a verdict for \$50. But even judgment for that amount the supreme court will not permit to stand. There being no evidence in this case that employment in a laundry is accompanied by any unusual dangers, it applies to it the rules stated, rather than those which have been held to apply to cases of injury to railway employees and others engaged in what are deemed extrahazardous occupations. It holds that the forewoman of the laundry had no power to bind the employers by sending for a physician to attend the injured employee. It also takes into account that he never informed the employers that he was treating her, or that he expected them to pay him, or presented a bill, until he had ceased to treat her. Nor does the court see any evidence of ratification in the testimony of the husband of the woman with whom the girl lived that he went to see one of the employers and asked him to help her, which he declined to do, stating, however, that he would pay the doctor's bill; or in the testimony of one of the doctor's attorneys that he had called upon one of the employers to try to collect the bill and the man told him that the calling of the doctor was all right—was something that he would have done himself, had he been there in the laundry at the time, and that he was willing to pay for the first visit, whatever that might be worth, though he didn't think that he ought to pay the entire bill. Moreover, not only does the court hold that, as already shown, the employers were not originally liable, and that there was no evidence of ratification, but it declares that the language of these two witnesses imported no more than a promise to pay the debt of another, which is void under the statute of frauds requiring such a promise to be in writing. And even more emphatically than it holds that the doctor could not collect for his own services, does the court declare that he could not recover for the services of the two physicians whom he called in, unknown to the girl's employers, one for advice, and the other to assist him in an operation.

Association News.

AMERICAN MEDICAL ASSOCIATION.

*Fifty-first annual meeting, held at Atlantic City, N. J.,
June 5-8, 1900.*

Official Minutes of the General Sessions.

JUNE 5—FIRST GENERAL SESSION.

Of the vice-presidents and ex-presidents of the Association there were seated on the platform Drs. Henry O. Marcy, E. D. Ferguson, Nicholas Senn, Joseph M. Mathews, W. D. Middleton, Donald Maclean and Charles A. Wheaton.

The Association was called to order at 10:20 a.m., by the president, Dr. W. W. Keen, Philadelphia.

Prayer was offered by the Rev. Frederick J. Stanley.

Dr. J. F. Marchand, Ohio, on behalf of the citizens of Canton, presented to President Keen the insignia of authority and of power, in the form of a gavel made from the oak connected with President McKinley's residence.

The gavel was accepted by President Keen in a brief, but befitting speech.

The acting-governor of New Jersey, Wm. M. Johnson, was then introduced, and delivered the following:

ADDRESS OF WELCOME.

You have already been made aware of the fact that the governor of New Jersey is absent, and that you are to be addressed by the acting-governor of this commonwealth. When I assign as the reason of Governor Voorhees' absence that he is "half seas-over" I mean no disrespect to his excellency, who is my valued friend, and whose personal habits are unexceptionable. It was his purpose to be present to-day to offer his greeting to the members of this Association, but he is across the seas on the advice of his doctor, for here as elsewhere, there is always one higher in authority than the chief executive, and that is the family physician. If that physician is a member of this honorable body, as I have no doubt he is, it may be a serious question whether his action in banishing the governor at this time does not require investigation at your hands. The constitution of New Jersey provides that in case of absence from the state of the governor, the powers, duties and emoluments of the office shall devolve on the president of the senate, who thereby becomes the acting-governor. A careful investigation of our statutes to ascertain the duties of the governor, fails to disclose among those duties the obligation or privilege of addressing the members of this magnificent association. I therefore have concluded that this great honor must be deemed one of the "emoluments" of the office devolving on me by the constitutional provision already mentioned. I certainly esteem it a high privilege and a distinguished honor to be permitted to welcome you to-day, and only regret that you are not to have the opportunity to meet and hear that most charming man and successful governor, Foster M. Voorhees.

The hospitality of Atlantic City is proverbial. Being the greatest watering-place in America, if not in the world, it is accustomed to entertain most royally, and is never happier than when entertaining those, who, like yourselves, by virtue of their intellectual, personal or representative character, occupy positions of usefulness or of honor.

But I am here to greet you in the name of the people of New Jersey, and in their behalf to extend a most cordial welcome. I thank you for the honor done the state by the selection of this place for your annual meeting, and desire to express the wish that you may have an agreeable and successful session of this great representative Association.

In case there should be a marked improvement in the condition and health of your patients while you are enjoying your vacation here, I trust it may not be charged solely to your absence from home.

We are justly proud of the fact that the first medical society in America was established in this state. In the year 1766, while New Jersey was still a province, a permanent organization was formed by some of the leading physicians of the colony, for the advancement of the profession, on a basis which was most honorable in its aims and in the high ethical purposes of its founders. I understand that the original book of minutes of this association is still in the possession of the Medical Society of New Jersey, in a good state of preservation. Its articles of association would prove a model for similar societies at the present day. It is a matter of surprise to me to learn, as I lately have, that so many of these associations

formed by medical men for mutual benefit and the improvement of the profession, trace their history back to the early years of the century, and that several, like the medical society of this state, go back far beyond the limit of the one hundred years. (Applause.)

Even in those early days American medicine was distinguished by its high ideals and its desire to make the general fund of professional knowledge available to all who desired to enjoy its benefit.

It seems to me that in no department of human activity is there to be found a more unselfish interest in a common cause, than in the noble profession to which you have devoted your lives and talents. It manifests itself in a willingness to contribute for the good of the profession whatever of value has been learned by experience or investigation. The results of most wearisome labors become at once common property. Every member feels that he owes duties to the profession, and is bound to give as well as to receive honor and help. How much of this spirit is due to the influence of this and kindred societies it is perhaps impossible to estimate, but it must be that these societies, founded as they were with such lofty standards, have done much to stimulate and develop a high conception of the duties and obligations of the profession, and to foster a noble ambition to reach the highest attainments in the learning and practice of medicine. It is inspiring to note the efforts of its members to advance the cause of medical science for the benefit of their fellow men.

The triumphs of medicine have kept pace with the progress of the mighty century now fast drawing to a close. I would not assume in this presence to recount the marvelous progress of medical science and practice, but in no department of human endeavor, in this brilliant epoch in the world's history, have there been greater gains and more illustrious achievements than in the domain of your beneficent profession. These achievements rank in importance and value with the discovery and adaptation of steam and electricity with all their dazzling results. The telegraph, the telephone, the electric light and other varied forms of electrical development, are the products of the century now closing, but of equal rank and importance are those great discoveries of medicine, which have in the same century revolutionized the practice of the profession. Every intelligent layman knows how the use of anesthetics has made surgery humane instead of barbarous, and what the modern discovery of surgical cleanliness and antiseptic treatment has done to preserve human life. He knows something of the enormous value derived from the use of the microscope and other instruments of precision, the achievements in the science of chemistry and in the new learning of biology, and especially in the domain of bacteriology. He has heard of the marvelous and almost incredible skill of daring operators and specialists. An ordinary student of affairs needs no medical training to see that a rational system of diagnosis and treatment of disease, based on substantial scientific grounds, together with an intelligent appreciation of the causes of sickness as something to be warded off and prevented if possible, are characteristics of the medical practice of the present day, in marked contrast to the empiricism of earlier years. But the advance of medical science has not served to efface from its practitioners the principles of philanthropy and charity which are so prominent in all the history of the profession. In the original constitution of the Medical Society of New Jersey, adopted in 1766, already referred to, it was among other things declared "that as we have separated ourselves to an office of benevolence and charity, we will always most readily and cheerfully when applied to, assist, gratis, by all means in our power the distressed poor and indigent in our respective neighborhoods." The modern physician has not departed from the principles thus promulgated. Few, indeed, realize the extent and value of the services rendered by a busy practitioner to those from whom he can expect no pecuniary fee or reward, oftentimes not even the reward of common gratitude for time and skill most generously and successfully bestowed. There is, I am sure, no class of men who freely give so much of faithful service for the benefit of others, as the men of your profession. Private philanthropy may found and support hospitals, but who can measure the value of the professional services cheerfully rendered to such hospitals all over our land by the hundreds of physicians of the highest order of talent, without regard to personal inconvenience and sacrifice? (Applause.)

This magnificent association, the representative of all that is best and most progressive in the greatest school of medicine in America, should have a powerful influence in advancing the general interest of the profession. I bespeak for you a most harmonious and successful meeting here.

I trust, however, that you will not think New Jersey is all scrub-oak and pine-barrens, salt meadows and sand dunes. We

have within our boundaries a country most diversified and beautiful. On the north, we are walled in by the magnificent rocks of the Palisades of the Hudson, whose preservation has lately been the subject of legislative action. The Highlands of New Jersey and all the sections of the western and central parts of the state are picturesque and attractive, a fertile soil makes it a garden spot for the two great cities on our borders, a mild and salubrious climate causes a residence here to be delightful and healthful.

This magnificent stretch of sand extending for a hundred miles along our eastern coast gives to countless thousands a chance to breathe the invigorating and life-giving ocean breezes. To these breezes we welcome you. Drink deep of the ozone which is borne in upon you by favoring winds from the bosom of the broad Atlantic! From these breezes may you gain health and vigor; from this mighty ocean may you receive new inspirations which shall lead to high resolves, and may your deliberations here still further advance the interests of that noble profession of which you are such illustrious representatives.

I thank you again for the honor of your presence here and give you all a most hearty welcome and greeting. (Applause.)

MAYOR'S ADDRESS OF WELCOME.

Hon. F. P. Stoy, mayor of Atlantic City, was introduced and spoke as follows:

I deem it a great privilege to be present on this great occasion. It has been my duty the last few days to follow the reverend gentlemen on the programs of different delegations which have met here, all of which have been addressed. These gentlemen have done the praying, and I have extended the right hand of welcome. I am here this morning to bid you welcome, the greatest bunch of intellect that has met here for many days. (Laughter.) I want to say to you that the great gates of this city have closed behind you, and you are now surrounded by water. I am here on behalf of the people of Atlantic City to bid you a hearty and cordial welcome. I trust that your stay with us will be one of pleasure, as well as benefit to you. While we are extending a little beyond the limit, you must remember that you are at sea. We are outside of Atlantic City several hundred feet (laughter); nevertheless, I want to state to you that you have the freedom even of the outside. (Applause.) We are pleased to have you with us, and when it becomes your duty to select your next place of meeting we want you to remember that this city always extends a welcoming hand to any convention. Remember, that on such occasions as this the latch-string of Atlantic City hangs on the outside. I hope there will be nothing to mar your pleasure while here. I want to say, further, that should any of you stray from your wives, or be out late at night, and desire my assistance, the mayor of Atlantic City will remain at home during your presence here, and if you get into trouble (laughter), the mayor will be in trouble with you. I trust that this meeting will be a grand success. Ladies and gentlemen, we will be glad to meet you again. (Applause.)

An address was also made by Dr. T. S. K. Reed.

At this juncture the first vice-president, Dr. Chas. A. Wheaton, was called to the chair.

REPORT OF COMMITTEE ON ARRANGEMENTS.

Dr. Philip Marvel, Atlantic City, reported as chairman of the Committee of Arrangements. He called attention to the official program for the order of business, entertainments, places of meetings of sections, committees, etc.

REPORT OF GENERAL BUSINESS COMMITTEE.

The next thing in order was the report of the General Business Committee, which was read by Dr. Bulkeley, the acting secretary, as follows:

The General Business Committee met for work yesterday afternoon, thirteen members being present.

The committee would call the attention of the Association to the fact that the order given last year in regard to abstracts of papers had been imperfectly carried out, as of the 492 papers on the program, only 231 had abstracts presented, and that the secretary of the Association had stated that many had been sent in very late, instead of thirty days before, as provided by the resolution of the Association.

In this connection the committee desires to call attention to the fact that too large a number of papers has often been secured, and that as suggested last year not more than thirty or forty can be properly considered during the six possible meetings of the Sections. At one meeting, in Philadelphia, four years ago, no less than 93 papers were printed on the program of the Section of Practice of Medicine, and often over

80 have appeared on different programs: a total of 2261 titles have been printed during the past four years. To facilitate the understanding of the work of the Sections, the committee would recommend for adoption the following:

Resolved, That the members of the Executive Committee of each Section meet the newly-elected officers of each Section on Thursday morning for the purpose of organizing the work for the ensuing year. Carried.

NUMBER OF PAPERS ON THE PROGRAMS OF SECTIONS DURING THE PAST FOUR YEARS.

	Philadelphia.	Denver.	Columbus.	Atlantic City	Total
Practice of Medicine	93	45	83	59	280
Surgery and Anatomy	46	71	72	55	244
Obstetrics and Diseases of Women	49	57	69	56	231
Ophthalmology	70	56	58	49	234
Laryngology and Otology	82	38	47	49	216
Diseases of Children	53	62	37	45	197
Materia Medica, Pharmacy and Therapeutics	28	81	59	48	216
Physiology and Dietetics	37	43	32	26	138
Neurology and Medical Jurisprudence	51	80	43	44	227
Cutaneous Medicine and Surgery	23	24	21	17	85
State Medicine	46	35	56	11	116
Stomatology	16	14	14	23	67
Pathology (provisional section)	..	..	..	18	18
	594	615	561	491	2261
	Presented.	47	13	15	85
	Papers Not	41	15	35	110
	Abstracts.	11	10	10	31
1. Practice of Medicine	60	47	13	15	135
2. Obstetrics	56	41	15	35	147
3. Surgery and Anatomy	55	..	..	..	55
4. State Medicine	44	25	19	18	106
5. Ophthalmology	40	30	10	10	90
6. Diseases of Children	45	28	17	17	107
7. Stomatology	23	23	23	23	92
8. Neurology and Medical Jurisprudence	44	25	19	19	107
9. Cutaneous Medicine and Surgery	17	17	16	16	66
10. Laryngology and Otology	49	23	26	26	124
11. Materia Medica, etc.	48	23	25	25	121
12. Physiology and Dietetics	26	26	26	26	104
13. Pathology	18	12	6	6	42
	492	231	261	261	1245

The committee nominates Dr. Edward Jackson, Denver, Colo., to serve on the committee on the Association prize essay, in place of Dr. Huntington, Sacramento, Cal., for the coming year. Recommendation adopted.

On account of the confusion which has existed in regard to the name of the committee, it would ask the Association to fix its name as the "General Executive Committee" to correspond with the name already given to the separate executive committees of the Sections of which it is composed. Adopted.

L. DUNCAN BULKLEY, M.D.
Acting Secretary.

The report was considered section by section, and the resolutions recommended by the committee were adopted.

President Keen then delivered his address, which was punctuated with applause throughout its delivery. (Referred to Executive Committee.)

Dr. Charles A. L. Reed, Cincinnati, moved that a vote of thanks be extended to the president for his able and very instructive address. Seconded and unanimously carried.

REPORT OF TREASURER.

The treasurer, Dr. Henry P. Newman, Chicago, read his report, which was referred to the Board of Trustees.

ANNUAL REPORT OF THE TREASURER OF THE AMERICAN MEDICAL ASSOCIATION FOR THE FISCAL YEAR ENDED DEC. 31, 1899.

In presenting my sixth annual report as treasurer, I congratulate the American Medical Association upon a continuance of her development in the most satisfactory directions.

There has been a steady increase in membership and a marked growth of the sentiment of individual interest and responsibility. This is shown in the promptness with which dues are now paid early in the year. For instance, in January, 1900, we received \$10,215.00, whereas in 1895, in January and February together, our receipts amounted to but \$1,711.00. For the entire year ended Dec. 31, 1899, our membership receipts were \$38,965.00, being \$15,593.00 in excess of those of five years ago.

The cash in hand January 1, 1900, was \$13,556.36.

This, with the Indianapolis loan of \$3,000.00, and government bonds \$10,812.50, purchased during the year, makes our total assets at the close of the fiscal year, Dec. 31, 1899, \$27,368.86, exclusive of the valuable JOURNAL plant which, being under the efficient management of the secretary, Dr. Simmons, and the Trustees, is accounted for in their report.

HENRY P. NEWMAN, IN ACCOUNT WITH THE AMERICAN MEDICAL ASSOCIATION.

RECEIPTS.		Dr.
1899.		
Jan. 1,	To cash, balance on hand.....	\$18,729.95
June 10,	" " Registration fees, Columbus meeting.....	6,125.00
Oct. 25,	" " Interest on Indianapolis loan.....	179.80
Dec. 30,	" " Membership dues for the year, not including registration fees of Columbus meeting.....	32,540.00
Total	.....	\$57,574.75
DISBURSEMENTS.		
1899.		
March 9,	By cash, Dr. U. O. B. Wingate, expenses as Chairman of Committee on Public Health.....	\$ 49.62
" 21,	" " U. S. Government war bonds.....	10,812.50
April 14,	" " Special R. R. Agent, Columbus meeting.....	23.00
" 18	" " R. C. Shultz, stenographic report, Section of Practice of Medicine, Philadelphia meeting.....	80.00
May 9,	" " Plate for foreign advertisement.....	14.00
" 11,	" " Safety deposit vaults, box rent.....	10.60
" 29,	" " Index book for Secretary.....	12.00
June 8,	" " Expenses of Trustees, attending special and annual meeting in Chicago and the annual meeting at Columbus.....	1,330.78
" 8,	" " Dr. Wm. E. Atkinson, Secretary Honorarium, and expenses attending annual meeting at Columbus.....	432.98
" 13,	" " Dr. Geo. H. Simmons, Edr. expenses attending Columbus meeting.....	48.40
" 13,	" " Dr. H. P. Newman, Treas., expenses attending Columbus meeting.....	46.00
" 13,	" " Dr. J. Taylor, Chairman Regr. Committee, expenses of registration at Columbus meeting.....	297.30
" 20,	" " Premium on Treasurer's bond.....	100.00
" 20,	" " Dr. L. Dean Bulkley, stenographic report for Executive Committee at Columbus meeting.....	22.14
" 28,	" " Wm. Whitford, stenographic report proceedings at Columbus meeting.....	60.00
" 28,	" " Dr. H. O. Reik, stenographic report Section of Ophthalmology at Columbus meeting.....	120.00
" 28,	" " Ira J. Williams, stenographic and Medical Jurisprudence at Columbus meeting.....	120.00
" 28,	" " Dr. B. G. Kolb, stenographic report Section on Cutaneous Medicine and Surgery at Columbus meeting.....	50.00
July 7,	" " Dr. O. C. Ludlow, stenographic report Section on Diseases of Children at Columbus meeting.....	100.00
" 11,	" " Dr. H. P. Newman, Treas. half-yearly Honorarium.....	500.00
" 11,	" " Dr. E. F. Smith, stenographic report Section of Practice of Medicine, Columbus meeting.....	120.00
" 11,	" " Sundries for Treas. office.....	54.82
" 11,	" " Dr. F. E. Wessels, stenographic report Section of Surgery at Columbus meeting.....	120.00
" 25,	" " Wm. Whitford, stenographic report transactions of General Session and Section of Obstetrics and Diseases of Women at Columbus meeting.....	230.00
" 25,	" " 2,000 copies Trustees' reports.....	9.50
" 25,	" " Dues refunded for duplicate payments at Columbus meeting.....	55.00
Aug. 15,	" " Dr. Geo. F. Malsbary, stenographic report Section on Laryngology at Columbus meeting.....	102.60
" 23,	" " Carqueville Lith. Co. letter-heads for Association.....	94.35
" 23,	" " Dr. Geo. H. Simmons, Edr., subscriptions to Journal received at Columbus meeting.....	350.00
Nov. 4,	" " Dr. H. P. Newman, Treas. half-yearly Honorarium.....	500.00
" 16,	" " Bank collection fees on drafts.....	53.40
Dec. 28,	" " Postage for Treas. Office.....	400.00
" 28,	" " Dr. Geo. H. Simmons, Edr. Journal, requisitions for the year.....	28,000.00
" 28,	" " Balance on hand.....	13,556.36
Total	.....	\$57,574.75

ASSETS JANUARY 1, 1900.		
Loan	.....	\$ 3,000.00
U. S. Government Bonds	.....	10,812.50
Cash on Hand	.....	13,566.36
		\$27,368.86

Respectfully submitted,
H. P. NEWMAN, Treasurer.

Audited and found correct.
Hawley, Jones & Co., Public Accountants.
Feb. 9, 1900.

REPORT OF SECRETARY.

The secretary, Dr. Geo. H. Simmons, Chicago, presented his report, which was referred to the General Executive Committee. It is as follows:

Pursuant to instructions adopted by resolution at the last meeting of this Association I had printed and sent to all the health boards of the country a copy of the preamble and resolu-

tions in reference to smallpox and vaccination, which were adopted then. In attempting to carry out your instructions, I found that in several states there was no health board, and consequently it was impossible to do anything in those states, except to send to individuals who were known to be interested in health matters. In several states there is only one board of health, that is, the state board, whereas in others there is a board of health in every town in the state. In several instances, through the co-operation of the officers of the State Board of Health, it was an easy matter to get the required number distributed.

Believing that it would be advantageous and beneficial to place the Code of Ethics in the hands of the young physician as he starts out in his life-work, I wrote to every regular medical college in the country and asked its co-operation in distributing a copy of the Code of Ethics to each of their graduates. Without exception the offer to send these Codes free was accepted and very much appreciated. The result is, we have put into the hands of every graduate of eighty-one medical colleges a copy of the Code of Ethics. I am confident that the result will be beneficial to the profession at large in the future.

The following letter was received in November last:

Dr. Wm. E. Atkinson:
Secretary of the American Medical Association.
Philadelphia, Pa.

Dear Sir:—At the forty-seventh annual meeting of the American Pharmaceutical Association held at Put-in-Bay, O., Sept. 4-9, 1899, the following preamble and resolution were unanimously adopted, and the undersigned was instructed to transmit the same to you for presentation at the next meeting of your Association.

Yours very truly,
CHAS. CASPARI, M.D.,
General Secretary.

WHEREAS, The Metric system of weights and measures is used exclusively in the United States Pharmacopoeia, and is official in the pharmacopoeias of nearly all nations; and

WHEREAS, It has become the almost universal system of weights and measures in scientific calculations; be it

Resolved, That the members of the American Pharmaceutical Association request the American Medical Association to use its influence with all colleges and schools of medicine recognized by them in the United States, to use exclusively the metric system in the instruction of students, beginning with the classes entering said colleges and schools in the college year 1901.

Action on this subject was taken by the Association, as recorded in Vol. xxx of the Transactions, p. 44, which is as follows:

Resolved, That the American Medical Association adopt the International metric system and will use it in its transactions.

Requests that those who present papers at its future meetings employ this system in their communications or reprints thereof.

Requests that the medical boards of the hospitals and dispensaries adopt the metric system in prescribing and recording cases; and that the faculties of the medical and pharmaceutical schools adopt it in their didactic, clinical, or dispensing departments.

I present also correspondence with the officers of the Inland Empire Clinical Society of Spokane, Wash., in which they ask that their society be recognized as an affiliated body with the American Medical Association. Accompanying these letters is a list of members of the Inland Empire Clinical Society, Spokane, Wash., Constitution of the Inland Empire Clinical Society and By-Laws of the same society; also a part of the Constitution and By-Laws of the Washington State Medical Society, annexed hereto.

I have received the following letter:

CINCINNATI, OHIO, June 2, 1900.

Dr. Geo. H. Simmons:
Secretary of the American Medical Association.

Dear Sir:—I have the honor to advise you that the third Pan-American Medical Congress will be held in the City of Havana, Cuba, Dec. 26, 27, 28 and 29, A. D., 1900, and you are earnestly requested to communicate the fact to the general session of the American Medical Association.

In view of the fact that the Pan-American Medical Congress had its origin in the American Medical Association, it is earnestly requested that the latter organization appoint official delegates to attend the meeting above designated.

I have the honor to be, very respectfully,
CHARLES A. L. REED,
Secretary of the International Executive Commission.

Applications have been received from members of the medical profession residing in Honolulu, Alaska, Cuba, the Philippine Islands; and sixteen members of a Honolulu medical society are subscribers to THE JOURNAL and ask to be admitted as members of the American Medical Association. I would suggest that arrangements be made whereby members of these acquired possessions may become members of the American Medical Association.

The membership of the Association is at the present time approximately 9074. Respectfully submitted,
 GEORGE H. SIMMONS, Secretary.

PAN-AMERICAN MEDICAL CONGRESS.

Dr. Dudley S. Reynolds, Louisville, offered the following resolution, which was adopted.

Resolved, That the nominating committee be and is hereby instructed to present in its regular report the names of two members for each state, territory, the District of Columbia, and for the army, navy, and marine-hospital service to represent the American Medical Association in the capacity, respectively, of delegates and alternates at the Third Pan-American Medical Congress, to be held in Havana, Cuba, Dec. 26, 27, 28 and 29, A.D. 1900.

REPORT OF COMMITTEE ON DEPARTMENT OF PUBLIC HEALTH.

Dr. U. O. B. Wingate, Milwaukee, Wis., read the report of the Committee on Department of Public Health, as follows:

Your Committee on Department of Public Health desires at this time to submit a short report of progress.

Briefly speaking, the situation is as follows: The measure known as the "Spooner Bill," which has received the indorsement of this Association at its last two meetings, remains unchanged as to its provisions.

It was introduced in the Senate of the 56th. or present, Congress, by Senator Spooner of Wisconsin, and referred to the Committee on Public Health and National Quarantine, and in the House by Congressman Ray of New York, and referred to the Committee on Interstate and Foreign Commerce.

It has been an unfavorable session of Congress for such legislation, on account of the important and unusual questions to be considered, and also, on account of the close proximity to the next presidential election.

Nevertheless, much progress has been made by way of creating public sentiment, which is so essential in aiding such a movement.

Your committee has been assured by members of Congress who are advocating the bill that much more interest has been taken and much more information has been received by members of Congress concerning the importance of such legislation than ever before, and that it is only a question of time, if we continue in the work, when we will succeed in our endeavors.

Many organizations, both medical and business, have become interested, and are using their influence with their respective members of Congress in favor of the measure. The bill has now been twice formally indorsed by this Association, by the American Public Health Association, by the New York Academy of Medicine, by the New York State Medical Association, by the New York Board of Trade and Transportation, and by the New York Chamber of Commerce.

It has also received the indorsement of the conference of State and Provincial Boards of Health of North America, many state and local medical societies, also municipal and local boards of health. Its principal features were warmly indorsed at two large sanitary conventions nearly two years ago, which convened for the purpose of considering sanitary legislation for the future.

During the past year, the chairman of your committee has visited Washington several times, interviewed many members of Congress and appeared before the Senate committee. Much literature and many letters have been sent to members of Congress. At the last meeting of the Association the sum of \$500 was voted for the use of the committee, and we have to report that the Board of Trustees has allowed \$215 only, which is the sum expended during the year. Your committee believes that the future prospects for the creation of a national public health organization are mostly promising, and it strongly urges continued and persistent work along the lines begun.

Respectfully submitted,

U. O. B. WINGATE, M.D.,

Chairman Committee on Department of Public Health.

Dr. H. O. Walker, Detroit offered the following:

Resolved, That the Committee on Department of Public Health be continued and that it is hereby authorized to continue its work along the lines begun as indicated in its reports.

Resolved, That the Board of Trustees be and hereby is authorized and directed to allow the chairman of the Committee on Department of Public Health the sum of \$400, to be used in defraying the actual expenses in the furtherance of this work.

The report and resolution were referred to the Board of Trustees.

REPORT OF COMMITTEE ON NATIONAL LEGISLATION.

Dr. H. L. E. Johnson, Washington, D. C., read the report of the Committee on National Legislation.

AMERICAN MEDICAL ASSOCIATION.

COMMITTEE ON NATIONAL LEGISLATION.

H. L. E. JOHNSON, Chairman, Washington, D. C.; WILLIAM H. WELCH, Baltimore, Md.; WILLIAM L. RODMAN, Philadelphia, Pa.

WASHINGTON, D. C., June 5, 1900,

TO THE PRESIDENT AND MEMBERS OF THE AMERICAN MEDICAL ASSOCIATION:

Gentlemen:—In behalf of your Committee on National Legislation we beg to report that your Honorable President, in accordance with the resolution of the American Medical Association, adopted at the last meeting, appointed the following members to constitute a Committee on National Legislation, H. L. E. Johnson, of Washington, D. C.; Wm. H. Welch, of Baltimore, Md.; and Wm. L. Rodman, of Philadelphia, Pa. This Committee met in Washington D. C., Nov. 10, 1899, and after full discussion prepared the following communication which was addressed to the secretary of each state medical society in affiliation with the American Medical Association, and the Surgeons-General of the Army and Navy and Marine-Hospital Service, and also published in THE JOURNAL.

WASHINGTON, D. C., Jan. 10, 1900.

My Dear Doctor:—At a regular meeting of the Committee on National Legislation of the AMERICAN MEDICAL ASSOCIATION, held Nov. 10, at Washington, D. C., I was directed to request you to have your State Medical Society appoint one delegate to represent your society at the general meeting of delegates to be called by the Committee to meet in Washington, D. C., some time in January or February next (exact date not yet determined) to act in accordance with the resolution adopted by the ASSOCIATION at the Columbus meeting on June 7, 1898, which reads as follows, viz.:

Resolved: That the special Committee on Legislation be authorized to invite, in the name of the AMERICAN MEDICAL ASSOCIATION, the Army Medical Service, the Navy Medical Service, the Marine-Hospital Service, and each State Society of legally qualified practitioners of medicine, to send one delegate each to a conference to be held at Washington, D. C., at such time as the Committee may determine; such conference to consider the medical and sanitary legislation now pending, and the members to report to their respective societies such action as in their judgment ought to be taken.

This Committee hereby requests you to have your society consider, and instruct your delegate to the conference on the following matters to be considered at this session of Congress: 1. Department of Public Health; 2. Publication of Index Medicus; 3. The Antivivisection Bill; 4. Unification of Medical Practice Acts, and 5. Such other medical legislation of interest to your society, now pending or to be proposed during the present session. Please forward to me at your earliest opportunity, the name and address of your duly appointed delegate that I may give ample notice to him and you of the date of the proposed general conference, to be held in Washington, D. C., as provided for by the resolution of the AMERICAN MEDICAL ASSOCIATION herein quoted.

Very truly yours,

H. L. E. JOHNSON, M.D., Chairman.

In reply to the above communication, the following delegates were appointed to the conference: Surgeon-General Geo. M. Sternberg, U. S. A.; Surgeon-General Walter Wyman, U. S. Marine-Hospital Service; Gustavus Eliot, New Haven, Conn.; H. L. E. Johnson, District of Columbia; John Y. Porter, Jacksonville, Fla.; J. W. Pettit, Ottawa, Ill.; J. N. Hurty, Indianapolis, Ind.; Dudley S. Reynolds, Louisville, Ky.; William Osler, Baltimore, Md.; H. M. Bracken, St. Paul, Minn.; Frank J. Lutz, St. Louis, Mo.; Geo. H. Simmons, Nebraska; Geo. Evans Reading, Woodbury, N. J.; Robert S. Young, Concord, N. C.; L. B. Tuckerman, Cleveland, Ohio; L. Haynes Buckston, Oklahoma City, Okla.; R. H. Roberts, Philadelphia; Gardner Swarts, Providence, R. I.; T. J. Tyner, Galveston, Texas (temporarily, Washington, D. C.); Henry B. Holton, Brattleboro, Vt.; W. P. Goff, Clarksburg, W. Va.; U. O. B. Wingate, Milwaukee, Wis.

The Medical Department of the United States Navy, and the medical societies of the following named states made no reply to the call of your Committee: Alabama, Arizona, Arkansas, California, Colorado, Delaware, Georgia, Idaho, Indian Territory, Kansas, Massachusetts, Michigan, Mississippi, Montana, Nevada, Oregon, South Carolina, South Dakota, Tennessee, Utah, Washington and Wyoming.

The medical societies of the following states responded but were unable to appoint a delegate to this conference for various

reasons, but principally because the state society would not meet until after the date of the meeting of the general conference, and they had no one in authority who could make such appointments *ad interim* (universal approval of the conference and its purposes was expressed): Iowa, Louisiana, Maine, New Hampshire, New Mexico, New York, North Dakota and Virginia.

Delegates from the following states, though appointed, did not register at the conference, and usually sent written excuses and regrets for their absence: Illinois, Indiana, Kentucky, Maryland, Missouri, North Carolina, Oklahoma, Rhode Island, and Vermont.

On April 7, 1900, the following call was officially sent to the secretaries of the state societies, and to duly appointed delegates.

WASHINGTON, D. C., April 7, 1900.

Dear Doctor:—The Committee on National Legislation of the American Medical Association at the Columbus meeting last, hereby requests you to come to Washington, D. C., to attend the meeting of the Committee to be called to order at 11 a. m., on May 1 and 2, 1900, at the Arlington Hotel. The especial subjects to be considered have been announced to you, and also published in THE JOURNAL of the Association. The Committee has decided on this date for the meeting in order that you may have the pleasure of attending the fifth triennial session of the Congress of American Physicians and Surgeons, which meets May 1-3.

You can secure accommodations at the Arlington Hotel at a rate of \$4 and \$5 a day (American plan), and we suggest that you write at once to Mr. Frank B. Bennett, manager, for your room, stating that you will attend the meeting of the National Legislative Committee of the American Medical Association, on the dates indicated. The work of the Committee will be greatly facilitated if you will kindly notify the chairman at once that you will be present at the meeting.

The Congress of Physicians and Surgeons has arranged with the railroad companies for a fare and a third on the certificate plan, and as you will attend the meeting of this Congress, you can avail yourself of the reduction in transportation rates.

Very truly yours,

H. L. E. JOHNSON, M.D., Chairman.

The following communication was received from the Committee of Arrangements of the Congress of American Physicians and Surgeons, extending the courtesy of visitors to the legislative delegates; subsequently waiving the registration fee.

WASHINGTON, D. C., April 18, 1900.

DR. H. L. E. JOHNSON, Chairman, Committee on National Legislation.

My Dear Doctor:—Having been informed that your Committee on National Legislation will be in session in this city at the time of the meeting of the Congress of American Physicians and Surgeons, I desire on the part of the Committee of Arrangements to extend to your Committee the courtesy of accrediting them as visitors to the Congress in accordance with its by-laws (see enclosed circular). Those who wish to accept this courtesy should call at the Bureau of Registration, Parlor 1, the Arlington, on arrival, and register, when they will also receive cards to the reception, cards to the "smoker" given by the Cosmos Club on the evening of May 1, and program of the meeting of the Congress.

Very truly yours,

A. K. SHAW, Chairman,
Com. of Arrang., Cong. of Am. Phys. and Surg.

TRANSACTIONS OF THE MEETING.

The first annual conference of the National Legislative Committee of the American Medical Association was called to order by the Chairman, Dr. H. L. E. Johnson, of Washington, D. C., at 11:20 a. m., at the Arlington Hotel, Washington, D. C., twelve members present. Dr. Johnson addressed the meeting and stated the purpose for which it was called. Dr. Wm. H. Welch, of Baltimore, moved that after a general discussion the meeting adjourn until the following day, Wednesday, at 5 p. m. The motion was seconded by Dr. L. B. Tuckerman, of Ohio, and carried. Dr. Welch moved that if any member of a state society which had not sent a delegate be in the city, he be invited to take part in the deliberations of the Conference. The motion was seconded by Dr. Tuckerman, of Ohio, and carried. On motion of Dr. Welch, the Conference adjourned.

This re-consession of the conference was called to order by the Chairman, Dr. H. L. E. Johnson, Washington, D. C., Wednesday, May 2, at 5:10 p. m. There were present: Drs. U. O. B. Wingate, Wisconsin; W. F. Goff, West Virginia; L. B. Tuckerman, Ohio; Geo. Evans Reading, New Jersey; Gustavus Eliot, Connecticut; T. J. Tynes, Texas; H. M. Braeken, Minnesota; Walter Wyman, U. S. Marine-Hospital Service; Wm. H. Welch, Maryland; H. L. E. Johnson, District of Columbia; J. B. Roberts, Pennsylvania; Geo. H. Simmons, Nebraska; Geo. M. Sternberg, U. S. Army; Wm. L. Rodman, Pennsylvania; Henry Sewall, of Colorado, by invitation.

The Chairman addressed the meeting, stating its object, and suggested that the following subjects be discussed in order: 1. Department of Public Health. 2. Publication of the "Index Medicus." 3. The Pending Antivivisection Bill. 4. Unification of State and National Medical Practice Laws. 5. Other Medical Bills Pending in Congress.

General Sternberg, U. S. Army, spoke of the importance of the meeting and regretted that he had several appointments at this hour which would prevent his remaining throughout the session, and requested permission to speak at this time on the various subjects under consideration. Concerning the "Index Medicus," he did not deem it advisable to urge its further publication. There is not the necessity for it now that there was a few years ago, and many of the journals are publishing indexes on their own account. The index catalogue will be kept up, and the department is always ready and willing to place its books and work at the disposal of any one desiring assistance in any particular medical, literary line. Concerning the antivivisection bill, he said he regarded this measure as being practically dead at this session, although it might come up again at some subsequent one, and it behooved the Conference to be ready for it, and be constantly on guard. He thought the Chairman was in a position to be on the lookout for its revival, and when he deemed it necessary, he should call a general meeting or notify the state delegates to act.

Dr. H. L. E. Johnson, D. C., asked General Sternberg if it was advisable to secure an appropriation, as has been urged, for the distribution of the "Index Catalogue" to libraries throughout the country. General Sternberg replied that if any library desired the catalogue, he would have the department out off individuals on the list in favor of such libraries, this having been done in several instances. He said the original edition was 15,000, but it had been reduced to 10,000, and that any library desiring it could have it furnished on receipt of application and approval by the department.

Dr. Johnson asked General Sternberg if he had anything to suggest on medical practice acts. General Sternberg replied that it was very desirable that uniformity and reciprocity in medical practice acts should be obtained, and that a clause should be inserted in the law of each state looking to this end.

Dr. Tuckerman, Ohio, read a portion of the Ohio medical law providing reciprocity.

Dr. Reading, New Jersey, stated that his state had reciprocity clauses.

Dr. Johnson, District of Columbia, stated that the medical practice law in the District of Columbia contained a reciprocity clause.

He also asked General Sternberg if he had any suggestions to make on any of the medical matters now pending in Congress, to which General Sternberg replied that he had indorsed three bills, viz.: One making provision for increase in the medical department of the army (H. R. 4483); one providing for appointment of assistant-surgeons of volunteers (S. 4274); and one for the relief of acting assistant-surgeons of the United States Army (S. 4200).

A BILL FOR AN INCREASE IN THE MEDICAL DEPARTMENT OF THE ARMY.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there shall be added to the number of medical officers of the Army now authorized by law (a) one assistant surgeon-general with the rank of colonel, an deputy surgeon-general with the rank of lieutenant-colonel, thirty surgeons with the rank of major, and eighty assistant-surgeons with the rank of first lieutenant, who shall have the rank of captain at the expiration of five years service, as now provided by law; *Provided,* That the original vacancies created by this Act in the grade of colonel, lieutenant-colonel, and major shall be filled by seniority promotion in accordance with established laws and regulations.

Sec. 2.—That hereafter candidates for appointment in the Medical Corps of the Army who pass a medical examining board in compliance with existing regulations shall be appointed acting assistant-surgeons for a probationary period of six months. During this period they shall attend the Army Medical School established at the Army Medical Museum in the city of Washington, and the faculty of the Army Medical School shall report to the Secretary of War at the end of the prescribed course of instruction upon the fitness and relative standing of the probationary candidates. Those who are recommended by the faculty may then be commissioned by the President to fill existing vacancies in the Medical Corps of the Army.

Sec. 3.—That acting assistant-surgeons appointed in accordance with the provisions of section two shall be paid one hundred dollars per month, and shall not be entitled to any allowances or to mileage in reporting for the prescribed course of instruction, or in returning to their homes if they are not recommended for a commission.

Sec. 4.—That the number of acting assistant-surgeons appointed in accordance with the provisions of section two shall not exceed the number of vacancies, existing or to result from retirements during the probationary period.

Sec. 5.—That candidates who have rendered satisfactory service as acting assistant-surgeons or as commissioned medical officers in the Volunteer Army of the United States for a period of six months or more shall be exempted from this period of probation, and may be commissioned at once if vacancies exist and they possess satisfactory qualifications as to their physical, moral, and professional qualifications.

A BILL PROVIDING FOR THE APPOINTMENT OF ASSISTANT-SURGEONS OF VOLUNTEERS.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That "contract surgeons" who have rendered faithful and satisfactory service with the Army of the United States for a period of one year, and who

have passed a satisfactory examination as to their physical and professional qualifications, shall be commissioned by the President as assistant-surgeons of volunteers with the rank of first lieutenant, subject to honorable discharge from the service whenever their services are no longer required.

Sec. 2.—That at the end of two years' service as first lieutenants assistant-surgeons of volunteers, appointed in accordance with section one of this Act, who have rendered faithful and satisfactory service, shall be commissioned by the President as assistant-surgeons of volunteers with the rank of captain, subject to honorable discharge from the service whenever their services are no longer required; and that they shall receive pay and allowances of a captain mounted.

A BILL FOR THE RELIEF OF ACTING ASSISTANT-SURGEONS OF THE UNITED STATES ARMY.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That on and after the passage of this Act acting assistant-surgeons in the Army of the United States shall have the same rights and privileges as regards leaves of absence as commissioned officers of the Army.

Sec. 2.—That acting assistant-surgeons in the Army of the United States who have been appointed since the first day of May, eighteen hundred and ninety-eight, who have been absent from duty, by proper authority, on account of sickness contracted in the service, shall be paid for the time of such absence at the rate per month specified in their contracts.

He further said he would be pleased to have the help and enforcement of the Conference in getting them passed, and suggested that the Committee consider the matter and give it all the help in its power. He made a motion to this end, which was seconded by Dr. Reading, of New Jersey.

Dr. Tuckerman, Ohio, suggested that there should be a copy of the bills furnished each state society's delegate, and that each member should write to his congressman stating the action of the state societies.

General Sternberg said that he would send a copy to each member.

Dr. Goff, West Virginia, requested that, inasmuch as many of the state societies would meet in the course of a few days, they be sent at once.

General Sternberg replied that he would do this.

Dr. Reading, New Jersey, moved that the Conference do all that it can for the two bills providing for contract surgeons, and the other bill of Dr. Sternberg's.

General Sternberg moved that a committee of five be appointed by the chairman to wait upon the congressional committee with the indorsement of this meeting and urge the immediate passage of the bills proposed. The motion was seconded by Dr. Reading, and carried.

Dr. Tuckerman, Ohio, suggested that a permanent committee should be appointed by the American Medical Association for this and similar purposes.

Dr. Johnson, District of Columbia, said that such a Committee had been provided for at the meeting last June.

At this juncture General Sternberg begged to be excused, and the business was taken up in its regular order.

DEPARTMENT OF PUBLIC HEALTH.

Dr. Wingate, Wisconsin, stated that he had nothing new to report, the matter was still pending in Congress, though Senator Spooner stated to him that he hoped to get it out of his committee this week. (S. 3433, Spooner.)

Dr. Simmons, Nebraska, said he had looked into the bill, but could not see the importance of it, and would like to know whether it is indorsed by the Association.

Dr. Tuckerman, Ohio, stated that there was a great need for unity of action between the national and state health authorities, and that the only way to secure it was to have a national health commission; that he questioned very much whether the country would be willing to turn the matter over to a commissioner who would use his office for purely party influence, incidentally doing what he could for the public health; that owing to the constant change of administration there would necessarily result the constant change of health officers; that it took from ten to fifteen years of constant training to fit a man for such an office, and that when an officer is chosen, not for his ability but for the support he would bring to his party, his efficiency as health officer would be absolutely nil.

Dr. Roberts, Pennsylvania, requested information as to what were the duties of the United States Marine-Hospital Service, and what were the provisions of the Spooner health bill. He wished to hear from General Wyman in this connection.

Dr. Johnson, District of Columbia, suggested to Dr. Roberts that for the better understanding of the situation, it might be better for Dr. Wingate to explain the provisions of his bill, the so-called Spooner bill, and give some idea of its present status in Congress, and subsequently hear from General Wyman. The suggestion being accepted by Dr. Roberts, Dr. Wingate proceeded to explain his bill, which he said was approved at the Denver meeting of the American Medical Association; he also read an extract from the Columbus meeting, which he said also

indorsed it. He stated that no two people wanted the same thing, one society demanding one thing, and another society demanding another; that Congress was perfectly willing to pass a bill of this character, but wanted to know first what was wanted by the doctors, and that there must be a uniformity in their demands. He said that this bill had received the largest support all over the country from both professional and business men; that there was no intention of working against the Marine-Hospital Service, but there is a feeling all over the country that there should be a department of public health devoted solely to that work and nothing else; that nobody could be found in Congress at present to draft such a bill, and the present bill was therefore the best that could be framed.

Surgeon-General Wyman said that he might have to give an official opinion later, hence it would not do for him to anticipate his views. He thought, however, some of the features of the bill were good, though he felt quite positive that the bill as presented had never been thoroughly understood or appreciated, there being a general idea that it helped the Marine-Hospital Service, while on the contrary it disrupts it. He believes that the Marine-Hospital Service, as it is, is a splendid foundation for whatever public health service might be placed upon it. He does not believe that a double-headed service would be advisable or practicable.

General Wyman then gave a detailed outline of the work of the Marine-Hospital Service, and cited many instances to show its ability to deal with questions of public health. He concluded by saying that he did not consider it necessary for the Committee to take any action, but to let the matter rest where it is.

Dr. Welch, Maryland, said he approved the Marine-Hospital Service, but hardly thought it the place for the establishment of a national sanitary department, though he would not want anything done to interfere with its work; also, it would be better to have a bureau to start with, instead of a cabinet officer, and this can not be accomplished at present.

Dr. Bracken, Minnesota, stated that he was not in sympathy with this bill or of creating a department of any such nature; that he upheld the Marine-Hospital Service because of its independence of politics, whereas the Spooner bill proposed a department which, as stated by the previous speaker (Dr. Tuckerman), would be changed with every change of administration; that he would approve of the making of the Marine-Hospital Service a national board of health.

Dr. Roberts, Pennsylvania, indorsed Dr. Bracken's views, and said it represented his view of the situation precisely.

Dr. Tuckerman, Ohio, stated that there was a new bill just introduced designed to protect the southern coast and strengthen the national quarantine service. It is H. R. 11139 and S. 4171.

A BILL AMENDING "AN ACT GRANTING ADDITIONAL QUARANTINE POWERS AND IMPOSING ADDITIONAL DUTIES UPON THE MARINE-HOSPITAL SERVICE," APPROVED FEB. 15, 1893.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That an Act granting additional quarantine powers and imposing additional duties upon the Marine-Hospital Service, approved February fifteenth, eighteen hundred and ninety-three, be amended and added to as follows:

That section six of said Act shall be amended to read as follows:

Sec. 6.—That on the arrival of an infected vessel at any port not provided with the proper facilities for treatment of the same, the Secretary may remain said vessel, at its own expense, to the nearest national or other quarantine station where accommodations and appliances are provided for the necessary disinfection and treatment of the vessel, passengers, and cargo; and after treatment of any infected vessel, or inspection of any vessel not infected, at a national quarantine station, and after certificate shall have been given by the United States quarantine officer at such station that the vessel, cargo, and passengers are each and all free from infectious disease or danger of conveying the same, said vessel shall be permitted to enter and be admitted to entry at any port of the United States named within the certificate, and at any port where sufficient quarantine provision has been made by State or local authorities, the Secretary of the Treasury may direct vessels bound for said ports to undergo quarantine at said State or local station."

That there shall be added the following sections:

Sec. 10.—National quarantine stations shall be conducted in accordance with the provisions of this Act, and the Supervising Surgeon-General, with the approval of the Secretary of the Treasury is authorized to designate and mark the boundaries of the quarantine grounds and quarantine anchorages for vessels which are reserved for use at each United States quarantine station; and any vessel or officer of any vessel or other person trespassing or otherwise entering upon such grounds or anchorages in disregard of the quarantine rules and regulations, or without permission of the officer in charge of such station, shall be deemed guilty of a misdemeanor and subject to arrest, and, upon conviction thereof, be punished by a fine of not more than three hundred dollars or imprisonment for not more than one year, or both at any portion of the court. Any master or owner of any vessel or any person violating any provision of this Act, or any rule or regulation made in accordance with this Act, relating to inspection of vessels, or relating to the prevention of the introduction of contagious or infectious diseases, or any master, owner, or agent of any vessel making a false statement relative to the sanitary condition of said vessel or its contents, or as to the health of any passenger or person thereon,

shall be deemed guilty of a misdemeanor and subject to arrest, and upon conviction thereof be punished by a fine of not more than five hundred dollars or imprisonment for not more than one year, or both, in the discretion of the court.

Sec. 11.—That any port or place in the United States where the Secretary of the Treasury shall deem it necessary for the prevention of the introduction of contagious or infectious disease from a foreign port or place, incoming vessels, vehicles, or persons shall be inspected by a national quarantine officer, such officer shall be designated or appointed by the Secretary of the Treasury, on the recommendation of the Surgeon-General of the Marine-Hospital Service, and at any such port or place no vessel, vehicle, or person from any foreign port or place shall be admitted to entry or exit without a certificate of said officer that the United States quarantine regulations have been complied with. Any vessel sailing from any foreign port without the bill of health required by section two of this Act, and arriving within the limits of any collection district of the United States, and not entering or attempting to enter any port of the United States, shall be subject to such quarantine measures as shall be prescribed by regulations of the Secretary of the Treasury, and the cost of such measures shall be a lien on said vessel, to be recovered by proceedings in the proper district court of the United States, and in the manner set forth above as regards vessels from foreign ports without bills of health and entering any port of the United States.

Sec. 12.—That the medical officers of the United States duly clothed with authority to act as quarantine officers at any port or place within the United States, and when performing the said duties, are hereby authorized to take declarations and administer oaths in matters pertaining to the administration of the quarantine laws and regulations of the United States.

A BILL TO AMEND "AN ACT GRANTING ADDITIONAL QUARANTINE POWERS AND IMPOSING ADDITIONAL DUTIES UPON THE MARINE-HOSPITAL SERVICE," APPROVED FEB. 15, 1893.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That an Act granting additional quarantine powers and imposing additional duties upon the Marine-Hospital Service, approved February fourth, eighteen hundred and ninety-three, be amended and added to as follows:

That section six of said Act shall be amended to read as follows:

Sec. 6.—That on the arrival of an infected vessel at any port not provided with the proper facilities for treatment of the same the Secretary may remand said vessel, at its own expense, to the nearest national or other quarantine station where accommodations and appliances are provided for the necessary disinfection and treatment of the vessel, passengers, and cargo; and after treatment of any infected vessel, or inspection of any vessel not infected, at a national quarantine station, and after certificate shall have been given by the United States quarantine officer at said station that the vessel, cargo, and passengers are each and all free from infectious disease or danger of conveying the same, said vessel shall be permitted to enter and admitted to entry at any port of the United States named within the certificate. But at any ports where sufficient quarantine provision has been made by State or local authorities, and in the discretion of the national district vessels bound for said ports to undergo quarantine at said State or local station.

That there shall be added the following sections:

Sec. 10.—That national quarantine stations shall be conducted in accordance with the provisions of this Act, and the Supervising Surgeon-General, with the approval of the Secretary of the Treasury, is authorized to designate and mark the boundaries of the quarantine grounds and quarantine anchorages for vessels, which are reserved for use at each United States quarantine station; and any vessel or officer of any vessel or other person trespassing or otherwise entering upon such grounds or anchorages in disregard of the quarantine rules and regulations, or without permission of the officer in charge of such station, shall be deemed guilty of a misdemeanor and subject to arrest, and upon conviction thereof be punished by a fine of not more than three hundred dollars or imprisonment for not more than one year, or both, in the discretion of the court. Any master or owner of any vessel, or any person violating any provision of this Act or any rule or regulation made in accordance with this Act, relating to inspection of vessels or relating to the prevention of the introduction of contagious or infectious diseases, or any master, owner, or agent of any vessel making a false statement relative to the sanitary condition of said vessel or its contents or as to the health of any passenger or person thereon, and upon conviction thereof be punished by a fine of not more than five hundred dollars or imprisonment for not more than one year, or both, in the discretion of the court.

Sec. 11.—That any port in the United States where the Secretary of the Treasury shall deem it necessary for the prevention of the introduction of contagious or infectious disease from a foreign port or place, that incoming vessels, vehicles, or persons shall be inspected by a national quarantine officer, such officer shall be designated or appointed by the Secretary of the Treasury, on recommendation of the Surgeon-General of the Marine-Hospital Service, and at any such port or place no vessel, vehicle, or person from any foreign port or place shall be admitted to entry or exit without a certificate of said officer that the United States quarantine regulations have been complied with. Any vessel sailing from any foreign port without the bill of health required by section two of this Act, and arriving within the limits of any collection district of the United States, and not entering or attempting to enter any port of the United States, shall be subject to such quarantine measures as shall be prescribed by regulations of the Secretary of the Treasury, and the cost of such measures shall be a lien on said vessel, to be recovered by proceedings in the proper district court of the United States and in the manner set forth above as regards vessels from foreign ports without bills of health and entering any port of the United States.

Sec. 12.—That the medical officers of the United States, duly clothed with authority to act as quarantine officers at any port or place within the United States, and when performing the said duties, are hereby authorized to take declarations and administer oaths in matters pertaining to the administration of the quarantine laws and regulations of the United States.

On request of Dr. Tuckerman, General Wyman explained the bills in detail.

Dr. Tuckerman, Ohio, moved that the bills be approved. Seconded by Dr. Bracken, and carried.

Dr. Tuckerman, Ohio, moved that the committee of five be instructed to present its approval to the congressional committees in connection with the army bills. Carried.

Dr. Tuckerman, Ohio, moved that it be recommended to the state societies that a standing committee be appointed to consist of one member each from accredited medical societies.

Dr. Reading, New Jersey, questioned the advisability of admitting homeopathic physicians to such a conference, stating that they would come under the head of accredited societies.

Dr. Tuckerman explained his motion, and it was seconded by Dr. Goff.

Dr. Simmons, Nebraska, approved of such a committee, but stated that it must consist of men well informed on the subject in hand, who should come prepared to deal with each question and empowered to act as the representative of their state society.

Dr. Bracken, Minnesota, said he did not believe that at this time we should take any action for the homeopathic societies, though he is favorable to acting with them in this matter, as they are in sympathy with all public health movements.

Dr. Tuckerman, Ohio, by request, read his motion.

Dr. Welch, Maryland, moved to amend the motion so that all societies sending a delegate must be in affiliation with the American Medical Association. His motion was seconded.

Dr. Roberts, Pennsylvania, stated that he firmly approved of admitting the homeopathic physicians.

Dr. Goff, West Virginia, requested that the points of opposition be brought out.

Dr. Welch, Maryland, stated that he did not consider it wise, from a professional standpoint, to admit homeopaths.

Dr. Johnson, District of Columbia, stated that there was a clause in the Constitution of the American Medical Association covering that question.

Dr. Reading, New Jersey, stated that he believed in working with them, but that as a body he did not believe that we could ever get the American Medical Association to unite with the homeopaths.

Dr. Tuckerman, Ohio, desired to amend his resolution so as to include a representative from the Bureau of Animal Industry, and stated that he would not make a stand on the wording of the amendment, but he desired an expression of opinion from the general committee. He stated that the two main features of the amendment would be the addition of a member from the Bureau of Animal Industry, and limiting this to representatives from societies in affiliation with the American Medical Association. The amendments were agreed to, whereupon Dr. Tuckerman read the resolution as amended, and recommended that it be submitted to the American Medical Association at its meeting in June, 1900, for adoption.

RESOLVED, That the Committee on National Legislation shall consist of three members, one of whom shall be a resident of Washington, D. C., one of Baltimore and one of Philadelphia. It shall be the duty of this Committee to represent before Congress the wishes of this Association respecting pending medical and sanitary legislation. This Committee shall also invite to an annual conference to be held at Washington, D. C., one delegate each from the Army Medical Service, the Navy Medical Service, the Marine-Hospital Service, the Bureau of Animal Industry, and from each state society in affiliation with the American Medical Association; such conference to consider questions of national medical and sanitary legislation, and report to their respective bodies for action.

The resolution was seconded by Dr. Welch, Baltimore, and carried.

Dr. Tuckerman, Ohio, moved that this body recommend to the various state societies that they provide in their constitution for a standing committee on national legislation, and that they provide that one member of this shall represent their state at future conferences. The motion was seconded by Dr. Reading, and carried.

REVIVAL OF THE "INDEX MEDICUS."

Dr. Reading, New Jersey, moved that, after considering the remarks of Surgeon-General Sternberg on the matter of the publication of the "Index Medicus," this matter be laid on the table. The motion was seconded and carried.

ANTIVIVISECTION BILL.

Dr. Johnson, District of Columbia, said he thought the Committee should take a very positive and decided stand with respect to the antivivisection bill now pending in Congress, and specially known as S. 34. He stated that while a great deal had been done throughout the United States by the medical profession, to check or throw a damper on its passage, we as a body should denounce it, and recommend to Congress that it be not passed.

A BILL FOR THE FURTHER PREVENTION OF CAUCLTY TO ANIMALS
IN THE DISTRICT OF COLUMBIA.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That hereafter no person shall perform on a living vertebrate animal any experiment calculated to give pain to such animal, except subject to the restrictions hereinafter prescribed. Any person performing or aiding in performing any experiment calculated to give pain in contravention of this Act shall be guilty of an offense against this Act, and shall, if it be the first offense, be liable, at the discretion of the court by which he is tried, to a penalty not exceeding five hundred dollars, or to imprisonment for a period not exceeding six months.

Sec. 2.—That the following restrictions are imposed by this Act with respect to the performance on any living vertebrate animal of any experiment calculated to give pain to such animal; that is to say:

a. The experiment must be performed with a view to the advancement by new discovery of physiological knowledge or of knowledge which will be useful for saving or prolonging life or alleviating suffering; and

b. The experiment must be performed by a person holding such license from the Commissioners of the District of Columbia as in this Act mentioned, or by a duly authorized officer of the Government of the United States, or of the District of Columbia; and

c. The animal must, during the whole of the experiment, be completely under the influence of ether or chloroform sufficiently to prevent the animal from feeling pain, excepting only those instances in inoculation experiments or tests of drugs or medicines, the animal need not be anesthetized nor killed afterwards, nor in tests of surgical procedure need animals be kept completely anesthetized through the process of recovery from the surgical operation. In all other cases the animal must be kept from pain during all experiments; and

d. The animal must, if the pain is likely to continue after the effect of the anesthetic has ceased, or if any serious injury has been done to the animal, be killed before the anesthetic wears off, the influence of the anesthetic which has been administered; and

e. No experiment shall be made upon any living creature, calculated to give pain to such creature, in any of the public schools of the District of Columbia, provided as follows, that is to say:

1. Experiments may be performed under the foregoing provisions as to the use of anesthetics by a person giving illustrations of lectures in medical schools, hospitals, or colleges, on such certificate being given, and in such cases the object of the experiment, if the experiments are absolutely necessary for the due instruction of the persons to whom such lectures are given, with a view to their acquiring physiological knowledge or knowledge which will be useful to them for saving or prolonging life or alleviating suffering; and

2. Experiments may be performed as usual or current shall not, for the purposes of this Act, be deemed to be an anesthetic; and

3. Notwithstanding anything in this Act contained, no experiment calculated to give pain shall be performed on a dog or cat, except upon such certificate being given as in this Act mentioned, relating, in addition to the statements heretofore required to be made in such certificate, that for reasons specified in the certificate the object of the experiment will be necessarily frustrated unless such animal be permitted to continue in pain, and that no other animal is available for such experiment; and an experiment calculated to give pain shall not be performed on any horse, ass, or mule, except on such certificate being given, as in this Act mentioned, that the object of the experiment will be necessarily frustrated unless it is performed on a horse, ass, or mule, and that no other animal is available for such purpose; and

4. Any exhibition to the general public, whether admission be a payment of money or gratuitous, of experiments on living animals in which pain is given shall be illegal. Any person performing or aiding in performing such experiment shall be deemed to be guilty of an offense against this Act, and shall, if it be the first offense, be liable to a penalty not exceeding five hundred dollars, or to imprisonment for a period not exceeding six months, shall be liable, at the discretion of the court by which he is tried, to a penalty not exceeding six months; and any person publishing any notice of any such intended exhibition by advertisement in a newspaper, placard, or otherwise, shall be liable to a penalty not exceeding ten dollars.

A person punished for an offense under this section shall not for the same offense be punishable under any other section of this Act.

Sec. 3.—That the Commissioners of the District may insert, as a condition of granting any license, a provision in such license that he place in which any such experiment is to be performed by the applicant in such manner as to be approved by the Commissioners from time to time by any general or special order directed to that effect. That every place for the performance of experiments for the purpose of instruction shall be approved by the said Commissioners, and shall be registered in such manner as the said Commissioners may direct by any general or special order directed to that effect.

Sec. 4.—That the Commissioners of the District, upon application as hereinafter prescribed, may license any person whom they may think qualified to hold a license to perform experiments under this Act. That a license shall not be granted to any person under the age of twenty-five years, unless he be a graduate on a medical college, duly authorized to practice medicine in the District of Columbia.

Sec. 5.—That the Commissioners of the District may direct any person performing experiments under this Act from time to time to make reports to them of the methods employed and the results of such experiments, in such form and with such details as the Commissioners may require.

Sec. 6.—That the President of the United States shall cause all cases where experiments on living vertebrate animals are carried on in the District of Columbia, to be, from time to time, visited by a special committee appointed by the President for the purpose of compliance with the provisions of this Act; and that what said special committee four inspectors, who shall serve without compensation, and who shall have authority to visit and inspect the places aforesaid. That the President of the United States from time to time the results of their observations therein, which shall be made public by him.

Sec. 7.—That any application for a license under this Act, and for certificate to be given as in this Act mentioned must be signed by the physicians to be licensed to practice medicine in the District of Columbia in the District of Columbia, and also by

a professor of physiology, medicine, anatomy, medical jurisprudence, or in the medical department of the medical department of any duly established reliable school or college in the District of Columbia. Provided, That when any person applying for a certificate under this Act is himself one of the persons authorized to sign such certificate, the signature of some other of such persons shall be substituted for the signature of the applicant.

A certificate under this section may be given for such time or for such series of experiments as the persons signing the certificate may think expedient.

A copy of any certificate under this section shall be forwarded by the applicant to the Commissioners of the District, but shall not be available until one week after a copy has been so forwarded.

The Commissioners of the District may at any time disallow or suspend any certificate given under this section.

Sec. 8.—That the powers conferred by this act of granting a license or giving a certificate for the performance of an experiment on living animals may be exercised by an order in writing, under the hand of any judge of a court of record having criminal jurisdiction in the District of Columbia, in a case where such judge is satisfied that it is essential for the purpose of justice in a criminal case to make such experiment.

Dr. Welch, Maryland, with the remarks of the Chairman, and moved that the members of the Conference approve the resolution, which he would formally submit in writing, and that they send a copy to their individual state societies. Seconded by Dr. Eliot, Conn., and carried. The resolution as submitted in writing is as follows:

RESOLVED: That the National Legislative Conference, composed of delegates from the state medical societies of the United States, assembled in the City of Washington, on May 2, 1900, in response to the invitation of the American Medical Association, hereby most earnestly protests against the passage of Senate bill 34, generally known as the "antivivisection bill."

Experimentation on animals is absolutely essential to the progress of physiology and pathology and has conferred inestimable benefits on practical medicine and surgery. Not a single instance of the practice of vivisection in some regularly incorporated medical school to have occurred in the District of Columbia, where the existing law permits only "properly conducted scientific experiments or investigations, which experiments shall be performed only under the authority of a majority of some regularly incorporated medical college, university or scientific society." No further legislation on this subject is needed.

The antivivisection bill has been condemned with practical unanimity by the entire medical profession of this country and by numerous scientific societies, including the National Academy of Sciences. This bill, if enacted into law, would inflict the most serious injury upon the medical science and art. It leaves it entirely to the discretion of two laymen, making a majority of the commissioners of the District, whether any experimentations upon vertebrate animals shall be performed at all in the District of Columbia, save that conducted under severe restrictions by certain officers of the general government. The recent appointment as president of the District Commissioners, of a sportsman known to be hostile to experimentation upon animals indicates the perils to science and medicine of entrusting to these laymen the absolute control of this important method of scientific investigation. This bill in unmistakable terms absolutely prohibits many important and useful experiments; it provides for a system of inspection of the work of experimenters without provision that the official inspectors shall possess any special qualifications for their responsible and remarkable duties. It surrounds the entire practice of experimentation with unnecessary and vexatious restrictions, and is so framed as to enable the administrators of the law virtually to put a stop to experimentations, while nominally permitting it. Experience with similar although less restrictive and more intelligent legislation in Great Britain, has demonstrated the injury which it is sure to inflict upon scientific and practical medicine. We can not believe that the Congress of the United States will disregard the united voice of the medical profession in a matter vitally concerned with the interests and progress of medicine.

Seconded by Dr. Tuckerman, and carried.

UNIFICATION OF MEDICAL PRACTICE LAWS—STATE AND NATIONAL.

Dr. Eliot, Connecticut, suggested that this be left to the special committee of five to be appointed, to which had been referred the other matters previously considered.

Dr. Reading, New Jersey, moved that the efforts of the members of the Conference be directed through their several state societies to securing reciprocity in the various states not now so providing. The motion was seconded by Dr. Goff, West Virginia, and carried.

Dr. Tuckerman, Ohio, stated that as the regular business had been finished he would now bring up new business for discussion. He referred to the bill appropriating money for the investigation of pollution of the Potomac water. The bill is S. 359, for the investigation of pollution of water-supplies, and carries with it report No. 411, Calendar No. 427. The bill and report were submitted, and he moved its approval. Seconded and carried.

Dr. Goff, West Virginia, moved that this matter be now put in the hands of the special committee of five, which shall urge its immediate passage by Congress and personally wait on the proper committee. Seconded by Dr. Eliot, Connecticut, and carried.

A BILL FOR THE INVESTIGATION OF POLLUTION OF WATER-SUPPLIES.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the sum of three thousand dollars be, and is hereby appropriated, out of

moneys not otherwise appropriated, to enable the Marine-Hospital Service, under the direction of the Secretary of the Treasury, to investigate the sources of contamination of rivers and other natural sources of water supply where the sanitary condition of the people of more than one State or Territory or the District of Columbia is affected or threatened to be affected by such pollution, and to report upon what legislation is necessary to remove or prevent such pollution: *Provided*, That the first investigation shall relate to the Potomac River.

Dr. Tuckerman, Ohio, moved that the same committee to be appointed should manage also another bill, providing for the inspection of immigrants at the port of embarkation, and that this bill should be indorsed by the committee and recommended to the state societies for indorsement. Seconded and carried.

General Wyman at this point explained the bill in full, and gave additional reasons for its immediate passage.

Dr. Tuckerman, Ohio, moved that the Chairman of this Committee (conference) be also on the special committee of five to go before Congress in support of these bills. Seconded and carried.

Dr. Welch, Maryland, moved that the Chairman of this Conference (Dr. Johnson) be the chairman of the subcommittee of five.

Dr. Johnson, District of Columbia, said he preferred not to be on the Committee at all. The wishes of the Committee prevailed, however, and the motion, seconded by Dr. Reading, carried.

Dr. Johnson, District of Columbia, then announced the special committee in accordance with the resolution, appointing: H. L. E. Johnson, Washington, D. C.; William H. Welch, Maryland; L. B. Tuckerman, Ohio; H. M. Bracken, Minnesota; W. P. Goff, West Virginia.

Dr. Tuckerman, Ohio, moved that the special committee of five meet on the following day, Thursday, at 2 p.m., and that arrangements be made to meet the proper committees in the House and Senate. The motion was seconded by Dr. Reading and carried.

On motion of Dr. Goff the Conference was declared closed, and the meeting adjourned.

MEETING OF THE SPECIAL COMMITTEE OF FIVE.

The Committee met at the Arlington Hotel, at 2 o'clock, Thursday, May 3, 1900, discussed the matters submitted to it by the general Conference and proceeded to the Capitol to wait upon the proper committees and submit to them the recommendations of the Conference. The Committee subsequently directed the Chairman, Dr. Johnson, Washington, D. C., to prepare written indorsements of the measures agreed to by the Conference and submit them to the proper committees in the House and Senate. The resolutions of the Committee were promptly carried out by the Chairman as directed by the subcommittee.

Dr. Tuckerman, Ohio, moved that the Chairman, Dr. Johnson, should represent the subcommittee before Congress during the absence of the Conference and subcommittee. Seconded by Dr. Bracken, and carried.

WASHINGTON, D. C., May 2, 1900.

HON. JNO. A. T. HULL, Chairman,

Committee on Military Affairs, House of Representatives.

Dear Sir:—We are directed by the Committee on National Legislation, which represents the American Medical Association and each state and territory medical society of the United States, to inform you that at our meeting in this city to-day, we unanimously endorsed bill H. R. 4483, providing for increase in the medical department of the army, and urge its prompt passage by Congress at this session. Very respectfully,

H. L. E. JOHNSON, Chairman,

Committee on National Legislation and Subcommittee.

SUBCOMMITTEE
Dr. W. P. Goff, West Virginia.
Dr. H. M. Bracken, Minnesota.
Dr. L. B. Tuckerman, Ohio.
Dr. H. L. E. Johnson, Washington, D. C.

Letters similar to the above were sent to Senator Jos. R. Hawley, Chairman of the Committee on Military Affairs, United States Senate, indorsing bill S. 4274, providing for the appointment of assistant-surgeons of volunteers, and bill S. 2400, providing relief for acting assistant surgeons, U. S. A. (See bills above.)

WASHINGTON, D. C., May 2, 1900.

HON. GEORGE C. VEST, Chairman,
Committee on Public Health and National Quarantine,
United States Senate.

Dear Sir:—We are directed by the Committee on National Legislation, which represents the American Medical Association and each state and territory medical society of the United States, to inform you that at their meeting in this city to-day, we unanimously endorsed bill S. 4171, and urged its prompt passage by Congress at this session. We consider it absolutely necessary that the U. S. Marine-Hospital Service should be empowered to regulate the fishing marks which are now hovering along the Florida coast and menacing the public health by infecting the Southern ports. The penalty clause for violation, the right to administer oaths, and the right to establish promptly a quarantine when necessity demands, are obviously proper functions of said Government Service, and in

our opinion the bill proposed should become a law, and we do so urge your committee. Very respectfully,

H. L. E. JOHNSON, Chairman,
Committee on National Legislation and Subcommittee.

SUBCOMMITTEE
Dr. W. P. Goff, West Virginia.
Dr. H. M. Bracken, Minnesota.
Dr. L. B. Tuckerman, Ohio.
Dr. H. L. E. Johnson, Washington, D. C.

A similar letter indorsing bill H. R. 11139 (see above), was sent to Hon. W. Hepburn, Chairman of the Committee on Interstate and Foreign Commerce, House of Representatives.

WASHINGTON, D. C., May 2, 1900.

HON. WM. P. FAYE, President Pro tem., U. S. Senate,
Dear Sir:—We are directed by the Committee on National Legislation, which represents the American Medical Association, and each state and territory medical society of the United States, to transmit to you resolutions adopted at our meeting in this city to-day, unanimously disapproving of bill S. 34 (for the further prevention of erythra to animals in the District of Columbia) and recommending that it do not pass the Senate of the United States. We respectfully request that the resolutions which were offered by Dr. Welch of Baltimore, and unanimously approved at our conference, be laid before the Senate for consideration. Very respectfully,

H. L. E. JOHNSON, Chairman,

Committee on National Legislation and Subcommittee.

SUBCOMMITTEE
Dr. W. P. Goff, West Virginia.
Dr. H. M. Bracken, Minnesota.
Dr. L. B. Tuckerman, Ohio.
Dr. H. L. E. Johnson, Washington, D. C.

WASHINGTON, D. C., May 2, 1900.

HON. GEORGE C. VEST, Chairman,
Committee on Public Health and National Quarantine,
United States Senate.

Dear Sir:—We are directed by the Committee on National Legislation, which represents the American Medical Association and each state and territory medical society of the United States, to inform you that at their meeting in this city to-day we unanimously indorsed Senate bill 559, for the investigation by the Marine-Hospital Service of the pollution of water-supplies where the sanitary condition of the people of more than one state or territory is affected, and we urge its prompt passage by Congress at this session. Very respectfully,

H. L. E. JOHNSON, Chairman,

Committee on National Legislation and Subcommittee.

SUBCOMMITTEE
Dr. W. P. Goff, West Virginia.
Dr. H. M. Bracken, Minnesota.
Dr. L. B. Tuckerman, Ohio.
Dr. H. L. E. Johnson, Washington, D. C.

RECOMMENDATIONS OF THE COMMITTEE OF NATIONAL LEGISLATION OF THE AMERICAN MEDICAL ASSOCIATION.

Your Committee is of the opinion that an annual conference at Washington, D. C., to consider pending national and state

awaken interest in national medical affairs and will give the legislators a medium for better understanding the wishes of the country at large, with respect to medical questions.

We recommend that the American Medical Association request affiliating medical societies of the several states and territories to provide in their constitution for the appointment of a state legislative committee, whose special duty it shall be to consider all medical legislation arising in the state legislatures and in the national Congress, and advise their constituent members thereon; further, the appointment of one member and an alternate to represent their society when called by your Committee on National Legislation to a general conference in Washington, each society paying out of its treasury the expenses of such delegate or alternate to said conference.

We suggest that such committee shall be carefully selected with respect to special individual qualifications for such service, and that the tenure of office should depend on individual fitness for the position.

We recommend the adoption of the pending amendments to the constitution of the American Medical Association, providing for a standing committee on national legislation, and we recommend that the Board of Trustees of the Association be empowered to make proper appropriations for the legitimate expenses of said committee.

We further recommend that your honorable Association approve the various measures indorsed by the delegates to the Conference at their meeting in Washington, if after due consideration you consider it just and wise to do so.

Respectfully submitted,

H. L. E. JOHNSON, M.D.

WILLIAM H. WELCH, M.D.

WM. L. RODMAN, M.D.

REPORT OF COMMITTEE ON REVISION OF CONSTITUTION AND BY-LAWS.

Dr. E. Eliot Harris read the report of the Special Committee on Revision of Constitution and By-Laws, as follows:

The Committee on Revision of the Constitution and By-Laws respectfully reports that through the kind and valuable aid of

our secretary, Dr. Geo. H. Simmons, it is in possession of a large and miscellaneous collection of ordinances, resolutions and motions annexing sections of the Constitution and By-Laws. The committee at this time wishes to express its acknowledgment of the help so cheerfully given by the president, secretary and other officers of the Association, with whom it has had occasion to correspond.

After a very careful study of the complicated problems involved in the revision of the Constitution and By-Laws, the committee, animated by a sincere desire to bring order out of the chaotic condition which now exists, recommends that its report on the revision of the Constitution and By-Laws be referred back to the committee for further consideration and in order that its final report may be the result of the best thought of those who have the interests of our Association at heart, we ask that the Committee on Revision of the Constitution and By-Laws be enlarged by the addition thereto of the members of the Board of Trustees and General Executive Committee, with instructions to report at the general session on Thursday morning.

Respectfully submitted,
E. ELIOT HARRIS and DUDLEY S. REYNOLDS.

On motion, the recommendation of the committee was concurred in.

RESOLUTION ON GIVING COMMISSIONS.

Dr. J. Henry Carstens, Detroit, Mich., offered the following resolution, which was referred to the General Executive Committee:

Resolved, That the receiving or giving of commissions or the division of fees, under whatever guise it may be made, shall be considered as unethical, and any member or members found guilty thereof shall be expelled from this Association, or from any Association affiliated therewith.

AMENDMENTS TO CONSTITUTION.

The next order being amendments to the Constitution, Dr. F. W. McRae, Atlanta, moved that the consideration of such amendments be deferred until Thursday morning, and that in the meantime they be referred to the Committee on Revision of the Constitution and By-Laws. Seconded and carried.

SECTION ON PATHOLOGY.

Dr. Ludwig Hektoen, Chicago, offered the following:

Resolved, That the number of sections specified in Section 11 of the By-laws be increased to thirteen by the establishing of a Section on Pathology and Bacteriology. (Referred to the General Executive Committee.)

Dr. F. F. Lawrence, Columbus, Ohio, asked for a ruling by the chair relative to the matter of registration in sections.

President Keen ruled that only the members of the Association are eligible to membership in Sections, and those who have been invited by the officers of Sections to take part in the proceedings.

Dr. Donald Maclean, Detroit, Mich., offered the following resolution, which was seconded by Dr. Reynolds, and referred to the Board of Trustees.

Resolved, That in future the reports of the treasurer and secretary, and of all special committees, be printed from THE JOURNAL press and circulated in advance to the attending members for the purpose of saving time in the general session and enabling the Association to act promptly and intelligently in discussing, criticizing, or adopting said reports.

On motion, the Association then adjourned until Wednesday, 10 a.m.

JUNE 6—SECOND GENERAL SESSION.

The Association met at 10 a.m., and was called to order by the president.

The secretary read the minutes of the previous general session, which were approved.

Dr. E. D. Ferguson, the second vice-president, was called to the chair.

Dr. William L. Rodman, Philadelphia, Pa., delivered the Oration on Surgery.

Dr. Victor C. Vaughan, Ann Arbor, Mich., followed with the Oration on State Medicine.

On motion of Dr. Marcy, Boston, a vote of thanks was extended to Drs. Rodman and Vaughan for their excellent and entertaining addresses.

Dr. Hall, Chicago, moved that a committee of five be ap-

pointed by the chair to prepare a memorial, to be subsequently submitted to the proper authorities of the United States Government, setting forth the desirability of inaugurating a change in the methods of education at West Point relative to sanitation and camp hygiene. Seconded and referred to the General Executive Committee.

REPORT OF GENERAL EXECUTIVE COMMITTEE.

Dr. Buckley read the report of the General Executive Committee, as follows:

At the regular meeting of yesterday, 23 members being present, the matters referred to it were fully considered and are here reported on.

The matter of revision of the Constitution and By-Laws was referred to a special committee of five, who met with the Board of Trustees in the evening, and their report will be presented later.

The bill from Dr. L. B. Tuckerman for expenses in connection with the work of the Section on State Medicine is referred to the trustees.

In accordance with the request of the Section on State Medicine, the committee recommends that the name of the Section be changed to that of "The Section of Hygiene and Sanitary Science."

It was moved and carried that this recommendation be concurred in.

The report of the secretary has been referred to a special subcommittee, which will report later.

Upon the suggestions contained in the president's address, the committee would report as follows:

1. That agitation in regard to the Rush Monument Fund should be continued and pushed to the greatest extent possible.

On motion, this section of the report was adopted.

2. That agitation in regard to the antivivisection bills should also be continued and pushed with all possible activity.

On motion, this section was adopted.

3. That hereafter members by invitation be limited to foreign delegates, eminent foreigners whom the section may desire to invite to read papers and take part in the discussions, to members of the medical staff of the army, navy and marine-hospital service, and to the occasional visiting physicians from our possessions outside of the limits of the United States proper.

It was moved that this section of the report be laid on the table. Seconded.

Dr. Dougherty, Chicago, said that inasmuch as this section of the report contemplates an amendment to the Constitution which defines the classes and qualifications of members, it could not be voted on at that time, but should be laid over until the next annual meeting.

President Keen suggested that the matter be referred to the Committee on Revision of the Constitution and By-Laws, which would report next day.

Dr. Harris, New York, said that the Committee on Constitution and By-Laws had considered the matter under discussion and had embodied it in its report, which would be presented next morning.

The chair then put the motion to table this section of the report, and it was lost.

Dr. Ferguson then moved that it be referred to the Committee on Constitution and By-Laws, which was seconded and carried.

4. That the section (provisional) known as the Section on Pathology should exist, and that the present officers of the unusual section should be empowered to elect officers in the usual manner, it to be known as the "Section of Pathology and Bacteriology."

Dr. Harris, New York, stated that the Committee on Revision of the Constitution and By-Laws had also considered this matter and would report on it the following morning. He therefore moved that this part of the report of the General Executive Committee be referred to the Committee on Constitution and By-Laws. Seconded and carried.

5. That a permanent committee of five be established to have charge of the annual exhibit, and that they shall elect each year a chairman who is a resident of the place of next meeting.

Dr. Harris, New York, said this matter had been considered by the Committee on Constitution and By-Laws and would be incorporated in its forthcoming report. He therefore moved

that this suggestion be referred to the Committee on Constitution and By-Laws, which was seconded and carried.

6. That the trustees be empowered to donate the sum of \$50 toward defraying the expenses of the Thirteenth International Medical Congress.

It was moved that this matter be considered by the Board of Trustees with the favorable recommendation of the General Executive Committee. Carried.

7. Regarding the recommendation of the president that the Trustees of the Association be given the responsibility of accepting or rejecting papers presented for publication; it was moved by Dr. Mayer that the question of responsibility of accepting or rejecting of papers for publication is already covered in Section IV of the By-Laws, which the committee heartily indorses.

The recommendation of the President concerning the appropriation by the trustees of the sum of \$500 each year for scientific research, the same to be carefully distributed in amounts of \$50 or \$100 to persons carefully selected, was deemed of such commendable nature and of so large importance that it was referred to a committee consisting of Drs. Hill, Sayre and Hughes for consideration, this committee to report at the next meeting of the committee.

Dr. T. J. Happel, Tennessee, then read the report of the Board of Trustees.

REPORT OF THE BOARD OF TRUSTEES OF THE AMERICAN MEDICAL ASSOCIATION, MADE AT ATLANTIC CITY, JUNE 6, 1900.

To the Officers and Members of the American Medical Association:

Your Board of Trustees beg leave to present the following report for the year ended December 31, 1900:

RECEIPTS.

1899		
Jan. 1.	Balance Cash in Journal Office.....	\$ 931.51
Jan. 1.	Balance in Treasurer's Office.....	18,729.95
June 10.	Registration Fees at Columbus Meeting.....	6,125.00
Oct. 25.	Interest on Indianapolis Loan.....	179.80
Dec. 31.	Membership Fees one year.....	32,540.00
Dec. 31.	Subscription Fees one year.....	9,488.41
Dec. 31.	Sales, Reprints, etc., one year.....	7,059.84
Dec. 31.	Cash Advertisements one year.....	33,760.82
	Total Receipts.....	\$109,115.33

EXPENDITURE JOURNAL OFFICE.

1899		
Dec. 31.	Paper, one year.....	\$22,923.93
"	Labor, one year.....	20,812.19
"	Salary, one year.....	10,636.50
"	Postage, one year.....	5,851.48
"	Editorials, one year.....	4,656.41
"	Rent.....	1,500.00
"	General Expense Account.....	1,672.29
"	Subscription Commissions.....	2,921.73
"	Advertising Commission.....	710.19
"	News and Reporting.....	1,809.34
"	Electros.....	621.87
"	Electric Power.....	551.50
"	Type.....	651.06
"	Ink.....	718.44
"	Metal Account.....	607.51
"	Linotype Machine Appliances.....	256.77
"	Press Supplies.....	294.36
"	Bindery Supplies.....	74.44
"	Traveling Expenses.....	184.58
"	Bindery Account.....	75.10
"	Stamps.....	83.32
"	Tools.....	7.27
"	Incidentals.....	17.69
	Total Expense Journal Office.....	\$77,641.01

EXPENSE TREASURER'S OFFICE.

1899		
Dec. 31.	Expense Trustees attending three meetings.....	\$ 1,330.78
"	General account (Stenographers, etc.).....	1,901.92
"	Treasurer's Salary.....	1,000.00
"	Treasurer's Expense account.....	54.82
"	Collecting Fees paid Banks.....	10.40
"	Postage, Treasurer.....	400.00
"	Premium on Treasurer's Bond.....	100.00
"	Expense Com. on Pub. Health.....	49.22
"	Books, Printing, etc.....	106.35
"	Dues Refunded (Dup. Payment).....	55.00
"	Paid Stenographer at Philadelphia Meeting.....	80.00
"	Paid for Foreign Ad. Plate.....	14.00
"	Paid for Safety Box Rent.....	10.00
"	Amount Interest U. S. Bonds.....	10,812.50
	Total Treas. Exp. account.....	\$15,968.30
	Expense account Journal Office.....	77,641.01
		\$93,609.40

CREDIT FURTHER.

Bills Receivable.....	\$ 190.00
Buttons and Paper on hand.....	960.42
Cash in Journal Office.....	799.13
Cash in Treasurer's Office.....	13,556.36
Aggregate Credit.....	\$109,115.33

You have then in the hands of the Journal.....	\$ 799.15
In Treasurer's Hands.....	13,556.36
Total Cash on Hand.....	\$14,355.51
You have invested in Indianapolis Loan.....	\$ 3,000.00
In U. S. Bonds.....	10,812.50
Total Investment.....	\$13,812.50
Cash on Hand.....	14,355.51
Aggregate.....	\$28,168.01

As already reported, you had invested \$13,812.50, and a balance in the treasurer's hands of \$13,556.36 on Jan. 1, 1900. While this amount was on hand Jan. 1, 1900—but in order that an up-to-date view of your cash account may be had—it is necessary to state that since Jan. 1, 1900, the close of our fiscal year, we have paid the balance due on the two Linotype machines, \$5400, and have been compelled to buy and pay for a new Miehle press, \$2925, and a motor to run the same, \$225; again, a new cutter had to be bought, but using the old one in exchange, our new one costs us \$325; and finally a new Linotype machine has been bought to aid in meeting the growing business of THE JOURNAL, the cash payment on which was \$550, making a total of \$9425 to be deducted from your cash on hand, leaving a real balance of only \$4131.36 available for debts. We would aid in regard to this apparent small balance that we were compelled to pay out \$4047.65 for paper used in 1898, it being customary then to charge up accounts as paid regardless of when they were contracted. This has been changed by your Board of Trustees. All bills are cash on delivery, and we feel that we have effected a considerable saving along this line. As the books have been now correctly opened and material is charged when purchased, it makes an apparent cost for production for the year 1899 that much more than it really should be, and would increase the net gain that amount for that year.

We present you herewith an inventory of THE JOURNAL office, Dec. 31, 1899:

INVENTORY.

PRESS-ROOM AND PROOF-ROOM FURNITURE AND FIXTURES.		
1	Metal Furnace.....	\$ 75.00
285	Galleys at 20c.....	57.00
36	Galleys.....	24.00
5	Pairs of Stands.....	26.00
3	Sets Chases.....	50.00
3	Imposing Stones.....	40.00
1	Pair Large Scales.....	14.00
7	Case Stands.....	5.00
1	Oak Washstand.....	20.00
3	Binding Tables at \$2.00.....	6.00
2	Make-up Tables.....	6.00
2	Linotype Machine Chairs.....	8.00
1	Type Cabinet, new.....	24.00
1	Type Cabinet, old.....	15.00
	Stands, Drawers, etc.....	20.00
	Journal Files.....	125.00
2	Desks at \$10.00.....	20.00
3	Oak Chairs, high back.....	3.00
1	File Case.....	2.00
		\$515.00

OFFICE FIXTURES AND FURNITURE.

	Partitions and Panel Work.....	\$150.00
9	Oak Chairs, high backs.....	9.00
1	Ant. Oak Desk (Ed.).....	65.00
1	Ant. Oak Book Case (Ed.).....	20.00
	Book Shelving (Ed.).....	25.00
1	File Case.....	60.00
1	Card Index (Editorial Room).....	15.00
1	Victor Safe.....	15.00
1	Large Safe.....	125.00
1	Typewriter Stand (Ed.).....	3.00
1	Chair, Oak (Ed.).....	6.00
1	Electric Fan.....	10.00
1	Dictionary Stand.....	2.00
1	Roll Top Desk.....	50.00
4	Typewriters at \$25.00.....	100.00
1	Typewriter.....	75.00
1	Flat Top Typewriter Desk.....	6.00
1	Flat Top Subscription Clerk Desk.....	6.00
2	Flat Top Typewriter Desks.....	30.00
2	Flat Top Desks.....	10.00
5	Window Shades.....	20.00
1	Index Cabinet (Bookkeeper).....	6.00
1	File Case (Bookkeeper).....	1.50
1	High Desk (Bookkeeper).....	20.00
1	Carpet (Ed. Room).....	15.00
1	Subscription Cabinet and Base.....	32.50
2	Desk Files.....	7.00
1	Wicket.....	7.50
1	Combination Desk and Book Case.....	10.00
1	Book Case, Light Oak.....	10.50
3	Revolving Stenographers' Chairs.....	14.00
7	Revolving Chairs.....	8.00
1	Letter Filing Cabinet.....	5.00
1	Letter Press.....	.50
1	High Stool.....	2.00
1	Combination Dictionary Stand and Book Case.....	4.00
1	Exchange Rack.....	5.00
1	Walnut Book Case.....	5.00
	Miscellaneous Articles.....	10.00
	Total.....	\$1,004.50

MACHINERY AND PLANT.

1 Folding Machine	\$1,116.25
1 Folding Machine	175.75
1 Miehle Cylinder Press	2,180.25
1 Miehle Cylinder Press	1,140.00
1 Pony Gordon Press	950.00
1 Miehle Cylinder Press (Not Paid)	2,925.00
1 Crocker Wheeler Motor	207.00
1 Crocker Wheeler Motor	70.00
1 Sheridan Auto Cutter	103.36
1 Sitching Machine	175.00
1 Proof Press	150.00
2 Linotype Machines	9.00
1 Sitcher (Not Paid)	6,750.00
1 Crocker Wheeler Motor (Not Paid)	225.00
1 Linotype Machine ordered (\$650 of above paid)	225.00
	3,100.00
	\$19,511.80

RECAPITULATION.

Press Room and Proof Room Furniture and Fixtures	\$ 515.00
Office Furniture and Fixtures	1,004.50
Machinery and Plant	19,511.80
Total value	\$21,031.30

Of this amount there is unpaid \$5,935.

In making this inventory the depreciation on machinery, type, fixtures, etc., has been charged at a conservative basis.

The inventory was furnished last year. The inventory given now more than doubles that reported in 1898 at Denver. All of these investments we were compelled to make. THE JOURNAL has now an almost complete office outfit and can do all the work demanded of it for the present.

The growth of THE JOURNAL for the past year has been steady. Every month has shown an increase of subscribers and the amount of advertising. Your Board of Trustees in addition to the exclusions from the pages of THE JOURNAL already ordered, have decided that no proprietary medicines advertised in the public press shall be allowed space in THE JOURNAL pages. This we felt was due to the medical profession, and less than that could not well be done.

SUBSCRIPTION DEPARTMENT.

The following figures indicate the gross issue for each week during 1899:

WEEKLY EDITION.		WEEKLY EDITION.	
Jan. 7, 12,000		July 1, 12,700	
" 14, 11,500		" 8, 12,700	
" 21, 11,500		" 15, 13,800	
" 28, 11,750	46,750	" 22, 12,800	
		" 29, 12,700	
Feb. 4, 11,800		Aug. 5, 12,800	63,700
" 11, 12,000		" 12, 12,800	
" 18, 11,100		" 19, 12,750	
" 25, 12,250	48,250	" 26, 12,700	
Mar. 4, 12,200		Sept. 2, 15,000	51,100
" 11, 12,200		" 9, 15,000	
" 18, 12,300		" 16, 15,000	
" 25, 12,250	48,950	" 23, 15,000	
Apr. 1, 12,200		" 30, 15,100	
" 8, 12,500		Oct. 7, 15,500	75,100
" 15, 13,200		" 14, 15,600	
" 22, 13,000		" 21, 15,000	
" 29, 13,200	64,100	" 28, 15,800	
May 6, 13,200		Nov. 4, 15,800	62,500
" 13, 13,200		" 11, 16,100	
" 20, 13,200		" 18, 15,000	
" 27, 13,000	52,800	" 25, 15,800	
June 3, 15,000		Dec. 2, 16,000	63,700
" 10, 13,200		" 9, 16,000	
" 17, 13,100		" 16, 16,000	
" 24, 12,700	54,000	" 23, 16,000	
		" 30, 16,000	
	314,850		80,000
			396,100
Grand Total			710,750
Weekly Average			13,672

The comparative statement below indicates the increase in THE JOURNAL'S circulation during the past year.

COUNTING OF MAILING LIST.

	JANUARY 1899	1900
Copies to members	7,937	8,445
" " subscribers	2,433	4,633
" " advertisers	200	223
" " exchange (Domestic)	149	153
" " exchange (Foreign)	36	59
" " Med. Coll. Libraries	104	8
" " subscription agents		4
	10,959	13,635

The above indicating an increase of 2,676.

Of this increase 2628 are in new members and subscribers, which, according to records on hand, is the largest increase of any single year since the establishment of THE JOURNAL.

The following is a detailed count of mailing list by states, indicating the gains and losses during the past twelve months:

State	Members.	Subscribers	Total	Gain Year	Loss Year
Alabama	71	15	86		8
Alaska		1	1		
Arizona	18	5	23		3
Arkansas	66	26	92		13
California	268	54	322		34
Colorado	327	35	362		20
Connecticut	105	6	111		2
North Dakota	35	24	59		26
South Dakota	22	17	39		10
Delaware	25	3	31		4
Dist. of Col.	120	43	163		3
Florida	44	4	48		6
Georgia	188	20	208		25
Illinois	885	1052	1937		518
Iaho	15	4	19		3
Indian Territory	14	14	28		7
Indiana	443	211	654		150
Iowa	356	225	581		29
Kansas	102	62	164		28
Kentucky	167	155	322		69
Louisiana	52	52	104		42
Maine	47	10	57		9
Maryland	142	63	205		52
Massachusetts	266	60	326		48
Michigan	323	290	613		208
Minnesota	167	156	323		81
Missouri	206	44	250		96
Mississippi	49	21	70		14
Montana	33	7	40		1
Nebraska	144	70	214		33
New Mexico	5	2	7		6
Nevada	3	3	6		1
New Hampshire	47	8	55		2
New Jersey	172	20	192		14
New York	131	561	692		64
North Carolina	46	26	72		13
Ohio	866	528	1394		484
Oklahoma Ter.	18	12	30		15
Oregon	46	13	59		2
Pennsylvania	1088	126	1214		53
Rhode Island	57	2	59		7
South Carolina	50	2	52		6
Tennessee	124	76	200		53
Texas	124	126	250		79
Utah	37	3	40		2
Vermont	43	10	53		14
Virginia	81	88	169		74
Washington	41	15	56		9
Wyoming	15	7	22		2
West Virginia	68	56	124		60
Wisconsin	286	173	459		75
	8401	4333	12732	2518	59

Canada	8	58	66		
Mexico	5	10	15		8
Cuba (Foreign)	4	3	7		7
Hawaiian Islands	1	11	12		12
Philippine Islands	1	1	2		1
Foreign	26	25	51		64
U. S. A. Hosp.		171	171	64	
		21	21	21	
	8445	4633	13078	2687	59

Total 13635

NUMBER OF COPIES SENT OUT JANUARY 1, 1900.

Members	8,445
Subscribers	4,633
Advertisers	233
Domestic Exchange	153
Foreign Exchange	59
Medical College Reading Rooms	108
Agents	4
Total	13,635

ADVERTISING DEPARTMENT.

The following comparative statement indicates the increase in advertising collections during the past twelve months:

	1898	1899
January	\$2,061.98	\$3,292.84
February	2,415.67	2,291.65
March	1,556.51	2,763.23
April	2,643.23	2,635.11
May	1,095.43	3,240.83
June	1,568.44	2,343.75
July	2,698.05	3,453.41
August	1,377.84	2,698.25
September	1,635.44	2,093.68
October	3,350.31	3,891.40
November	1,714.96	2,734.25
December	1,783.85	2,262.46
	\$23,629.71	\$33,760.82

Indicating an increase of \$10,131.11.

An effort is being made—and we are promised by the chairman of the Committee on Exhibits at the Atlantic City meeting that this will be carried out—to have THE JOURNAL advertisers receive preference in the allotment of space in the exhibit hall. If such an arrangement could be permanently

effected, it would be a decided advantage, and inasmuch as exhibit space at the annual meetings is under the jurisdiction of the Association, it seems practicable, and would greatly assist in amalgamating the work for the final good of the Association.

The Board has attempted to reduce the affairs of THE JOURNAL to a business basis and to this end has had all of the books and papers gone over by expert accountants. New books have been opened and rearranged and the bookkeeping has been systematized. We believe your JOURNAL to be on a firm basis.

ALONZO GARCELON, President.

CHARLES A. L. REED, Secretary.

- E. E. MONTGOMERY.
- I. N. LOVE.
- JAMES TAGGART PRIESTLEY.
- JOSEPH EASTMAN.
- HENRY L. E. JOHNSON.
- T. J. HAPPEL.

Dr. Harris, New York, moved that the report be adopted, and that a vote of thanks be extended to the Board of Trustees, the treasurer and editor for their faithful and efficient services. Seconded.

Dr. Bishop, of Pennsylvania—When we recall the previous reports of committees and the previous occurrences we have had, we can not too highly commend the work of the Board of Trustees and of the editor for the healthy condition of our finances, because I am sure it is largely due to their efforts. I hope that the members of the profession outside of the Association will realize the importance of coming into it and making our number as great as it should be, and whether it would not be wise to call upon the various state societies to co-operate more actively in the effort to increase the circulation of THE JOURNAL by increasing the membership of the Association. It would be a benefit to the state societies as well as to the American Medical Association.

The motion of Dr. Harris was then put and carried unanimously.

REPORT ON ASSOCIATION MEDAL.

Dr. Geo. M. Gould, Philadelphia, read the report of the Committee on American Medical Association Medal, as follows:

The committee having in charge the award of the American Medical Association Prize Medal respectfully report that they have carefully and independently examined the six essays submitted to them, and unanimously voted to recommend that the Association should award it to the author of the essay entitled "Quantitative Tests for Proteolysis," by "Ganagaru." Upon opening the envelope containing the writer's name we found the author of this essay to be Dr. A. L. Benedict, of Buffalo, N. Y. To him your committee therefore recommend the award of the prize medal. In accordance with the instructions contained in the resolution of the Association, your committee have had designed and made a gold medal about the diameter of a \$20 United States gold coin, and about twice as thick, containing upon one side the stamp of the American eagle with shield, and the legend, *E pluribus unum*. Surrounding this emblem are the words "THE AMERICAN MEDICAL ASSOCIATION." Upon the other side are the words, "Prize for Best Essay." Awarding the upper part, while through the center runs the design of the Esculapian staff and a tablet bearing the inscription: "Awarded to A. L. Benedict, A.M., M.D. Essay: Quantitative Tests for Proteolysis, June, 1900."

Your committee would also recommend in order to save the trouble and expense of new designs in future years, that in general features the present medal be adopted as the style of the Association medal for permanent use.

The committee would recommend that in future the recipient of the prize shall be given the option of the gold medal or a bronze replica of the medal and the balance of the appropriation in money.

The committee also recommend that the paper of Dr. Benedict be published in the Association JOURNAL.

Respectfully submitted,

- GEORGE M. GOULD.
- E. FLETCHER INGALS.
- T. W. HUNTINGTON.
- Committee.

On motion, of Dr. Bishop, the report and recommendations contained therein were adopted.

Dr. Keen then presented the medal to Dr. Benedict.

REPORT ON SENN MEDAL.

Dr. W. L. Rodman, Philadelphia, presented a verbal report of the Committee on Senn Medal. He said that the committee, after carefully examining all papers that had been presented for the medal, were of the unanimous opinion that the writer with the *nom de plume* "Exstrophy" is entitled to the medal. The identity of the author is still unknown to the committee.

Dr. Rodman then handed President Keen an envelope containing the author's name, and asked him to open it, which he did, and the name was F. Gregory Connell, 381 East Superior Street, Chicago, Ill. The title of Dr. Connell's essay was "Exstrophy of the Bladder."

Dr. Keen then presented the medal to Dr. Connell, and said that his contribution was one of great credit to American surgery.

REPORT ON RUSH MONUMENT FUND.

Dr. J. C. Wilson, Philadelphia, read the report of the Committee on the Rush Monument Fund, as follows:

Your committee has the honor to report that in accordance with the statement of the treasurer, Dr. Henry D. Holton, dated June 1, 1900, and hereto appended, there was received during the year ending upon that date, in cash: From the California Medical Society, \$500; from the Iowa Medical Society, \$240.12; from the Connecticut Medical Society, \$98.28; and from Dr. Jas. T. Jelks, Hot Springs, Ark., \$100; a total in new contributions of \$938.40; and that the accumulated funds now in the treasurer's possession, invested in notes and bonds, amount to \$10,965, which, together with the cash in hand—\$365.05—reach a total of \$11,330.05.

An active committee of the Philadelphia County Medical Society, under the chairmanship of Dr. Curtin, is now engaged in an effort to raise \$1500 for this fund, with a reasonable hope of success.

Under date of Jan. 5, 1900, a circular letter was forwarded by the treasurer to the presidents of the various state societies, calling attention to the pledges made at the meeting of the Association in Philadelphia in 1897, and requesting reports. The payments to the fund from the Arkansas, California, Connecticut and Iowa societies, referred to above, were made in response to this appeal. In other instances, however, the replies indicated an unaccountable lack of interest in the matter. Committees had been appointed but had not reported; no committees had been named; one state society disclaimed any responsibility in the matter, averring that any pledge made had been unauthorized, etc.

In the report made by Dr. Gihon at the meeting last year, it is stated that "The Secretary of the Navy has assigned an unequalled site for the structure in the beautiful park fronting the United States Naval Museum of Hygiene." In that report Dr. Gihon dwells upon the fact that in fifteen years of effort no more than the sum of \$10,000 had been collected, whereas \$100,000 is regarded as necessary for the completion of the monument. The contributions during the past year, together with interest, have augmented that sum by nearly \$1500—a rate of increase which, even could it be sustained, would with compound interest defer the realization of the plan to a period far beyond the expectancy of life of most of those present at this meeting.

In this assembly no argument is necessary in support of a design so lofty. In thus honoring the memory of Rush the profession will honor itself. In thus commemorating his abilities and achievements it will remind the world that gifts of the highest order and usefulness, of the highest beneficence, belong to that silent profession of which the Sydenham of America was a brilliant type.

Your committee respectfully represent that the matter grows more urgent as time passes, that it should be no great task for the profession of the United States to raise the remaining sum of \$88,000 for this noble object, and that what the enthusiasm of Philadelphia in 1897 failed to do, the earnest purpose of the Association at Atlantic City in 1900 can surely accomplish.

Your committee suggests that three additional members be added to its number.

Henry D. Holton, Treasurer.

IN ACCOUNT WITH RUSH MONUMENT FUND		Dr.
June 1, 1899, To Cash on Hand.....		\$ 882.52
To Cash from California Medical Society.....		500.00
To Cash from Dr. J. T. Jelks.....		100.00
To Cash from Iowa Medical Society.....		240.12
To Interest on Bonds and Mortgages.....		532.00
To Taluck Mortgage and Interest.....		1,025.00
To Cash from Connecticut Medical Society.....		98.28

Cr.	
By Tacoma Light and Water Bonds.....	\$2,000.00
By Postage, stationary, printing, interest, coal, revenue	247.87
By Aerial Note.....	765.00
By Cash on Hand.....	365.05
	\$3,377.92

AMOUNT OF FUND JUNE 1, 1900.

Funds Invested in Notes and Bonds.....	\$10,965.00
Cash on Hand.....	365.05
	\$11,330.05

It was moved, seconded, and carried that the report be accepted and the recommendation adopted.

The president appointed as additional members of the committee on Rush monument fund, Drs. Frank Billings, L. Duncan Bulkley and W. L. Rodman.

Under the head of "Special Committees," Dr. Norman Bridge, chairman of the Committee on Tuberculosis, desired to present the report of this committee by title, as it was to be read in full in the afternoon, in the Section on State Medicine.

NOMINATING COMMITTEE.

The secretary announced the members of the nominating committee as follows:

COMMITTEE ON NOMINATION—Alaska, ———; Alabama, W. E. P. Davis; Arizona, W. D. Duffield; Arkansas, ———; California, W. S. Willis; Colorado, Edward Jackson; Connecticut, W. S. Barber; Delaware, Willard Springer; District of Columbia, J. Wesley Bovée; Florida, ———; Georgia, J. S. Hiers; Illinois, Frank Billings; Idaho, Ed. E. Macey; Indian Territory, ———; Indiana, E. Walker; Iowa, J. A. Seitz; Kansas, R. L. Magee; Kentucky, J. N. McCormick; Louisiana, Otto Joachim; Maine, ———; Maryland, Fulton; Massachusetts, E. B. Harvey; Michigan, H. O. Walker; Minnesota, A. J. Stone; Mississippi, ———; Missouri, J. T. Murray; Nebraska, W. L. Dayton; Nevada, ———; New Hampshire, George Cook; New Jersey, A. McAllister; New Mexico, ———; New York, E. Eliot Harris; North Carolina, Chas. L. Pearson; North Dakota, I. N. Wear; Ohio, F. H. Fosbury; Oklahoma, ———; Oregon, ———; Pennsylvania, W. B. Lowman; Rhode Island, ———; South Carolina, Evans; South Dakota, ———; Tennessee, Frank H. Glenn; Texas, Bacon Saunders; The United States Army, Capt. E. B. Flick; The United States Navy, Robert A. Marmion; Utah, Charles G. Plummer; United States Marine Hospital Corps, P. H. Bailhache; Vermont, D. C. Hawley; Virginia, John N. Upshur; Washington, W. C. Cox; West Virginia, John L. Dickey; Wisconsin, W. B. Hill; Wyoming, ———.

RESOLUTION ON THE JOURNAL'S ADVERTISING POLICY.

The secretary read the following resolution, which was offered by Drs. A. A. Eshner and S. Solis-Cohen, and, on motion, was adopted:

Resolved, That the steps taken by the Editor and Trustees of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, looking toward the fulfillment of the expressed will of the Association, excluding from its columns advertisement of nostrums and secret preparations, be cordially approved, and that the Editor and Trustees be encouraged to continue in this course until the work is completed.

The secretary read a telegram from Surgeon-General Sternberg regretting his inability to attend the meeting.

RESOLUTION ON ORATIONS.

Dr. C. L. Bonfield, Ohio, offered the following:

Resolved, That the orations in Surgery, State Medicine and Medicine be omitted from the program in the future. Seconded.

Dr. L. Duncan Eve, of Nashville, moved as a substitute that the general addresses be limited to thirty minutes. Seconded.

Dr. James T. Priestley, Iowa, said that the matter of the general addresses was thoroughly discussed jointly by the Trustees and the Committee on Constitution and By-Laws, and he expressed the hope that the motions that had been made be withheld until the presentation of the report of the Committee on Constitution and By-Laws. He therefore moved as an amendment that the matter be referred to this committee. The motion as amended was put and carried.

Dr. F. F. Lawrence, Ohio, moved that the matter of selecting a place of meeting be referred to the General Executive Committee for consideration, with a view to securing better railroad rates, to report the following morning. The matter was so referred.

RESOLUTION ON INSTRUCTION IN SANITATION.

Dr. Tuckerman, Ohio, presented the following resolution, which was seconded and referred to the General Business Committee.

Resolved, That the national legislative committee, in conjunction with the special committee on the reorganization of

the army and navy medical corps, cause to be drafted a bill providing for adequate instruction in hygiene and sanitation in the national military and naval academies, such bill to be discussed and perfected at the next meeting of the joint national legislative committee of the American Medical Association and affiliated societies, and to be pushed through Congress as speedily as possible.

Dr. Savage, Nashville, moved that one or more of the vice-presidents stand at the entrance to the hall during the general meeting hereafter to keep order. Seconded.

Dr. English, New Jersey, moved as a substitute that this matter be referred to the Committee of Arrangements.

The substitute was seconded and carried.

On motion, the Association adjourned until Thursday morning, 10 o'clock.

JUNE 7—THIRD GENERAL SESSION.

The Association met at 10 a.m., and was called to order by the president.

The secretary read the minutes of the previous general session, which were approved.

The third vice-president, Dr. J. M. Allen, was called to the chair.

Dr. John A. Witherspoon, Nashville, Tenn., delivered the Oration on Medicine. The address was listened to with marked attention, and the speaker was warmly applauded throughout its delivery.

Dr. Tuckerman, Ohio, moved that a vote of thanks be extended to Dr. Witherspoon for his interesting and able address, which was seconded and carried.

REPORT OF GENERAL EXECUTIVE COMMITTEE.

The report of the General Executive Committee was then read by Dr. Bulkley, as follows:

1. The resolution of Dr. L. B. Tuckerman in regard to instruction in hygiene and sanitation in the National Military and Naval academies is recommended to the Association for adoption.

Dr. Reynolds, Kentucky, moved that the action of the General Executive Committee be concurred in, which was seconded and carried.

2. The resolution of Dr. Hall, of Chicago, covering the same ground, is not necessary.

3. The resolution of Dr. F. F. Lawrence, Ohio, that the matter of selecting a place of meeting be referred to the General Executive Committee for consideration, with a view, if possible, of securing better railroad rates, is not recommended for adoption, as that duty, by the Constitution, belongs to the Nominating Committee and can not be altered by resolution.

4. The motion of Dr. Carstens, Michigan, relative to the division of fees, as belonging to the organic law of the Association, was referred to the special Committee on Revision of the Constitution and By-Laws, which will report later.

5. The committee believes that the Association yesterday, on the request of the Committee on Prize Medal, resolved that it be thrown open to others outside of the Association. After very full consideration, the committee recommends that the action be reversed, and that the prize medal be open for competition only to members of the Association.

On motion of Dr. Harris, New York, the recommendation of the General Executive Committee was adopted.

6. The committee indorsed the action of the Prize Medal Committee and accepted the medal offered as a model for future medals.

7. Upon the recommendation of the President that an appropriation be made for the promotion of scientific research, the committee recommends the following:

Resolved, That the suggestions of the president be adopted, namely, that the Trustees set aside the sum of \$500 annually for the encouragement of scientific research, with the further recommendation that, as our financial condition will permit, in the future, the sum be increased to as great extent as possible. Also that the manner in which this sum is to be expended be left to the Committee on Scientific Research, provided, however, that sums to be given to individuals do not exceed \$50 to \$100 at one time.

On motion this recommendation of the General Executive Committee was adopted.

8. The report of the secretary, which was referred to the committee, does not contain anything requiring action by the committee.

9. The Section on Neurology and Medical Jurisprudence has voted, requesting that its name be changed to that of the "Section of Nervous and Mental Diseases." This matter was referred to the Special Committee on Constitution and By-Laws, with the recommendation that it be so changed.

10. The resolutions offered by Dr. Brower, as follow, are recommended for adoption:

Resolved, That a committee be appointed by the Association on the organization of the profession throughout the United States to co-operate with the Committee on National Legislation; this committee to consist of one member from each state and territory represented in the Association.

Resolved, That a committee of three be appointed by the president to prepare plans in detail for such committee on organization, to enter into correspondence with officers of the various state societies and take such action in the premises as it may think advisable, and that the Trustees be requested to appropriate a sum not exceeding \$150 for the necessary expenses of the committee.

It was moved and seconded that the recommendation be concurred in.

Dr. Bishop, Pennsylvania, moved that the army, navy, and marine-hospital service be included in the committee. Seconded.

Dr. Tuckerman, Ohio, moved that the Bureau of Animal Industry be also added to the committee. Seconded.

Dr. Bishop accepted the amendment.

The motion with its amendments was put and carried.

The resolution offered by the Section on State Medicine that the Government of the United States be requested to make the Bertillon classification of the cause of death the basis of the mortality statistics of the census of 1900 is not recommended for adoption.

The committee would report that it has paid especial attention to the daily work of the Sections, and has had daily reports from each in regard to the numbers in attendance, the number of papers read, and the number of papers the authors of which failed to appear.

The General Executive Committee unanimously indorsed the action of its special committee, who met with the Trustees in the revision of the Constitution and By-Laws and recommended the acceptance of their work, and the adoption of the revision that is to be presented.

Dr. A. J. Stone, St. Paul, then read the report of the Nominating Committee, as follows:

REPORT OF NOMINATING COMMITTEE.

Your Nominating Committee met June 6, at 3:30 p.m., with Dr. A. J. Stone, of Minnesota, chairman, and W. E. B. Davis, Alabama, secretary, and begs leave to report as follows:

For president for the ensuing year, Dr. Charles A. L. Reed, Cincinnati, Ohio.

First vice-president, Dr. A. W. Calhoun, Atlanta, Ga. Second vice-president, Col. A. A. Woodhull, United States Army, Denver, Colo. Third vice-president, Dr. Philip Marvel, Atlantic City, N. J. Fourth vice-president, Dr. William E. Quine, Chicago. Permanent secretary, Dr. George H. Simmons, Chicago. Assistant secretary, Dr. Wm. Davis, St. Paul, Minn. Treasurer, Dr. Henry P. Newman, Chicago. Librarian, Dr. George W. Webster, Chicago. Trustees, Dr. Miles F. Porter, Fort Wayne, Ind.; Dr. E. Fletcher Ingals, Chicago; and Dr. W. L. Rodman, Philadelphia. To fill the vacancy caused by resignation of Dr. Charles A. L. Reed, Dr. Joseph M. Mathews, Louisville, Ky. Nomination for Judicial Council: Dr. James R. Guthrie, Iowa; Dr. G. B. Gillespie, Tennessee; Dr. R. C. Moore, Nebraska; Dr. Ida J. Heiberger, District of Columbia; Dr. John B. Roberts, Philadelphia; Dr. Charles S. Rodman, Connecticut; Dr. S. L. Jepson, West Virginia. Address on Surgery, Dr. John A. Wyeth, New York. Address on State Medicine, Dr. Geo. M. Kober, District of Columbia. Address in Medicine, Dr. N. S. Davis, Jr., Chicago. Place of meeting, St. Paul, Minn. Chairman Committee of Arrangements, Dr. John F. Fulton, St. Paul, Minn.

The secretary read a list of delegates to the Pan-American Medical Congress, at Havana, Cuba, December, 1900.

It was moved that the report of the Nominating Committee be adopted as read. Seconded.

Dr. Bulkeley moved to amend the report by substituting the names of Drs. Eastman and Priestley as Trustees in the place of Drs. Porter and Ingals. Seconded.

Dr. Wishard, Indiana, moved to lay the amendment on the table. Seconded.

There being some doubt as to the vote on the amendment, a division was called for, with the result that 118 voted for tabling the amendment while 99 were opposed to it.

The president declared the motion to table carried.

The original motion to adopt was then put and carried.

Dr. Stone, Minnesota, moved that the time of meeting be on the second Tuesday in June; and that the place of meeting be St. Paul. Seconded.

Dr. Donald Maclean, Detroit, moved to substitute Minneapolis for St. Paul, Seconded.

Dr. E. F. Ingals, Chicago, asked if the Constitution did not fix the time of meeting each year.

The secretary called attention to a resolution which is to the effect that if the place of meeting is to be in the South, it is to be held in May; if North of Mason and Dixon's line, it is to be held the first week in June.

Dr. Happel, Tennessee, made the point of order that by adopting the report of the Nominating Committee it carried with it the time and place of next meeting.

The president ruled that this point of order was well taken.

Whereupon, Dr. Marcy, Boston, moved a reconsideration so far as the date of meeting was concerned. Seconded.

After some discussion, Dr. Harris, New York, moved that the motion to reconsider the date of the meeting be laid upon the table, which was seconded and carried.

Under the head of "Reports of Special Committees," it was moved that the report of the Committee on Necrology be read by title. Seconded and carried.

REPORT OF BOARD OF TRUSTEES.

Dr. Happel, Tennessee, read the report of the Board of Trustees, as follows:

I have been delegated to present the report of the Board of Trustees on various matters which have been presented to them pertaining to questions of finance.

1. Upon the recommendation of the president that the Trustees be empowered to donate the sum of \$50 toward defraying the expenses of the Thirteenth International Medical Congress, we report that this recommendation be concurred in, and that the amount be allowed and paid.

It was moved, seconded and carried that the recommendation of the Board of Trustees be approved.

2. Regarding the resolution offered by Dr. Maclean, that the reports of the secretary, treasurer and special committees be printed in advance and distributed to the members, the Board of Trustees would recommend that the reports of the secretary, treasurer, and Trustees be printed in advance, but not those of special committees, and we would request that copy be furnished a few days in advance of the meeting of the Association.

It was moved that this recommendation be concurred in. Seconded and carried.

3. As to the resolution in regard to the continuance of the Committee on Public Health and the appropriation of \$400 for the purpose of defraying the expenses of that committee, which was also referred to the Board of Trustees, we recommend that, inasmuch as a legislative committee has been provided in the Constitution, all such matters be referred to that committee.

On motion, this recommendation was concurred in.

4. There was referred to the Board of Trustees the expense account of Dr. Tuckerman. This account was not sufficiently itemized for the board to act intelligently upon it, hence we respectfully refer it back to Dr. Tuckerman for an itemized statement of expenses, then the Board will be prepared to act upon it.

On motion, the recommendation to refer the matter back to Dr. Tuckerman was concurred in.

At this juncture, Drs. Mathews and Love were appointed as a committee to escort the president-elect to the platform.

Dr. Reed was introduced and made a short speech, accepting the presidency of the Association.

REPORT ON REVISION OF CONSTITUTION.

Dr. Happel, Tennessee, presented the report of the Committee on Revision of the Constitution and By-Laws, which was composed of a Special Committee, the General Executive Committee, and the Board of Trustees. He said the revision

had involved a great deal of work, especially as to corrections, codification, change of verbiage, etc., but they had always had in view the exact spirit, if not the letter, of the Constitution.

The report was read and adopted.

In regard to the proposed amendments the committee would report, as follows:

1. Amendment offered by the Committee on Medical Legislation:

Offered by the Committee on Medical Legislation:

Section 3, Standing Committees.—The committee on legislation shall consist of three members: one of whom shall be a resident of Washington, one of Baltimore, and one of Philadelphia. It shall be the duty of this committee to represent before Congress the wishes of this Association regarding pending medical and sanitary legislation. This committee shall also invite to an annual conference to be held at Washington, one delegate each from the army medical service, the navy medical service, the marine-hospital service and from each State society of legally qualified practitioners of such profession. This committee shall also invite to an annual conference to consider questions of national medical and sanitary legislation and report to their representative bodies for actions.

The joint committee would recommend the adoption of the same with the following amendments: In the second line, insert after the word members, the following: "To be appointed annually by the President;" in the third line, strike out the word "Baltimore" and insert the word "Maryland;" and in the same line, strike out the word "Philadelphia" and insert the word "Pennsylvania;" in the ninth and tenth lines, strike out the phrase "of legally qualified practitioners of medicine," and insert "in affiliation with the American Medical Association;" in the ninth line, after the word "service," insert the words, "United States Bureau of Animal Industry;" after the word "actions" at the close of the section, insert "this body shall have power to act *ad interim* when necessity requires."

The committee recommends the adoption of this amendment with the changes mentioned.

On motion, the recommendation was concurred in.

2. The amendment to the By-Laws which follows bears upon the amendment just adopted.

In By-Laws, Section 3, Standing Committees, Insert after "board of trustees" the words, "committee on legislation," and after the duty of "boards of trustees" the following clause: "The committee on legislation shall report annually to this Association its action during the previous year and shall recommend to the Association such amendments to pending legislation as it shall deem proper."

Your committee would report in regard to the proposed amendment to the By-Laws that this amendment be adopted, amending same by striking out in the fourth line the word "annually," and inserting after the word "Association" in the same line, the following, "at each annual meeting."

On motion, this amendment as amended by the committee was adopted.

3. The next amendment is one submitted by Dr. Reynolds, of Kentucky.

Offered by Dr. Dudley S. Reynolds, Louisville, Ky.:

Amend Article 2 of the Constitution, by adding to the qualifications of membership in those societies eligible to send delegates to this Association, after the words "Marine-Hospital Service of the United States," at the conclusion of the second paragraph; "provided, however, that no state, county or other auxiliary body sending representatives shall receive into its membership any one who may after 1900 have received the degree of Doctor of Medicine on less than four years of graded instruction or an equivalent requirement." (Laid over for one year.)

Your committee would report upon the amendment offered by Dr. Reynolds, Louisville, favorably, with the following change: Strike out the word and figures "after 1900" in the seventh line, and insert after the word "medicine" in the same line, the word and figures "after 1901."

The committee unanimously recommends the adoption of Dr. Reynolds' amendment, with the changes proposed.

On motion of Dr. Savage, the amendment as amended by the committee was adopted.

The last amendment is that offered by Dr. Q. C. Smith, of Texas.

Amendments to the Code of Ethics offered by Dr. Q. C. Smith, Austin, Texas:

Article 4, Section 9.—Be It

Resolved, That attending physicians are entitled to charge a consultation fee for each consultation, in addition to visit fee, equal in amount to that ordinarily charged in similar cases by consulting physicians residing in the same city, locality or community where the service may be rendered.

Your committee would report in regard to the amendment of Dr. Smith that said amendment be rejected.

On motion, the action of the joint committee was concurred in.

The following resolution was adopted at a joint meeting of the Trustees, Committee from General Executive Committee, and Special Committee on Revision of Constitution and By-Laws:

Resolved, That we report that, in accordance with a motion passed last year, the Trustees have conferred with the Executive Committee and a special committee, and have prepared for publication a revised edition of the Constitution and By-Laws of the Association, and recommend that the same be adopted and published.

On motion, the resolution was adopted.

The committee would further report in regard to some recommendations in the president's address.

As to the members by invitation, the committee would state that that matter is fully covered in the revised By-Laws.

In regard to the appointment of a committee of five to have charge of exhibits, the committee would report that the same is already provided for in the Constitution and By-Laws under the head of "Committee of Arrangements," hence the committee could not recommend the adoption of the suggestion.

Your committee report regarding the resolution offered by Dr. J. Henry Carstens, of Michigan, recommending that said resolution be rejected. The committee recognizes the fact that it would be impossible for this Association to get at the truth or the bottom facts on all such questions, hence it recommends the rejection of the resolution.

On motion, the recommendation of the committee was concurred in.

The matters presented by the National Legislative Committee and referred by the Association to this joint committee for consideration, was by that committee referred to the General Executive Committee, as being in the province of that committee.

On motion, the report of the joint committee was then adopted as a whole.

AMENDMENTS.

The following amendments were offered:

Offered by Dr. Benjamin, Camden, N. J.:

Amendment to By-Laws: "A committee on statistics shall be annually appointed by the president."

Offered by Guy Hinsdale and L. B. Tuckerman:

Resolved, That Article I, Section VIII, by the By-Laws, be changed, so that the Nominating Committee shall include a delegate to be elected by each one of the component Sections.

Dr. A. J. Coey, Illinois, offered the following amendment:

Amend By-Law, to allow each member the right to record his vote for each officer.

This amendment was referred back to the author with instructions to put it in proper shape.

RIGHT TO PUBLISH PAPER.

Under the head of "Miscellaneous Business," Dr. Denstow Lewis, Chicago, moved that the consideration of the Trustees' report not to publish in THE JOURNAL that portion of the proceedings of the Columbus meeting entitled "The Gynecologic Consideration of the Sexual Act" be made the special order of business for to-morrow's session, and that there be no further interference with the distribution of reprints to delegates only. Seconded.

After making his motion, Dr. Lewis said: "It was my privilege last year to read a paper in the Section of Obstetrics and Diseases of Women, which took the usual course. It was discussed, and it has been published in the Transactions of that Section, but not in THE JOURNAL. One member of the publication committee reported in favor of publishing the paper in THE JOURNAL, while two other members reported adversely. Of these two members, one is unfortunately dead, and the other is no longer a member of the Board of Trustees. The objection of the latter was on a legal ground, and in reply to his objection I have the privilege of submitting the opinions of five representative attorneys of the city of Chicago, among them a former chief justice of the Supreme Court of Illinois.

Dr. Bulkley, at this juncture, rose to a point of order, and said that all new business had to be introduced on Thursday in order to come before the General Executive Committee.

The president ruled that the point of order was not well taken, and said that the resolution would be referred to the General Executive Committee to be considered that afternoon and be voted on in general meeting the following morning.

Dr. Lewis then asked the chair the proper method to pursue to bring the matter before the members of the Association.

President Keen suggested that Dr. Lewis simply offer his resolution to the general meeting, and then the matter be

referred to the General Executive Committee without discussion to be reported on by them and discussed to-morrow.

Dr. Harris, New York, moved that the whole matter be referred to the General Executive Committee with instruction to report at their pleasure, if not this year, next year. Seconded.

Dr. McRae, Georgia, moved as a substitute for the whole matter that it be the sense of the Association that the paper of Dr. Lewis be not published. Seconded.

After a prolonged discussion, which was participated in by Drs. Cotton, Hiatt, and Harris, Dr. Reynolds, Kentucky, moved that all restrictions imposed on the paper of Dr. Lewis be removed. Seconded.

Dr. Jackson, Missouri, made the point of order that Dr. Reynolds' motion was in the nature of a substitute, and that it was unparliamentary to move a substitute to a substitute.

The chair decided that this point of order was well taken.

The matter was further discussed by Dr. Love, when Dr. Mayer, New York, rose to a point of order and stated that the subject-matter of the resolution was new business, and that any discussion on new business was out of order, and should be referred to the General Executive Committee.

The president then ruled that the discussion on the resolution was out of order. The resolution was therefore referred to the General Executive Committee to report to-morrow morning.

On motion, the Association adjourned until Friday morning, 10 o'clock.

JUNE 8—FOURTH GENERAL SESSION.

The Association met at 10 a.m., and was called to order by the president.

The secretary read the minutes of the previous general session, which were approved.

Dr. Hoff, Salt Lake City, asked if the Association had taken any action concerning reciprocity between the states having similar laws.

The chair replied that no action had been taken by the Association, but the matter was referred to in the report of the secretary.

Dr. DeVilbiss, Ohio, moved that the By-Laws be suspended, in so far as introducing resolutions on the last day is concerned. Seconded.

The motion was lost.

OFFICERS OF SECTIONS.

The secretary read the list of officers of the various sections, as follows:

Diseases of Children—Chairman, Samuel W. Kelley, Cleveland, Ohio; secretary, Wm. E. Darnall, Atlantic City, N. J.

Obstetrics and Diseases of Women—Chairman, Henry P. Newman, Chicago; secretary, C. L. Bonifield, Cincinnati, Ohio.

Surgery and Anatomy—Chairman, A. J. Ochsner, Chicago; secretary, Martin B. Tinker, Philadelphia.

Laryngology and Otolaryngology—Chairman, John N. Mackenzie, Baltimore; secretary, George C. Stont, Philadelphia.

Cutaneous Medicine and Surgery—Chairman, W. L. Baum, Chicago; secretary, R. R. Campbell, Chicago.

Nervous and Mental Diseases—Chairman, H. A. Tomlinson, St. Peter, Minn.; secretary, F. S. Pearce, Philadelphia.

Materia Medica, Pharmacy and Therapeutics—Chairman, N. S. Davis Jr., Chicago; secretary, J. N. Upshur, Richmond, Va.

Physiology and Dietetics—Chairman, Elmer Lee, New York City; secretary, R. Harvey Cook, Oxford, Ohio.

Practice of Medicine—Chairman, J. M. Anders, Philadelphia; secretary, W. Britt Burns, Deckerville, Ark.

Hygiene and Sanitary Science—Chairman, Ernest Wende, Buffalo, N. Y.; secretary, J. N. Hurty, Indianapolis, Ind.

Stomatology—Chairman, R. R. Andrews, Cambridge, Mass.; secretary, Eugene S. Talbot, Chicago.

Ophthalmology—Chairman, J. A. Lippincott, Pittsburg, Pa.; secretary, E. C. Ellett, Memphis, Tenn.

Pathology and Bacteriology—Chairman, Ludvig Hektoen, Chicago; secretary, Frank B. Wynn, Indianapolis, Ind.

Dr. Dougherty, Chicago, offered resolutions in regard to the late Dr. Truman W. Miller.

On motion of Dr. Reynolds, Louisville, the resolutions were adopted by a rising vote.

Dr. Denslow Lewis, Chicago, moved that that portion of the proceedings of the Columbus meeting of the American Medical Association, represented by his contribution in the Section on Obstetrics and Diseases of Women be published in THE JOURNAL. Seconded.

Dr. A. E. Baldwin, Chicago, rose to a point of order, and said that this matter had been referred to the General Executive Committee as new business and had been thoroughly discussed and considered by that committee. The secretary of the committee, Dr. Bulkley, was not present, but would report later.

The chair ruled that the matter of Dr. Lewis' motion was not new business, and that if the Association desired to take it out of the hands of the General Executive Committee, it could do so by specific vote.

Dr. Baldwin then asked whether any member of the General Executive Committee could make a verbal report.

The chair ruled that the Association could receive a report from any member.

Dr. Baldwin then said that the resolution of Dr. Lewis, which was referred to the committee, was very fully discussed, with copies of the paper in the hands of the members. After long and very full discussion, the following resolution was adopted:

Resolved, That the General Executive Committee, reposing confidence in our Trustees, who have declined to have the article in question published in THE JOURNAL, recommend to the Association that the request of Dr. Lewis be not granted.

Dr. Sims, New York, moved that the report of the General Executive Committee be adopted. Seconded.

After considerable discussion by Drs. Kelly, Hiatt, Love and Lewis, the president put the motion to adopt, and it was carried.

MEDICAL ASSOCIATION OF HAWAII.

Dr. Bulkley, speaking for the General Executive Committee, said: With reference to the report of the secretary, which was referred to the General Executive Committee, it was referred to a subcommittee, and this subcommittee reported that there was nothing in it requiring special action. But a very important matter has been overlooked, viz., application for membership by members of the Medical Association of Hawaii, who are subscribers to THE JOURNAL, and who wish to become members. Now, we have an Executive Council, and I move you, sir, that this matter, which was overlooked, be referred to the Executive Council with power. Seconded by Dr. Reynolds, Louisville.

Dr. Happel, Tennessee, said that, if he was not mistaken, Hawaii is a possession of the United States. This being so, the Constitution provides for the admission of such members whose societies are in affiliation with the American Medical Association.

The secretary stated that this organization in Hawaii was not affiliated with the American Medical Association. It is not recognized by any state society, and he asked that he be given authority to indorse the Medical Association of Hawaii.

Dr. Happel said that the Constitution provides, if that society is not in affiliation with the American Medical Association, then it shall send its Constitution and By-Laws to the Chairman of the Judicial Council, who will examine them and report to the secretary of the Association whether or not they accord with the requirements of our law. If the society is in affiliation with the Association, the secretary will then be authorized to receive them.

REPORT OF GENERAL EXECUTIVE COMMITTEE.

Dr. Bulkley presented the report of the General Executive Committee. At a full meeting the matters referred to it by the Association were fully discussed and action taken as follows:

1. The Section on Pathology and Bacteriology recommends the following resolutions in regard to a pathologic exhibit, which are indorsed by the Committee and recommended for adoption:

Resolved, That the pathologic exhibit be continued from year to year and be placed in the charge of the Pathologic Section.

Resolved, That to take charge of the pathologic exhibit for the next meeting and to formulate a definite plan for future exhibits, a committee of three be appointed by the chairman of the Pathologic Section, subject to the approval of the president of the American Medical Association.

Resolved, That the Trustees be requested to appropriate a sum not to exceed \$500 for the pathologic exhibit for the next meeting, if the finances will allow it.

The committee moves its adoption. Seconded and carried.

2. Upon a second special request from the Section on State Medicine, the committee gave a hearing to four of its members in regard to the resolution reported adversely yesterday, and the committee recommend that the action of yesterday be reversed and that the following resolution be adopted, and that the Legislative Committee be instructed to further the same:

Resolved, That the Bertillon classification of causes of deaths be adopted by the United States Government for the mortality statistics of the census of 1900.

Dr. Reynolds, Louisville, moved the adoption of the recommendation. Seconded.

Dr. A. R. Reynolds, Illinois, moved that the recommendation of the General Executive Committee be tabled, which was seconded and carried.

3. Recognizing the great value of having a perfect report of the scientific work done by the Association correctly reported in *THE JOURNAL*, the committee would recommend for adoption the following resolution, which has been sent to them:

WHEREAS, There are many items of general interest developed in the general discussions of the various section meetings which are lost to the Association at large, when an official stenographic report of these discussions is not taken; therefore, be it

Resolved, That the General Executive Committee recommend that the Board of Trustees be requested to approve and pay bills to an amount not exceeding \$1500 annually for the purpose of furnishing an official stenographer for each Section, as well as for the General Executive Committee and the general session of the Association.

The committee would move its adoption. Seconded.

Dr. Reynolds, Louisville, said that this was a matter of great importance to the members of the Association. The proceedings of the various sections should be accurately reported. He regretted that the General Executive Committee had mentioned a specific sum, because it is not known at present what the expense of such reports will be for the next year, or for any future meeting. He hoped the committee would not insist on using any specific figures.

Dr. Happel, Tennessee, moved to amend: "Provided, That the stenographers for the various Sections shall be secured through the Board of Trustees and the secretary of the Association and not by the Section officers themselves." Seconded.

The amendment was accepted, and the resolution as amended was adopted.

4. The committee recommends that the Association indorse the work of the Legislative Committee and give their indorsement to the following bills which they have been urging before Congress:

a. H. R. 4483 and S. 4274, regarding an "Increase in the Medical Department of the Army."

b. Bill providing for the appointment of assistant surgeons of volunteers.

c. Bill for the relief of acting assistant surgeons of the United States Army.

d. H. R. 11139 and S. 4171 to protect the Southern coast and therefore the National quarantine service.

e. That the S. 34 Bill for the "further prevention of cruelty to animals in the District of Columbia," in reference to antivivisection, be opposed.

f. S. 559 report calendar No. 427, in regard to the pollution of Potomac water.

On motion, the work of the Legislative Committee was approved.

OFFICERS OF GENERAL EXECUTIVE COMMITTEE.

The officers of the General Executive Committee for the ensuing year are: Chairman, Dr. W. J. Mayo, Rochester,

Minn.; vice-chairman, Dr. H. O. Walker, Detroit, Mich.; secretary, Dr. L. Duncan Bulkley, New York. Additional members of the Executive Council, Dr. Frank Billings, Chicago; Dr. B. Alexander Randall, Philadelphia.

The secretary read the following resolution, which was offered by Dr. W. L. Dickerson, of St. Louis.

RESOLUTION ON UNETHICAL PREPARATIONS.

Resolved, That this Section (Section on Materia Medica and Therapeutics) desires to express its unequivocal disapproval of the use by members of this Association of proprietary preparations of unethical composition; and entirely approves the course of *THE JOURNAL* of the Association and of the Trustees in refusing to such pharmaceutical compounds the privilege of appearing in the advertising pages of *THE JOURNAL*. This Section expresses the hope that the Committee of Arrangements of the next meeting will exert sufficient vigilance over applications for space for exhibition to exclude all such unethical preparations and prevent their obtaining an apparent indorsement from the American Medical Association.

RESOLUTIONS OF THANKS.

Dr. Dudley S. Reynolds, Louisville, offered the following:

We wish to move a vote of thanks: 1. To Dr. Wynn for the admirable, very interesting, pathologic exhibit. 2. To the ablest president under whose presidency I have sat within the past thirty years, many of whom were models almost of perfection, but not quite; we have had only one perfect president, and that is the gentleman who stands before us. 3. We wish to thank Dr. Philip Marvel and his collaborators on the Committee of Arrangements for the unprecedented and magnificent manner in which they have made provisions for our comfort and pleasure. 4. We wish to thank the press, which has been so generous in publishing our proceedings and so lenient in its criticism of our faults and shortcomings. 5. We wish to thank the ladies of Atlantic City for the grand and enchanting entertainments they have provided for our wives, our daughters, our sweethearts, our friends. 6. We wish to thank the Committee on Registration for the most excellent system, by which we were not delayed, or subjected to the inconvenience or tedium of lining up, as is too often the case. 7. We wish to thank the General Executive Committee for its faithful and patient discussion of all matters referred to it. 8. We wish to thank the chairman of the consolidated committee on Revision of the Constitution and By-Laws, Dr. Happel, for his faithful and painstaking labors. He denied himself both food and—drink. 9. We wish to thank Mr. Young, the owner of this matchless pier. 10. We wish to thank that distinguished, but modest, member of our fold, the editor of the Association journal. He has given us a model journal for all of the civilized world to imitate, if they can. (Applause.)

The resolutions were seconded by Dr. Love, and unanimously carried.

There being no further business to come before the general meeting, on motion, the Association then adjourned to meet at St. Paul, Minn., the first Tuesday in June, 1901.

Societies.

COMING MEETINGS.

Indian Territory Medical Association, Wagoner, June 19-20.
Wisconsin State Medical Society, Milwaukee, June 20.

Third District Branch of the New York State Medical Association, Binghamton, N. Y., June 21.

Oregon State Medical Society, Portland, June 26-27.

Second District Branch of the New York State Medical Association, Schenectady, N. Y., June 28.

Michigan State Medical Society, Mackinac Island, July, 1900.

WARREN COUNTY MEDICAL SOCIETY.—This Society met in Phillipsburg, N. J., May 31. The following officers were elected for the ensuing year: president, Louis C. Osmon, Hacketts-town; secretary, W. J. Burd, Belvidere; treasurer, W. H. McGee, Belvidere.

JACKSON COUNTY MEDICAL SOCIETY.—The annual meeting of this Society was held in Wellston, Ohio, May 31. The officers elected for the ensuing year were: president, B. F. Kitchen, Wellston; vice-president, J. L. Gahn, Jackson; secretary, J. J. McClung, Glen Roy.

CAPE MAY COUNTY MEDICAL SOCIETY.—At the annual meeting of this Society, which was held June 1, at Cape May, N. J.,

the following officers were elected: president, A. L. Leach; vice-president, J. S. Douglass; secretary, C. B. Corson; treasurer, Randolph Marshall.

NEW HAMPSHIRE MEDICAL SOCIETY.—The 100th anniversary meeting of this Society was held in Concord, May 31 and June 1. The election of officers resulted in the choice of the following: president, William T. Smith, Hanover; vice-president, D. S. Adams, Manchester; secretary, Granville P. Conn, Concord; treasurer, M. H. Felt, Hillsboro. Fifteen new members were added. The next meeting will be held in Concord, May 16 and 17, 1901.

ASSOCIATION OF AMERICAN MEDICAL COLLEGES.—At a recent meeting of this Association, the following officers were elected for the ensuing year: president, A. R. Baker, Cleveland, Ohio; first vice-president, Thomas H. Hawkins, Denver, Colo.; second vice-president, W. H. Earles, Milwaukee, Wis.; secretary and treasurer, Bayard Holmes, Chicago; judicial council: Parks Ritchie, Minneapolis, Minn. (three years); W. W. Keen, Philadelphia (three years); J. M. Dodson, Chicago (two years).

ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES.—This Association held its ninth annual session in New York City, May 31-June 2. Col. Chas. H. Alden, assistant surgeon-general, U. S. A., presided. The address of welcome was made by Major Albert Briggs, of the 65th New York Regiment. The following officers were elected: president, Brig.-Gen. A. J. Stone, Minnesota; first vice-president, Dr. John G. Wise, Washington, D. C.; second vice-president, Brig.-Gen. J. F. Calef, Connecticut; secretary, Col. Charles Adams, Illinois; treasures, Lieut. Herbert Arnold, Pennsylvania.

AMERICAN ACADEMY OF MEDICINE.—The Academy held its meeting June 2, at Atlantic City, under the presidency of Dr. G. Hudson Makuen, Philadelphia. Several Fellows were elected and many interesting papers read and freely discussed. The following officers were elected for the ensuing year: president, S. D. Risley, Philadelphia; vice-presidents, C. M. Culver, Albany; Rosa Engelmann, Chicago; G. G. Groff, San Juan; W. C. McClintock, Detroit; treasurer and secretary, Charles McIntire, Easton, Pa.; assistant secretary, Alexander Craig, Columbia, Pa. The selection of time and place of meeting was left to the Executive Council.

THIRTEENTH INTERNATIONAL MEDICAL CONGRESS.—According to instructions from Dr. A. Chaffard, Secretary-General of the Thirteenth International Medical Congress, no subscriptions to the Congress will be received after July 15, and no subscriber's name can appear in the official program unless his subscription is received before June 15. The publications of the Congress will consist of seventeen volumes, one of which will be sent gratuitously to each subscriber; that is, the volume containing the papers of the section under which he has inscribed himself. The other sixteen volumes may be purchased at a price of 4 francs per volume, or 45 francs for the series.

WAYNE COUNTY MEDICAL SOCIETY.—Physicians paid tribute to the memory of the late Dr. George E. Frothingham (THE JOURNAL, May 5, p. 1145), at a meeting of this Society, held in Detroit, June 3. Papers were read by Drs. E. B. Smith and J. J. Mulheron, and remarks were made by Drs. Irwin, A. N. Collins, J. E. Clark, Kenneth Gonsulov, W. C. Stevens E. W. Jenks, H. C. Wyman, J. C. Judson, G. G. Gordon, and L. E. Maire, all of whom spoke of the great nobility of character, the kindness of heart, and the straight-forward, sterling integrity of the lamented physician. Several of the physicians spoke in favor of the society doing something toward a lasting memorial of Dr. Frothingham, and the idea will probably be taken up later on. No business was brought up, out of respect for the memory of the deceased.

Kentucky State Medical Society.

Forty-fifth Annual Meeting, Georgetown, May 9-16, 1900.

(Concluded from page 1488.)

President, Dr. William Bailey.

EYE-STRAIN.

DR. A. J. BLINCOE, Bardstown, followed with a paper entitled "Some Facts and Fallacies in Regard to Eye-Strain." He

stated that this condition is very general. The following conditions are traceable to it: headache, vertigo, constipation, dyspepsia, "bilious spells," sleeplessness, neuralgia, neurasthenia, cerebral hyperemia, chorea, epilepsy, insanity, anemia, general debility, and obscure nervous troubles.

VISUAL PERIMETRY.

DR. DUDLEY S. REYNOLDS, Louisville, read a paper on this subject, and said that it is important to measure the field of vision, as, if it is narrow, a person is in danger. He exhibited a perimeter made on an ordinary piece of cardboard sheeting, by use of which spinal injury could be found, and tobacco and alcoholic peripheral narrowing of the field of vision and color imperception; while there is a central lesion rather than a peripheral if color and not visual trouble is in the retina. In toxic amblyopia scotoma begins on the nasal side; if of central origin on the temporal side. Toxic amblyopia may be present and not discovered until a map of the field of vision is made. It is rarely absent in habitual users of tobacco.

DIABETES MELLITUS.

DR. THOMAS HUNT STUCKY read a paper on this subject, in which he reports six cases. Disturbance of metabolism is the chief cause, and is related to rheumatism and gout. Some cases that are temporary may be relieved by purgation and rest; but if more than 2 per cent. of sugar is present and there are other symptoms, there is reason to believe that it is a true diabetes mellitus. Restricted but wholesome diet, free from pastry; strychnia, with bromid of gold and arsenic; thorough emptying of the alimentary tract, nitroglycerin, five drops of bromid of gold and arsenic, pushed until the full physiologic effect is obtained, is better than arsenic alone, or chlorid of gold and soda alone, as it produces direct cerebrospinal stimulation, and is a cardiac stimulant, reconstructive and antimicrobial.

AN X-RAY BURN.

DR. I. N. BLOOM exhibited a patient, showing an X-ray burn. He had been operated on for a gunshot wound of the abdomen, with perforation of intestine and stomach. The burn was produced after thirty minutes' exposure, with only the image of the Crookes' tube taken on plate. Five days afterward irritation began, and ten days after there was a bullous dermatitis, with great pain and sleeplessness. The patient became a victim of orthoform, but increased the dermatitis. Protonuclein, salicylic acid and diachylon, resinol and nosophen were used unsuccessfully; finally skin grafting was tried, with complete relief from pain four days afterward. The man gained flesh rapidly, and the burn practically healed.

SCARLET FEVER.

DR. LYMAN BEECHER TODD, Lexington, read a paper on this subject. He included in the management the general sanitation, sewerage, ventilation and quarantine; he mentioned as the period of caution, six weeks; and the three chemical agents in disinfection, carbolic acid, chlorid of lime and mercury. The second he considers the best and says, boil fabrics, use carbolic acid on furniture, and rub down the walls with bread, which should be burned afterward.

DR. AUGUST SCHACHNER, Louisville, read a paper entitled "Transplantation of Tendons for Correction of Paralytic Deformities." He stated that the first operation was done in 1881. The extent of the paralysis may be determined by electrical reaction; the preliminary step in forcible correction of the deformity is maintained some time; thorough disinfection, direct suture of tendons, if close; otherwise blunt tunneling, or implanting by a button-hole in the receiving tendon, coapting the sheath by catgut. The post-operative treatment is simple, but the immediate result is not an index of the final; tendoplasty is in the beginning of its usefulness, but must be used only in select cases.

ALKALOID MEDICATION.

DR. FRANK L. LAPSLEY, Paris, read a paper entitled "Alkaloid Medication, What Is It? What Are Some of the Advantages?" He said that this phase of medicine is spreading rapidly, that granules contain the active principle of plants long in use; and that it has to recommend it, accuracy of dosage, certainty of effect, convenience in carrying, jugulating and cutting short disease, and no taste.

APPENDICITIS.

DR. A. MORGAN CARTLEDGE, Louisville, opened the symposium of papers on this subject with one entitled "Dangers of Operation for Appendicitis After Four Days and Before Quiescent Period." Of the patients who die, 90 per cent. have a fulminating type of disease in which case operation must be done in twenty-four hours after the attack. In fifty cases of general septic peritonitis, two have recovered without operation. There is no means of knowing the course in a given case. If purulent accumulation is walled off, wait until after the third day of attack; if there is rupture in the peritoneal cavity, operate at once. He has never seen abscess rupture in cavity but twice. A patient recovers from general suppurating peritonitis without operation as well as with it. An interval operation is indicated when there has been an unmistakable attack of appendicitis, but we must not operate too soon after a severe attack with adhesions. With light diet and little exercise the mortality from interval operations is one-half of 1 per cent.

IMPORTANCE OF EARLY DIAGNOSIS IN APPENDICITIS.

DR. ARCH. DIXON, Henderson, said that diagnosis is not always easy, but many are clear; the temperature is variable, from normal to high. He should differentiate from colic, from indigestion, ovarian disease, pus tubes, extrauterine pregnancy, peritonitis from leaking pus tubes, and nephritis. Failure in diagnosis occurs when the initial symptoms are lost from the injudicious use of opium. Appendicitis is dangerous in all forms and stages.

REPORT OF CASES OF APPENDICITIS.

DR. W. A. QUINN, Henderson, read a paper entitled "Report of Seven Cases of Appendicitis with Remarks." He said it has no medical side in any phase, and that the laity and general profession are rallying to surgeons in their belief. It is attractive and satisfying surgery, and the results are pleasing. The operation of the present hour is the operation of the future.

DR. J. G. SHERRILL, Louisville, said that it sometimes can be handled in other ways than by surgery; that a slight inflammatory condition of the lining membrane may get well, but if there are three coats involved, abscess forms, and surgery is indicated, and that early diagnosis is of special advantage. Where appendicitis is suspected, opium should be avoided and hot or cold applications used. Typhoid fever may be confounded with tubercular peritonitis. The danger is increased after the fourth day.

DR. AUGUST SCHACHNER, Louisville, said that discussions on this subject are generally re-hashes, and important points lost. The pivotal point is a question of judgment; there is a time to go in and a time to stay out. Early operation should be a day or two from the onset, not from the diagnosis, which may be delayed a week, and the best time is very early, or in the quiescent period. Operation should not be as soon as diagnosis is made except when diagnosis is made early enough.

DR. J. O. JENKINS, Newport, said that appendicitis may be operated on with some safety in the beginning, but if late, it is cruelty, if not murder. He believes in medical treatment. For in twenty-five years, he never had a patient operated on. The diagnosis is not always easy; there are generally two or three days of treatment for colic before the physician sees it.

MUCOUS DISEASE.

DR. PHILIP F. BARBOUR, Louisville, read a paper on this subject. He said that no pathologic lesions were discoverable, not even micro-organisms; that it may last a week or more; and show malnutrition, interval discharge of mucus, skin dry, brown discoloration, restless sleep, nausea or vomiting, capricious appetite, distended abdomen, change in disposition, scanty urine, abnormal tongue, sweet breath, pain in bowels, prostration and no fever. It is differentiated from tuberculosis by the jelly-like substance or worm, that looks like mucus. Inherited gout or uric acid tendency must be combated, and the formation of mucus checked; nitrogenous foods should be used, but no fats or carbohydrates; the patient should have good hygienic surroundings, and sea-salt bathing. Bitter tonics and small doses of bismuth should be given. The digestive agents are phosphate of soda, hydrastis and sanguinaria, and arsenite of copper.

HERNIA OF BLADDER.

DR. W. O. ROBERTS, Louisville, considered this subject and re-

viewed a case already reported in the *Louisville Monthly Journal*, which was the only case he had seen, although literature shows it is met with frequently. It may be intra-, para- or extra-peritoneal; the latter least common. If there is pain and tenderness radiating toward the bladder in irreducible hernia, diagnosis may be easy. Two pathognomonic signs are ability to distend through the bladder, and introduction of the curved sound. The diagnosis is not made in a majority of cases prior to the operation.

CRETINISM.

DR. DAVID M. GADDIE, Hodgenville, calls this a rare form of idiocy, which is myxedema when it occurs in adult life. The degree of symptoms is dependent on the condition of the thyroid; climate, altitude, food, water have nothing to do with causation, though heredity plays a part. Grafting of the thyroid gives relief.

RATIONAL THERAPEUTICS OF TYPHOID FEVER.

DR. R. A. BATE, Louisville, presented a paper on this subject. He said that the clinical phenomena are due to toxins and not to bacilli; also that successful therapeutics must control toxemia; Nature produces enzymes. Thyroid antitoxin, as a prophylactic, renders susceptible individuals immune; other therapeutics rendered toxins less virulent. The therapeutic agents mentioned were the Brand bath, salicylates, nuclein group, calomel, light diet, and essential oils.

VACCINATION.

DR. J. C. MOSELY, Henderson, read a paper entitled, "Vaccination Prior To, During and After Smallpox." He said that the active elements of vaccin are not known; isolation can not be relied on; only vaccination and re-vaccination, since it never loses its efficiency. Out of 200 cases previously vaccinated, in only five did the smallpox reach the pustular stage, though in one case it had been fifty-two years since the vaccination. Vaccinated after exposure, the smallpox will be very mild; vaccinated the day after the beginning of symptoms, both will proceed, but the smallpox will be much less severe, and the vaccination not modified.

DR. B. W. SMOCK, Louisville, said that successful vaccination produces immunity against any kind of smallpox, and that the doctors are the greatest trouble in enforcing sanitation and compulsory vaccination.

OPIATES AND ETHICS.

DR. BARTON W. STONE, Louisville, read a paper on this subject. He said that the abuse of opium leads to reckless views of life, that they who use it have little remorse for crimes, that it engenders mendacity, dishonesty of speech and of action, weakening of religious responsibility, diminution in respect for age, law, authority and conjugal relations, laziness, self-indulgence, conceit, garrulosity, mischief-making, comparative imbecility and shrewdness in getting opiates for needs. The nervous system, alimentary tract, kidneys and liver lose their functions until the sufferer's life goes out. Cocain has the direst consequences, as those who use it earliest develop the paranoiac type of insanity and the effect persists for months after withdrawal. Opium is for pain and cocain to increase pleasures and stimulate failing energy. Doctors should try to stop the practice and are culpable if they ingraft the habit; if the patient is given opium he should be kept in ignorance of its use, for when once well established the habit is almost incurable. Smoking of opium is the least injurious form.

GONORRHEA VS. SYPHILIS.

DR. W. R. BLUE, Louisville, presented a paper on this subject. He mentioned the popular view of the laity regarding the two diseases, and said that they look on gonorrhoea lightly and collapse if told they have syphilis. Syphilis is relatively harmless; deaths from it comparatively *nil*; it kills its tens, while gonorrhoea kills its thousands. Legislative enactments to prevent its spread are not effectual because not supported by the public, but when they know how great a scourge gonorrhoea is, its prevention will be included among other matters under sanitary control, as meat, milk, water, plumbing, etc. The doctors should enlighten the people, and parents their children. Things will be different when gonorrhoeal pus tubes mean disgrace to a husband. Clean husbands should be demanded as well as clean wives.

THE JOURNAL OF THE
AMERICAN MEDICAL ASSOCIATION.

61 MARKET STREET, - CHICAGO.

SATURDAY, JUNE 16, 1900.

PRESENCE OF NUCLEATED RED CORPUSCLES IN THE
CIRCULATING BLOOD IN MAN.

Nucleated red corpuscles were first found in the blood in cases of leukemia, after death, and subsequently also in the circulating blood. In other instances, however, they could not be demonstrated. Their presence was at one time believed to be indicative of medullary leukemia, and attributed to abnormal activity of the bone-marrow. As experience increased nucleated red corpuscles were found also in the blood in cases of pernicious anemia, and even in cases of secondary anemia, of varying intensity. It was then demonstrated experimentally that nucleated red blood-corpuscles occur in all diseases attended with rapid disorganization of the blood, and their presence must be looked on as indicating insufficiency of the blood-generating organs, which become incapable of neutralizing the increased loss with normal red cells. The presence of megaloblasts, with or without nuclei, bespeaks grave disturbance in hemogenesis. The explanation of the anemia secondary to leukemia is not clear. It has been thought that the hemorrhages that frequently occur or the leukemic process itself or perhaps some condition of the bone-marrow may be the causative factor. The presence of nucleated red corpuscles in the blood is not constant in cases of leukemia, nor even in the same case. This circumstance has been attributed to exhaustion of the regenerative power of the blood and to failure in the power of the heart.

Jünger,¹ who has made a careful study of the blood in ten cases of leukemia, states that nucleated red corpuscles can be detected in unstained preparations, though care must be taken not to mistake for them red corpuscles the seat of degenerative processes. The central nuclei of the former are surrounded by a peripheral zone of hemoglobin. The nucleated reds can be readily found, because they soon become detached from the rouleaux and lie free in the field. On several occasions changes in the position of the nucleus from the center to the periphery, as well as movement within the nuclei itself, were observed. Permanent stained preparations were made by exposing smeared cover-slips, dried in air and heated, to the action of .5 per cent. aqueous solution of eosin, for two or three minutes, next rinsing in water, then exposing to the action of a saturated watery solution of picric acid for twenty-four and then to the action of dilute solution of hematoxylin for from twelve to twenty-four hours. The specimen was then rinsed in water, dried in air and mounted in Canada balsam. Any excess of stain was removed by means of .25 or .5

per cent. hydrochloric-acid alcohol. Thus treated, the red blood-corpuscles appeared reddish brown, their nuclei deep blue, the protoplasm of the leucocytes in part brownish, in part rose-tinted. The granulations of the eosinophile cells were distinctly visible. The network of chromatin filaments appeared sharply defined.

The largest number of nucleated reds found were normoblasts of variable size. Microblasts were less common and megaloblasts more numerous. Generally a single nucleus was present; often, however, there were several and in some even as many as four free nuclei. As a rule, the nuclei were round, but not rarely oval. The nuclei of the megaloblasts were generally oval and rather large, occupying almost three-quarters of the cell. While the nuclei of the normoblasts and the microblasts stained deeply, those of the megaloblasts stained more feebly. The nuclei were in part excentric and in part central. When the nucleated red blood-corpuscles were present in small numbers, the nuclei exhibited no peculiarity, being round and uniformly and deeply stained. If, however, the nucleated red cells were more numerous, the nuclei not rarely presented other shapes and even mitosis in all stages. It is established that red blood-corpuscles are formed by mitotic division of nucleated young cells in bone-marrow, although it has not been definitely determined that the nucleated reds originate here. The taking up of hemoglobin during mitosis, by cells previously free from hemoglobin, was not observed.

All stages of cell division occurred in red blood-corpuscles presenting the same tint and shape as non-nucleated red corpuscles, and in no instance were any structures found that could even approximately be considered transitional forms between white and red corpuscles. Karyokinetic red corpuscles could be most sharply differentiated from karyokinetic leucocytes. The karyokinetic figures of the former stained much more deeply with hematoxylin than those of the leucocytes; the cell-body appeared more delicate and fragile and the entire cell more plastic than that of the karyokinetic leucocyte. The nuclei of red corpuscles passing from kinesis to the resting stage, and which in turn undergo division, presented a typical appearance. They were large, at times occupying half the body of the blood-corpuscles, with a delicate nuclear membrane, which appeared thickened only in places from which chromatin filaments passed off. Within the nucleus was contained a rather loose, irregular network of delicate chromatin filaments. Similar thickenings were present at the points of intersection, as on the membrane, and they were often continued to other points of intersection, so that uniformly broad bands appeared woven into the delicate network. Such bands often seemed to be coherent filaments. Megaloblasts generally presented, in their usually oval, large nuclei, a closer network of chromatin filaments, but otherwise the conditions were the same as in the nuclei of normoblasts.

¹ Deutsches Archiv f. Klin. Med., B. lxxvii, 11. 1 u. 2, p. 109.

In the process of multiplication of the chromatic substance preceding cell-division the individual filaments of the close network become thickened, and enlargements appear at the periphery of the nucleus and at individual points of intersection. Further on, the delicate filaments of the dense convolution become shortened and thickened and collected in loops. These become rearranged and form the mother aster. The stage of metaphinesis was observed but once, while all subsequent ones were more common. In the stage of daughter asters the two halves of the nucleus were almost always more deeply stained than in the preceding one of karyokinesis. At times these halves were traversed by a number of dark filaments extending into the interior of the cell. The individual nuclear segments presented a concavity toward the pole, and a convexity toward the center of the cell. Often, however, the segments were irregular in shape, with a few short processes on the central aspect, while the remaining border was partly smooth and partly serrated.

The various stages of cell division described were observed in red corpuscles not larger than normal, but not in megaloblasts, although these were present in considerable number, and the division has been described by others. The impression was gained that karyokinesis of the nucleated red corpuscles occurs in the circulating blood without especial peculiarity. Although opinions differ as to the fate of the nuclei after having passed from the state of kinesis to the resting one, it is agreed that the nuclei that do not undergo division gradually lose the trabecular arrangement of their chromatin filaments. These move closer together and the nucleus becomes smaller and stains more deeply. Often lighter and darker areas are distinguishable in the nucleus, and, particularly at the periphery, deeply stained short or long bands, frequently with a radiate arrangement, stand out distinctly, until eventually these also disappear and finally the nucleus presents the appearance of a uniformly and deeply stained mass. The nucleus now exhibits a marked tendency to undergo all sorts of changes in shape, being at times round, at other times oval and at still others constricted in several places. Occasionally small portions of the mother nucleus become detached or the nucleus breaks up into two, three, four or even more small segments, which frequently cohere. In many blood-corpuscles the nucleus was wholly peripheral, with one-half already outside. In others, one segment was outside, others appearing to remain behind or to be about to follow. At times the individual segments seemed bound together, at times separated.

The polynuclear red blood-corpuscles have been considered pathologic, but they have been found in human embryos and have been thought to represent a normal phase in the development of non-nucleated red corpuscles. Free nuclei were found rather frequently, and they have again been observed to become surrounded by protoplasm and to imbibe hemoglobin and thus to form

new nucleated red corpuscles. It is possible, however, that these appearances are due to artefacts. It has further been held that the nuclei undergo absorption within the body of the cell.

DENTAL EDUCATION.

Medical educators will be deeply interested in the symposium on dental education, presented before the Section on Stomatology at the Atlantic City meeting of the AMERICAN MEDICAL ASSOCIATION. This symposium deals with every phase of the subject. The paper by Dr. N. S. Davis¹ has especial interest, and that the views therein, which were advanced more than four decades ago, are of more value to-day than when first expressed is shown in later discussion of the same topic by others. On perusal of these papers, it will be generally admitted that advanced education is necessary for the successful practitioner of stomatology at the present time, which is gaining ground among dentists, and the term for their science is an evidence of the advanced conception, held to-day by many dental societies, of the status of dentistry as a specialty of medicine. The dentist, as shown by this term, has ceased to be a mere tooth carpenter and become a medical scientist; dental science has brought diseases of the mouth, jaws and teeth so obviously under the domain of general pathology that somatic problems elsewhere presented in the body are best and easiest studied in the mouth. This is particularly true of teratology, embryology, excessive and arrested development, especially as related to race advance and degeneracy, as has been shown by Talbot. Factors of acquired degeneracy, like the drug habit, mercurialization, etc., neurotrophic and diathetic states have nearly all their pathologic phases outlined in the disease interstitial gingivitis (Talbot).

To enable the dental student to successfully treat these lesions, he should have a broad training in the fundamental branches in medicine, such as anatomy, physiology, pathology, bacteriology, materia medica and chemistry. It will not do to teach these sciences in a dental school, even by the same teachers, because the student acquires the idea that they are not necessary to a successful practitioner of dentistry. Dentistry, as practiced to-day by the better practitioners, is a part of general medicine. The same requirements should be exacted for the entrance of the dental student as for the medical. They should be taught in the same class and in the same manner. The final examinations should be as exacting for one as the other, and no distinction should be made between them. The extension of the course from three years to four of nine months each will give ample time to equip the dental student. In these days of trusts for the purpose of reducing expenses there is no reason why universities and medical schools should not reduce expenses.

1. THE JOURNAL, p. 1519.

There are forty-six dental colleges recognized by the National Board of Dental Faculties and state boards of dental examiners. Twenty of these are connected with universities, eleven with medical colleges and the remainder are independent. It is therefore a very easy matter to reorganize the teaching methods of these college faculties along lines advanced by Dr. Davis. The others would wisely follow. The technique in most of our dental schools is nearly perfect from the standpoint of the narrow lines on which dentistry has been taught in the past sixty years.

Chairs on stomatology should be a part of every medical faculty. Through the instrumentality of Dr. Davis, chairs on dental and oral surgery were added to every medical school in Chicago, in 1880. Instruction has been given to medical students each year, and no medical college can do justice to its graduates without such a course. Universities should bring their dental departments up to as high a grade as the other departments of learning. This can best be done by making stomatology as necessary a part of medical education as is general surgery or ophthalmology.

The object of these papers is to impress on both medical and dental teachers the necessity of a broader education for medical and dental graduates.

ARTIFICIAL SERUM SUBSTITUTES.

Blachstein¹ emphasizes that the phenomena of agglutination are valuable in other ways than shown in serodiagnosis. We are enabled by agglutination, to detect special disinfectants—"agglutino-disinfectants"—that may conveniently replace bactericidal serums, and thus prove to be true serum substitutes. Impressed from the first that agglutination is a chemical process, the idea seemed plausible to Blachstein that other substances besides pure serums might produce agglutination. In 1896 Blachstein showed that a dilute solution of chrysoïdin has the power to agglutinate cholera vibrios, the reaction being quite diagnostic and associated with destruction of the vibrios, so that chrysoïdin could be used as a practical and efficient disinfectant and preventive of cholera. These statements gave rise to much discussion among bacteriologists, and dissenting opinions were freely expressed. Some claimed that certain races of cholera vibrios are agglutinated by a dilute solution of chrysoïdin while others are not. Blachstein now states that all the various races are agglutinated by chrysoïdin provided they have been planted on neutral media. The fact that vibrios grown on alkaline media do not give the chrysoïdin reaction is explained by the assimilation of alkali, which is given up again in the distilled water in which the emulsion is made; and any alkaline body renders chrysoïdin inactive. It seems probable that virulent vibrios are more tenacious of al-

kali than vibrios grown for a time on alkaline media. Hence the contention by some that virulent vibrios do not give the chrysoïdin reaction. Blachstein claims that bacteria that, planted on neutral media, do not show the chrysoïdin reaction are not cholera vibrios; the only exception being the historic Finkler-Prior vibrio, which reacts positively both when grown on alkaline and on neutral soils, being apparently unable to assimilate alkali. Engels has pointed out that malachite-green and safranin are also cholera agglutino-disinfectants; they are, however, poisonous substances. Chrysoïdin, malachite-green and safranin are all basophile substances, but only those basophile substances are cholera-agglutinins that contain a C_6H_6 group. Chrysoïdin is a disinfectant and agglutinin down to a dilution of 1 to 10,000 of distilled water; greater dilutions, as 1 to 20,000, produce agglutination but no destruction of the vibrios. This indicates that the limits of disinfection and agglutination do not coincide.

The possible practical outcome of these interesting observations is found in the following statement from Blachstein: "If I had again the privilege of witnessing a cholera epidemic, I should recommend a chrysoïdin solution (1: 1000) to be taken internally in doses of 20-50 c.c. This would serve to disinfect the mouth, the upper part of pharynx and stomach, if there should be an accidental infection." He suggests that it could also be used to sterilize fruit, vegetables, and water, and could be added to charcoal filters.

The fact that we have in chrysoïdin a test for cholera vibrios that surpasses the serum test in scientific accuracy and practical applicability, chrysoïdin being a chemical body of absolute purity, readily dissolved in standard solutions, must be regarded as an important step toward securing efficient serum substitutes. Malvoz has taken up the study of artificial typhoid agglutinins, and every one recognizes at once the great importance of having efficient typhoid agglutino-disinfectants. If agglutination is a purely chemical process, it seems plausible to expect that such substances may be found for many pathogenic germs.

A HOPEFUL DECISION.

A Wisconsin police magistrate recently fined two "Christian Science" healers for illegal practice of medicine. The usual defense, that their methods did not constitute the practice of medicine, did not succeed with the judge, who held that any kind of treatment of the sick for a fee comes under the provisions of the law; that when "Christian Science," which as a religious belief is entitled to toleration, undertakes to treat the sick it should do so under the sanction and conditions of the law, and failing this, its practitioners are liable to its penalties. The decision will probably be appealed and may go to the supreme court and become a leading case. If that should occur, we have no doubt that the opportunity to ventilate the methods of this delusion will be

¹ Serum Substitutes, with Especial Reference to Asiatic Cholera. Contributions to the Science of Medicine by Pupils of W. H. Welch, pp. 890-901.

fully improved and we trust the higher Wisconsin court will follow the same course as has this police magistrate.

GASTRIC HEMORRHAGE.

The subject of gastric hemorrhage in its various forms is thoroughly discussed by Dr. Rodman in his *Oration on Surgery*, printed in this week's *JOURNAL*. He favors early rather than late operative interference in case of gastric hemorrhage from ulceration, save in the acute cases and first hemorrhages, the uncertainty of diagnosis being in itself a strong argument for this course in many cases. When all medical measures have been tried and have failed, he believes better results will follow operation than the policy of inaction usually adopted, and if there is gastroctasis he holds that the indication is absolute. This is the surgical point of view, and it may be that many physicians will still hesitate to recommend such formidable operations as pylorotomy or partial gastrectomy when there remains any hope whatever from delay. Dr. Rodman expressly repudiates advocacy of any general or universal resort to surgery, and the difference of opinion is after all only one of degree; nearly all would advise operation as a last resort. The chances for surgical success in cirrhotic hemorrhage are, he admits, less promising than in the case of ulcer, but he still believes that in these cases also, within proper limitations, surgical intervention may be properly considered. Considering the frequent difficulty of diagnosis between these two etiologic factors, it would be less fortunate if in one of them operation was absolutely contraindicated. A popular notion, that of vicarious gastric menstruation, is not supported, even if not exploded, by his researches, and the accident of post-operative hematemesis is also shown to be a surgical rarity, though Rodman does not question its occasional occurrence in septic states of the blood. The address as a whole gives an excellent statement of advanced surgical opinion on this subject of the treatment of gastric hemorrhage, and the views expressed are in the main those best supported by statistics and the authority of such surgeons as Mayo Robson and others who have recently written on the subject.

THE TUBERCULIN TEST.

A recent occurrence in an eastern state has been made a text for some anti serumtheraputists. A veterinary surgeon, in using the tuberculin test on a calf, accidentally pricked himself and developed tuberculosis, which caused his death six months later. It is quite possible, as has been suggested, that he had already unconsciously contracted the disease and the involuntary inoculation only revealed it, but it is also possible that it awakened it into the excessive activity that produced the rapidly progressing disease. This latter possibility, while it is practically denied by some authorities, is nevertheless one that deserves serious consideration, and the conservative position of Dr. Knopf on the subject of the tuberculin test in the human subject is, on the whole, the safest to follow. When a man has only latent tuberculosis—some old practically isolated focus—and is in

apparent normal health, it may well be that there is no advantage in stirring it up, if by so doing any risk is taken. He is not, in that condition, a public danger and may never be—his ignorance is bliss to him and it is folly to make him wise. There are other diagnostic methods that meet all needed requirements and are beyond the suspicion of any danger to the individual, though less rapid and more laborious for the diagnostician. The suggestion, credited to a distinguished New York authority, that the individual resistance in this case was probably already unconsciously weakened, does not materially affect the case; if a diagnostic method can produce such effects on a weakened system, it had better not be used. The case, if correctly reported, furnishes a strong argument against any general application of the tuberculin test for diagnostic purposes on human subjects. It is well enough for cattle, but while generally harmless in man, there are at least one or two other cases on record of troublesome results from its use.

PECULIAR STATUS OF NEBRASKA MEDICAL LAW

A recent decision of the Supreme Court of Nebraska practically annuls an important feature of the medical registration law of that state, and is the result of a rather curious state of affairs. The constitution of Nebraska prohibits special state boards, and to get around this the legislature constitutes them out of holders of legalized existing offices. The State Board of Health therefore is made up of the governor, the attorney-general, the superintendent of public instruction and the treasurer. The real duties of this board are carried out by medical secretaries who have, however, only a deputized authority. One Dr. Drasky applied for a certificate to practice, but was refused by the board of secretaries on the ground that his diploma had not met the conditions of the law in being the outcome of a four years' course. He appealed to the official board of politicians, who told the "secretaries" to grant him the certificate, and at that point a local medical college interfered and obtained an injunction against the Board so doing. Appeal was carried to the supreme court and the injunction was dissolved: the judge, in reversing the decision held that the law governing the practice of medicine was a police measure and not an act to protect medical schools or practitioners from competition. An incorporated college can not, therefore, maintain an action to restrain the State Board of Health from issuing a certificate, and an injunction will not lie to annul its decision after it has placed its construction on the law. This seems to leave the matter, as far as any possibility of correcting matters by injunction is concerned, entirely in the hands of the State Board. The question arises: what remedy would there be if they should choose to put an absolutely nugatory construction on the law? and also whether the judges' decision would have been any different had there been no chance for an inference of self-interest on the part of the persons asking for the injunction. As the case now stands, medical registration in Nebraska is in the hands of non-medical elective officers whose sense of their responsibilities is evidenced by their nullification of an important clause

in the law, and, according to the supreme court, there is no appeal.

TEXAS AND "DIPLOMA MILLS."

A Texas diploma mill, calling itself the "New York Medical College," was organized and incorporated last November and has just been permanently closed by the state authorities. It appears to have been the project of an enterprising firm composed of a man and his wife, who associated with themselves certain other individuals—or at least their names—and proceeded to make M. D.'s, after the approved Armstrong & Co. (Chicago) method. The following letter is one included in the petition for injunction by the attorney-general, and is interesting evidence of the educational and literary qualifications of the corporation:

SAN ANTONIO, TEXAS, March 6, 1900.

Dr. G. V. Westgate:

DEAR DOCTOR:—Enclosed find Literature as per request. As to legality of our Institution See the article by Ogden & Terrell of this city our attorneys.

If you are practicing We are permitted to decorate you Without you attending school, providing you fill out Blanks sent you satisfactory. if you desire to do so send 1/2 fee and Blanks filled O. K. if O. K. we will send Diploma C. O. D. for Bal. N. Y. M. C. 201 Ave. C.

How many would-be M. D.'s have been "decorated" by this concern in its brief but enterprising career is unknown to us, but Texas appears to have been a good field for the Chicago bogus diploma dealers. According to an editorial in the *Texas Medical News*, from which journal we take the above facts, there were registered in Tarrant County, Texas, alone, 26 diplomas from Chicago's "Independent Medical College," out of a total of 41 in 1898, 115 out of 149 in 1899, besides 14 from the "Metropolitan Medical College"—now in trouble!—and 2 from the "International Health University." From Jan. 1 till April 12, 1900, there were 29 diplomas registered altogether, and of these 20 were from the Metropolitan and 2 from the "Independent Medical College." The medical laws of Texas have surely been lax in the past, but the authorities have certainly shown a commendable promptitude in nipping early, if not exactly in the bud, this Texas imitator of Armstrong and Buchanan.

COMPULSORY NOTIFICATION OF TUBERCULOSIS.

According to the newspaper reports, Boston is undertaking to treat tuberculosis as a notifiable contagious disease and to exercise a more rigid sanitary control over it, with a view to diminishing if possible its excessive mortality in that city. The question of the advisability of such a measure as compulsory notification of this disease has been long discussed and the medical profession is far from being a unit in its favor. We may admit that consumption is contagious and yet believe that notification should not be made compulsory, for obvious reasons, and it will be of interest to see how fully and willingly the Boston physicians will assist in the experiment to be tried there. Its success will be largely in their hands, for it will be difficult to enforce the rule without their hearty co-operation. If this be lacking,

and it seems very possible that the notification may not be quite universal, the results may not be altogether as instructive and effective as is anticipated. One thing, however, should be done—the general public should be educated to understand that the notification in tuberculosis does not mean all that it does in the case of smallpox or diphtheria, and that there is no necessary peril in casual contact with a consumptive. At present we are perhaps creating an unreasonable fear of the disease in many naturally pathophobic individuals, that leads, as Dr. Bowditch and others have shown, to actual inhumanity. For this reason, compulsory notification might in some cases add seriously to the hardships of those already afflicted, without really any justification for it. There is one unobjectionable feature, however, of the Boston proposition, viz.: the disinfection of premises after deaths from tuberculosis. This feature could easily be adopted elsewhere, when the other one of compulsory notification of cases in the living is not deemed as yet expedient. In the meantime, there are many unfortunates who will be thankful that they do not live in Boston.

SURGICAL RELATIONS OF THE BACTERIOLOGY OF THE UPPER PORTION OF THE ALIMENTARY CANAL.

The relations of the bacterial flora of the various parts of the intestinal canal to the consequences of traumatic and pathologic perforative lesions of the stomach and bowel have probably not received the attention that the importance of the subject merits. A good beginning has been made by the recent study of Cushing and Livingood.¹ As the result of experimental investigation and study of suitable clinical material, they find that in the upper part of the intestine the bacteria are more scanty than in the lower portion. The varieties of bacteria present are not definite or constant, inasmuch as the character of the food taken into the stomach plays a signal part in determining the kind and number of organisms present at a given time. The germicidal action of the gastric juice is rather limited and some bacteria, such as streptococci, escape its action more readily than others. During the latter part of digestion and after fasting, the investigators mentioned found it difficult to recover microbes from the mucous membrane of the stomach, duodenum, and even of the jejunum as far down as the canal was completely emptied. From this follows the important practical deduction that it is of great value, before operating on these parts, to rid food of micro-organisms as far as possible, by thorough sterilization and also to render the upper part of the digestive tract empty. Peritonitis following intestinal wounds assumes its special characteristics from the bacteria in the canal at the site of the lesion. Scanty and relatively harmless bacteria naturally favor the prognosis of such conditions. There is surely much to be done for the patient by following the indications mentioned; and further studies will undoubtedly bring to light many important details in the relations of the bacteriology of food and of the intestinal contents to the

1. Contributions to the Science of Medicine by Pupils of William H. Welch, 1900, 543.

1. See last week's JOURNAL, p. 1497.

consequences of intestinal lesions, operative or accidental. It is probable that too little attention has been given to the nature of food as regards the bactericidal content, and also to the condition of the mouth, in the preparation for severe operation on the stomach and adjacent parts of the digestive canal.

EXPERIMENTAL CIRRHOSIS OF LIVER.

The etiology of cirrhosis of the liver still presents many obscure points. Investigators have endeavored to experimentally produce cirrhosis of the liver in animals, but so far the success has been rather indifferent. It is true that certain chemical and toxic substances have been found to induce cirrhotic processes in the livers of animals, but it does not seem that any method has yet been devised that will reproduce at will, in any degree of completeness, the various changes observed in human cirrhosis. Injurious agents that act acutely and severely on the liver do not necessarily result in consecutive connective-tissue proliferation, because the liver has power in a high degree to regenerate after necrosis and degeneration. The general opinion is that cirrhosis develops from the action of substances that operate in a chronic manner and in some way induce the growth of fibrous tissue. The peculiarities of the tissues of the individual undoubtedly play their part in the genesis of cirrhotic changes in animals as well as in man. All observations throwing light on the development of cirrhosis of the liver are welcome. Weaver's recent study¹ of cirrhosis of the liver in the guinea-pig, produced by a bacillus and its products, is very suggestive of what may also occur in man. The bacillus appears to belong to the colon group. It was isolated from a guinea-pig that died spontaneously. Unfortunately, the organism early lost its virulence, but enough experiments were made to show the connection between the necrotic and proliferative changes. The lesions were produced equally well by inoculation of living cultures and devitalized ones. In the animals dying early, degenerative changes only were present in the liver; at a later period, connective-tissue proliferation was associated with necrosis; and in still further advanced stages, cirrhosis had entirely replaced the degenerative changes. These effects were obtained only in guinea-pigs, showing the influence of species. It would be of great interest in studies of this kind if animals could be kept alive for some time after connective-tissue growth had been induced, in order to observe the further course of the hepatic changes.

ETIOLOGY OF SCURVY.

It is fortunate that scurvy is much less common than it once was, although every now and then out-breaks occur, and sometimes under circumstances amid which the disease would ordinarily not be expected. That the disorder is a dietetic one there seems no reason to doubt. It has for a long time been thought to be dependent on an absence from the food of some substance, or substances, contained in fresh vegetables and

fruits, and, accordingly, lime-juice has been recommended and extensively employed for its prophylaxis. The disease has also been attributed to deficient ventilation. Recent observation, however, has shown, on the one hand, that scurvy may occur despite the use of fresh vegetables or lime-juice and the provision of adequate ventilation, and on the other hand, that it may fail to develop under the reverse conditions; so that it is necessary to seek for other influences to explain its occurrence. An exceedingly interesting and painstaking investigation by Jackson and Harley¹ is calculated to contribute to this end. From personal experience, and from the observation of others, Jackson came to the conclusion that the development of scurvy is attributable to the use of tainted animal food, and its prevention can be secured by the use of wholesome meat. In order to confirm or correct this opinion, feeding-experiments were undertaken with three groups of monkeys, to one of which rice and freshly opened tinned meat and maize were administered; to the second the same, except that the meat had been permitted to become tainted; and to the third the same as the second, except for the addition of an apple or a banana. While diarrhea and loss of weight occurred in all of the animals in the first group, there was an absence of blood and mucus from the stools and of sponginess of the gums, such as were present in the other two groups of cases. A comparison of the blood from two of the monkeys in which the symptoms of scurvy appeared, with the blood from a healthy monkey, showed the number of red corpuscles decreased in the former, the number of leucocytes greatly increased, the percentage of hemoglobin diminished, the specific gravity lowered, the water increased, the solids and the proteids diminished, the fibrin increased, the coagulation-time and the amount of nitrogen diminished and rash increased. Accepting the symptoms developed as evidence of the existence of scurvy, it would seem demonstrated that this disease may occur from using tainted meat, in spite of the administration of fresh vegetables, and that the absence of the latter is alone not sufficient to cause the development of the disease. An explanation is wanting, however, for the cases in which scurvy appears when meat is not taken in any form, and for those found in children. On the other hand, some confirmation is indirectly given to the view here expounded, by the fact that meat-juice has been found useful therapeutically under the conditions last named.

PRESIDENT-ELECT C. A. L. REED, A.M., M.D.

Charles A. L. Reed, A.M., M.D., of Cincinnati, the president-elect, although a comparatively young man, has been a conspicuous member of the AMERICAN MEDICAL ASSOCIATION for a number of years. In 1891 he was Chairman of the Section on Obstetrics and Diseases of Women, and at the time of his election to the presidency he was serving his second term as a member of the Board of Trustees, in both of which capacities he exercised vigilance and industry in promoting the welfare of the Association.

¹ Contributions to the Science of Medicine by Pupils of William H. Welch, 1900, pp. 297-305.

¹ The Lancet, April 28, p. 1184.

Dr. Reed was born in 1836, the second son of Dr. Richard Cumming Stockton Reed and Nancy (Clark) Reed. He was educated in the schools of Ohio and holds the degree in arts from Miami University, Oxford. His medical education was received in the Cincinnati College of Medicine and Surgery, in which institution his father held the professorship of materia medica and therapeutics for more than twenty-five years. After his graduation he engaged in general practice and began medical teaching soon after he received the doctorate. He lectured in his *alma mater*, first on pathology, and later (1882) was called to the chair of obstetrics and diseases of women. A few years later the chair was divided, when he became the professor of gynecology and abdominal surgery, a position from which he re-



PRESIDENT-ELECT C. A. L. REED, M.D.

signed after fifteen years of labor and after having occupied the deanship for four years. In 1892 Dr. Reed was elected a member of the Board of Directors of the University of Cincinnati, an office which he now occupies. In this connection one of his chief labors was in promoting the establishment of the medical department, the articles creating this having been formulated and written by him. That he might devote himself, with singleness of purpose, to the further development of interests connected with the university, Dr. Reed withdrew from all other college affiliations.

In 1897 Dr. Reed succeeded Dr. T. A. Reamy as gynecologist to, and clinical lecturer on diseases of women at, the Cincinnati Hospital, which is affiliated with the

university as its clinical and pathologic school. In 1896 he was invited by Governor Bushnell to become a member of the Ohio State Board of Medical Registration and Examination, a position which he accepted, but which he resigned after two years, in response to the exactions of his private practice.

In 1885 he determined to devote his energies to the practice of abdominal and pelvic surgery, and with this end in view he became the pupil of the late Mr. Lawson Tait, of Birmingham, England. He also extended his observations in other hospitals of Europe and America, and has since devoted himself exclusively to this department of practice.

The Doctor has been largely interested in promoting the organization of the medical profession. This was especially exemplified in his work in connection with the Pan-American Medical Congress, a movement, of which, by virtue of his initiative and effective organization, he has been justly recognized as the founder. This congress, as is well known, embraces all the countries and colonies of the Western Hemisphere, and has already borne excellent results, not only in effecting an interchange of scientific thought, but in establishing an *entente cordiale* between the English and Latin-speaking members of the profession in the Americas. It has been his hope, as has been expressed in resolutions previously presented by him to the AMERICAN MEDICAL ASSOCIATION, and as reiterated in his presentation remarks at Atlantic City, to see the membership of the ASSOCIATION embrace the entire English-speaking medical profession of North America. Dr. Reed is one of the founders of the International Periodical Congress of Obstetrics and Gynecology, at the third biennial reunion of which, at Amsterdam, in 1899, he was one of the honorary presidents for the United States. He is also one of the founders of the American Association of Obstetricians and Gynecologists, of which he was the president in 1898. He is at present the president of the Cincinnati Obstetrical Society and is a member of several local and foreign medical societies.

Dr. Reed has contributed numerous papers to the current literature of the profession, and eastern publishers now have in press a text-book on gynecology, of which he is the editor.

Medical News.

CHOLERA threatens to be severe in Bombay this summer.

THE INVALIDED soldiers sent home from South Africa will be paid and medically treated until they are discharged, their families receiving the ordinary allowances.

THE COMMITTEE charged with the organization of a collective investigation of cancer in Germany is now fully formed. Professors von Leyden and Kirchner are the presidents, and Dr. George Meyer is the secretary.

A DAY resort for pulmonary invalids has been opened on the outskirts of Berlin, with facilities for reclining, for warming lunches and obtaining inexpensive wholesome refreshments. It is under the charge of a physi-

cian, and a pavilion with four beds is ready in case of emergencies.

NEW ARMY STRETCHER.—Dr. Chavernac, of Aix, France, has designed a new army stretcher which possesses two chief advantages over the stretchers now in use; namely, the wounded man can be lifted from the ground without shock or pain, and he is not touched by the bearers while this is being done. The stretcher is rigid and is made in halves, which, by pressure, fold together under the body of the patient. When loaded, the stretcher is mounted on a light bicycle carriage. It requires only two bearers, as compared with four for the stretchers now employed.

PROGRESS OF THE PLAGUE.—During the week ending May 10, 1771 deaths occurred from plague in India, as compared with 2498 during the previous week. This encouraging decline has occurred in a fairly equal way in all the affected districts. The plague mortality is diminishing more rapidly than the general mortality. The present epidemic is the fourth that has visited Bombay since 1896. It has lasted over 200 days and is responsible for over 50,000 deaths in the presidency. While the death-rate is abating, it is still higher than at any corresponding period. In Calcutta the mortality is still quite high, there being 252 deaths from the plague during the week ending May 10, while in Mysore province the epidemic has practically disappeared. The plague at Aden is a serious check to trade, as steamers call there for many other places besides those bound to or from India. In Hongkong it is feared that the plague may again become epidemic, as the number of cases is daily increasing. In Swatow and the hinterland of the Kwang-tung province the plague still prevails. At one city, Chow-Yang, seven miles from Swatow, the plague carried off 40,000 people during 1899. At Sydney the epidemic is declining and at no other of the Australian ports is the disease spreading.

PENNSYLVANIA.

Philadelphia.

DR. DANIEL HUGHES will spend the summer in Europe.

DR. WHARTON SINKLER will spend the summer at Wynecote.

DR. J. WILLIAM WHITE will sail for Europe, June 21. He will return in September.

DR. JOHN V. SHOEMAKER has been appointed a member of the Board of Charities and Correction, to succeed Alfred Moore, who recently resigned.

THE BRITISH ship *Bessie Markham*, from Buenos Ayres with a cargo of bones, has been detained at the Reedy Island Quarantine Station. On May 26 the captain of the vessel died, and it is feared that death may have been due to the plague.

AN EPIDEMIC of measles has broken out among the pupils attending the Bridesburg School, and in one department sixty have the disease. The school may be closed on this account.

ON JUNE 11 the Board of Health began its annual inspection of manufacturing plants and other houses, to determine their sanitary condition. The work began along the Delaware River front and extended northward. Nuisances found were ordered abated.

THE ONE HUNDRED and forty-fourth annual commencement of the departments of medicine, dentistry, arts, science, law, and veterinary medicine of the University of Pennsylvania, occurred on June 12. In connection with the annual meeting of the college alumni there was a presentation of a portrait of Dr. William Pepper.

DAINGEROUS TOY.

A dangerous plaything has been placed on the market in the shape of a marble coated with phosphorus, which, when thrown on a hard surface, produces a loud noise. Chief Chemist Robinson has made an examination and states that the coat-

ing is composed of phosphorus, chlorate of potash and sugar. Orders have been issued for the arrest of persons selling these toys.

MORTALITY STATISTICS.

THE NUMBER of deaths occurring in the city for the week ending June 9 was 409, a decrease of 10 over that of last week, and a decrease of 69 over the corresponding period of last year. The principal causes of death were: apoplexy, 9; nephritis, 42; cancer, 17; tuberculosis, 41; diabetes, 1; heart disease, 36; influenza, 1; pneumonia, 41; suicide, 3.

EMERGENCY HOSPITAL.

THE PHILADELPHIA Emergency Medical Corps, which was organized some time ago for the purpose of relieving those who might suffer accidents during parades or public functions, is making extensive preparations for the accidents which may occur during the Republican National Convention. Members of this corps are to be distinguished by badges worn on the coat. A temporary hospital has been arranged.

RECEPTION TO PHYSICIANS.

THE PHILADELPHIA Medical Club tendered a reception, at the Hotel Bellevue, to a number of visiting physicians from various parts of the United States on the evening of June 9. Among the number present were: Drs. Abraham Jacobi, New York City; Alonzo Garcelon, Lewiston, Me.; George H. Simmons, Chicago; James M. Bodine, Louisville, Ky., and Frank Billings, Chicago. The reception followed a dinner, given at the Union League Club by Dr. James M. Anders of the Medico-Chirurgical College.

MARYLAND.

Baltimore.

DR. WM. S. HALSTED sailed for Bremen, June 7.

DR. FRANCIS T. MILLER and wife, and their son, Dr. L. W. Miller, left for Europe, June 9.

DR. JOHN MORRIS has retired from the practice of medicine, owing to ill-health and age.

THERE WERE 152 deaths in this city last week, 15 being from pneumonia. The death-rate per 1000 is 14.61, viz., whites, 12.58; colored, 26.66.

THE ANNUAL report of the Nursery and Child's Hospital shows that there were 228 children admitted during the year. The general receipts were \$8,916.78 and the expenses were \$4,900.63.

ABOUT twenty-five physicians from here will go to Paris this summer, to attend the International Congress. Among them will be Drs. Osler, Jacobs, Hemmeter and Cullen.

COLLEGE OF PHYSICIANS AND SURGEONS.

AT THIS institution the following changes have been made: Dr. C. Hampson Jones is transferred from the chair of obstetrics to that of clinical medicine and hygiene; Dr. Geo. W. Dobbin, appointed professor of obstetrics; Dr. Cary B. Gamble, associate professor of clinical medicine; Dr. W. F. Smith, associate professor of surgical anatomy; Drs. Archibald C. Harrison, Samuel Butler Grimes, and S. Griffith Davis, demonstrators of anatomy; Dr. Glen M. Litsinger, demonstrator of obstetrics; Dr. Lybran Rosenheim, demonstrator of bacteriology.

ILLINOIS.

Chicago.

DR. BAYARD HOLMES has returned home from his European trip.

DR. RUDOLPH HOLMES sailed recently for Europe, to spend a year in study there.

THE TRUSTEES of the Northwestern University have decided to continue the medical schools for men and women as separate institutions.

THE WILL of the late Dr. Truman W. Miller (see THE JOURNAL, June 2, p. 1425) has been probated. The estate amounts to \$175,000, and is left to Dr. Miller's wife and daughters.

DEGREES were conferred on twenty-one young women at the commencement exercises of the Woman's Medical School of the Northwestern University, held June 14.

THE SAMARITAN Hospital, at 481 Wabash Avenue, was opened June 11. It is in charge of Dr. L. Blake Baldwin, and is intended to care for cases of accidents and emergencies, in

which immediate attention is required, and in which the long journey to the County or other hospitals would expose the patients to grave risks.

EMERGENCY Ward, No. 1, at 85 Plymouth Place, will be opened about July 1. The City Council has appropriated \$2000 for its establishment, after long and patient work on the part of the Medical Woman's Club. The object of the hospital is to take care of surgical and medical emergency cases, and afford prompt first-aid.

THE ANNUAL meeting of the Chicago Medical Society will be held in the Assembly Hall of the Fine Arts Building, June 20. The annual address will be delivered by Dr. Maurice H. Richardson, professor of surgery in the Harvard Medical School.

KENTUCKY.

THE MEDICAL officers of the Confederate Army and Navy held a meeting in Louisville, recently.

Dr. J. S. REDWINE entered on his duties as superintendent of the Eastern Kentucky Lunatic Asylum, in Lexington June 1.

IOWA.

AT THE meeting of the medical staff of Mercy Hospital in Dubuque, recently, Dr. J. F. McCarthy was chosen president; Dr. J. M. Boothby, vice-president, and Dr. F. W. Meyers, secretary. It was decided to start a training-school for nurses in connection with the institution.

NEW JERSEY.

Dr. Francis H. Glazebrook, of Elizabeth, has been appointed house physician at the Orange Memorial Hospital.

THE BOARD of trustees of the Cooper Hospital has appointed Drs. A. S. Ross and S. E. Fretz, of Sellersville, Pa., resident physicians for the ensuing year.

DISTRICT OF COLUMBIA.

Washington.

DR. CHAS. G. SMITH has been appointed resident physician of the Emergency Hospital, to take the place of Dr. W. C. Williams, who resigned.

THE SIXTEENTH annual commencement exercises of the medical department of the National University were held May 31. The address was made by Dr. C. T. Caldwell.

MICHIGAN.

THE FACULTY of the Saginaw Valley Medical College met June 5, and elected the following officers: president, L. W. Bliss; vice-president, B. B. Rowe; secretary, D. B. Cornell. It was decided to change the present three-year course to a four-year one, the new system to come into operation in 1901.

CALIFORNIA.

DR. GUY COCHRAN, Los Angeles, has gone to Europe to spend six months in travel and study.

THE NINETEENTH annual commencement exercises of the Cooper Medical College were held in San Francisco, June 5. Dr. William Fitch Cheney addressed the class, which was composed of thirty-eight members.

INDIANA.

DR. T. B. LYON, formerly of South Bend, who went to New Mexico two years ago, has fully recovered his health and has located at Raton.

ST. JOHN'S HOSPITAL, Anderson, will receive not less than \$2000, as a result of the donation of all or part of the wages of the members of the Workingmen's Hospital Association for June 2.

NEW YORK.

DR. ROSWELL PARK, Buffalo, has been appointed chief medical director of the Pan-American Exposition.

THE SECOND annual commencement of the Cornell University Medical College occurred June 6. Diplomas were granted to fifty-three graduates, of whom twenty-one were women.

CANADA.

TREATMENT OF INEBRIATES.

DR. A. M. ROSEBURGH has returned to Toronto after spending

some time in Boston and vicinity, where he has been studying the practical side of the probation system as applied to the treatment of inebriates. He also visited the state institution for the treatment of inebriates from a pathologic standpoint, at Foxborough. He reports that in recent or mild cases of inebriety placed on probation, about 45 per cent. appear to be reformed, while of the pathologic cases—those of dipsomania—which receive institutional treatment at Foxborough, 37 per cent. are claimed to be reformed or cured. He says that the probation system has been found to be wonderfully successful in the reformation of delinquents, especially first offenders, as of these fully 85 per cent. are reformed. The bill for the treatment of inebriates, now under the consideration of the Ontario government, was presented to authorities, and the provisions thereof were very highly approved by them.

REGULATION OF THE SALE OF PATENT OR PROPRIETARY MEDICINES OR CURES.

A draft of a proposed bill which will be introduced at the next meeting of the Ontario legislature will seek to regulate this business. It is aimed against the fraudulent or improper advertisement of drugs, medicines or cures, and against the sale of such of these as contain hurtful ingredients, and to license the advertisement or sale of patent or proprietary medicines, and in order to accomplish that purpose, will seek the appointment of an inspector, and further provide for the payment of a license tax in respect of such licenses. "Medicine" is defined as including all substances intended to be administered internally or applied externally to the human body with a view to the prevention, cure or alleviation of any disorder in its functions. "Advertisement" or "Advertise" shall include all things or proceedings intended to attract the attention of the public to any medicine. "Registrar" shall mean the registrar of proprietary medicines appointed under this act for the purpose of carrying into effect any of its provisions. "License" shall mean a license granted under this act, and "Licensee" shall mean the holder of any such license. The proposed registrar shall be appointed by the lieutenant-governor, and shall be attached to the provincial secretary's department. It will be provided that such officer shall be a member of the Ontario College of Pharmacy, and a regular qualified pharmaceutical chemist of at least seven years' standing. His duties are very explicitly set forth. All licenses must be renewed yearly; and the license tax will be \$1000 per annum. Article "10" of this act reads: "No person shall advertise or sell or offer for sale any medicine unless the manufacturer or proprietor of same is a licensee." The bill further provides for fines and penalties under the act, and the machinery for putting such legislation into force, when it becomes law.

Montreal.

THE CITIZENS have recently contributed \$1060 to the funds of the Victorian Order of Nurses.

DR. JAS. BELL, of McGill University, is to read the address in surgery at the annual meeting of the Medical Society of Nova Scotia, to be held early in July. The subject will be "Some Observations on Cancer of the Breast."

THE ANNUAL meeting of the Metropolitan Dispensary was held May 31. The affairs of the institution are apparently in excellent shape; and during the past year 575 cases were treated. Dr. Haldimand was re-elected president.

SUCH RAPID progress has been made in the medical library of McGill that a new building is to be erected at once. Two years ago the Association of Medical Libraries was formed under the supervision of the medical department of McGill, by which it is entirely supported. The library is at the disposal of all doctors, whether graduates or not.

PARIS LETTER.

VACCINATION BY SCHOOL-TEACHERS.

IT HAS BEEN proposed in France to allow school-teachers to vaccinate their pupils, and a discussion on this subject took place recently at the Académie de Médecine, the most distinguished scientific body of the kind in France, it being a great honor to belong to it, either as a member or a national or foreign associate. Dr. Hervieux spoke about the awards to the school-teachers who had contributed to the spread of vaccina-

tion, but Dr. Pinard, the celebrated accoucheur, who is to be president of the obstetric section in the International Medical Congress, opposed the measure on the ground that it would be fraught with danger, as the antiseptic precautions necessary to vaccinate without incurring any risk could hardly be expected on the part of men who had had no medical instruction. A law rendering vaccination obligatory would be much more efficacious. A new sanitary law is under consideration by the Senate, and in Article 6 of the first paragraph the following regulation is laid down: "Vaccination is obligatory during the first year after birth, the eleventh and the twenty-first. Parents or guardians are held responsible as to the carrying out of this rule." Moreover, compulsory disinfection will be resorted to if necessary.

Dr. Hervieux spoke recently of the outbreak of smallpox in Madagascar. The mortality, it would seem, is quite high. Vaccination has been tried with virus sent from France, and from Saigon, and even from calves that were inoculated on the island, but it has been found ineffectual, and he recommended using that of the buffalo, as these animals are found in Madagascar, and this has already been tried at Saigon. Considerable vaccinating has been done in Paris of late on account of the smallpox scare in February. A number of bad cases of black smallpox have occurred at Marseilles and Toulon, and there was a slight outbreak at the Pitié Hospital, with four deaths in Paris during one week. The vaccination seems to take in a larger percentage of cases among the Americans. Dr. Vaquez, professor of the Faculté de Médecine, had only 4 per cent. who furnished a positive result, whereas in your correspondent's practice, out of about forty-six cases there were eight positive results. Americans, as a rule, do not seem to be vaccinated as often as are the Germans and the French. Instead of scraping the skin, as is done in America, the most noted vaccinators, such as Chambon and St. Yves Mesnard, make a very slight prick or a tiny scratch, so as not to draw blood, and apply collodion, after waiting a few moments. This does not seem to prevent the action of the virus.

TREATMENT OF ANEURYSM.

DR. DELBET, who is one of the best surgeons of the younger school, spoke at the Society of Surgery on the treatment of aneurysm by total extirpation and ligation of the arteries coming to or leaving the aneurysm. This treatment, which he has repeatedly advocated, was tried recently with full success by Dr. Monod, surgeon of the St. Antoine Hospital.

ALCOHOLISM.

Alcoholism is steadily on the increase in France, according to the latest statistics, and everything is being done from a medical point of view to check its progress. It is hard to accomplish anything by legislation, as the wine producers and sellers have a controlling vote in the parliament, and anything attempted against them would lead to untoward results. However, medical men have tried to do something; there has been founded an antialcoholic league, and prospectuses have been posted up in certain hospitals, showing the danger due to intoxicating liquors. Dr. Fernet, member of the Academy of Medicine and physician at the Beaujon Hospital, proposed, in a paper he read before the Academy, that alcoholism should be inscribed as the cause of death whenever the disease could be directly attributed to this factor, as for instance, in delirium tremens and diseases of the kidneys, heart and liver. This proposition was adopted.

GASTROSTOMY.

Dr. Poirier, who is editing the largest work on anatomy published in France, described a new method of gastrostomy, at a meeting held by the Society of Surgery. One finger's breadth from the ribs, an incision is carried out about 8 cm. in length; the rectus and transversalis muscles are incised, and the peritoneum opened by an incision 4 cm. long. The stomach is seized near the cardia, and is drawn out in the form of a cone, the mucous membrane being spontaneously detached. This cone is fixed by four separate cardinal points, and incised at its summit; the mucous membrane, in the form of a dome, is then detached and incised to a small extent, and a sound is introduced through the aperture thus made, then a few more sutures taken. The catheter is left as it is for from eight to ten days, then afterward is reintroduced two or three times a

day for the taking of food. This method has been used on five patients suffering from various complaints necessitating gastrostomy, and has been found to be expeditious. There is no narrowing afterward. In one case, the general condition of the patient remained good eleven months after the operation.

MALTA FEVER.

In many cases, the so-called Malta fever has been confounded with typhoid fever, and at the recent congress of internal medicine, held at Wiesbaden, Dr. Neusser, of Vienna, made some remarks on what he has noticed concerning this disease. It has repeatedly been mistaken for typhoid or intermittent fever, endocarditis or consumption. The serum of patients suffering from this disease has an agglutinating power of from 1 in 20 to 1 in 1000. The fever attacks especially marines and British colonial troops. The convalescence is slow and necessitates the patient keeping to his bed about 90 days, and there is also danger of a relapse.

PARIS EXHIBITION.

The great topic of conversation in Paris, not only in social circles but also among medical men, is the exhibition. Preparations are being carried out in the different laboratories, cultures are being made, specimens mounted, papers composed and written out, so that a large number of interesting communications may be expected. The surgical instruments-exhibit will be quite worth while visiting; it will be found on the Champs de Mars, and it is likely that in each foreign pavilion there will be also a separate display. The international Medical Congress is to hold its meetings August 2-9, and during that period there will be many dinners, receptions and reunions. A number of sections have been already established, and the work to be carried out has been more or less chosen and arranged. A large number of public buildings in the Latin Quarter will be used for the special meetings, but the general assemblies will take place in the grand hall of the Sorbonne. However, the greater number of the buildings chosen are near each other, a fact of some importance. There will also be given a reception by the president of the Republic, as well as by the president of the council. The Senate has put the gardens of the Luxembourg at the disposal of the committee, which intends giving a night festival, and there will be banquets offered by the presidents of the different sections to the members belonging to each section.

Correspondence.

Professional Frankness from the Standpoint of Ethics.

MAY THE DIAGNOSIS OF PULMONARY CONSUMPTION EVER BE ETHICALLY WITHHELD FROM THE PATIENT BY HIS MEDICAL COUNSELOR?

KNICKBOCKER, TEXAS, May 23, 1900.

To the Editor:—I have long been of the opinion that doctors are too often not sufficiently frank with their patients. It is a matter of every-day experience that patients very often are not entirely frank with their medical advisers. I do not hold it to be a duty of the doctor to tell the patient the name and properties of the medication which he prescribes. To do so is virtually to take the patient into counsel as to the merits or demerits of the remedy in question, and few laymen possess the requisite technical knowledge to qualify them to consult with the doctor on such matters. The exceptional instances only prove the rule. Yet the doctor must be both frank and explicit in his direction as to dietary, mode of life, administration of remedies, etc. To do less than this would be to fall short of doing one's whole duty in the case.

I hold that under no circumstances should a doctor communicate to his patient an unqualifiedly unfavorable prognosis, except when the latter, already suspecting the worst, requests to be informed as to the probable outcome of his illness. There is in this case no option but entire frankness. Such instances occur but seldom. Generally, when such inquiry is made, the medical adviser is fully warranted by the facts in giving a hopeful prognosis. By some process of intuition those patients who are entering the dark valley recognize Nature's law of mortality, and neither need nor wish for confirmation of an inevi-

table event. To thrust the unsolicited prognosis upon them is an ethical crime. When the doctor has frankly communicated the unfavorable outlook to the nearest friends, his whole duty and his responsibility in this regard are ended.

But if there be no call for the communication by a physician to his patient of an unsolicited fatal prognosis—if, indeed, such a course be, as I hold it to be, an ethical crime—what shall we say of communicating to him the unsolicited diagnosis of a disease which is commonly reputed to be, but which as a matter of fact is not necessarily, of fatal import? May we tell him: "You have cancer?" Should we, or should we not, say to him aloud: "You have consumption?"

If the diagnosis of either cancer or consumption implied, as a necessary corollary, an utterly hopeless prognosis, the same ethical obligation would devolve on the doctor, in other hopeless cases—to inform the nearest friends as to the fatal outlook, and to avoid intimating, by word or sign, the unwelcome truth to the patient who palpably dreads to have his fears confirmed. But since post-mortem records show that 35 per cent. of humanity dying of other diseases present evidences of healed tuberculosis, a fatal prognosis is not necessarily implied as a sequence of the diagnosis of consumption. And since the permanent arrest and cure of consumption, as well as the avoidance of infection to others, calls for intelligent co-operation of the patient with the physician, in a multitude of hygienic details, it appears to me an ethical sin of omission of momentous magnitude *not* to tell the patient frankly the unpalatable truth that he has consumption, so soon as the diagnosis is made.

Every practitioner at climatic resorts, or in charge of a sanatorium, has frequent occasion to regret the tardy diagnosis of pulmonary consumption in patients who come to him in a hopelessly advanced stage of the disease; and it not seldom is the case that such patients were dissuaded by their medical advisers from seeking a change of climate when they themselves had proposed it.

If those physicians who avowedly make it their uniform practice not to tell a patient that he has consumption, "unless he requests the information"—as reported in THE JOURNAL, May 12, p. 1158—could witness, as I have repeatedly, the un-availing wrath of their patients, who have later changed climate—after having first changed physicians—over the loss of time and money in slowly regaining a modicum of former health—all due to this unfortunate and too common lack of professional frankness—I think their views as to the best method of "comforting" (?) their patients and their patients' friends would undergo some modification. And I have never been able to think otherwise than that a feeling of resentment on the part of a patient was wholly justified toward a medical adviser who thus withheld from him, however benevolent the motive, the diagnosis of consumption after it was once made.

Until recently it has not been possible to make a diagnosis of pulmonary tuberculosis with approximate certainty and absolute safety to the patient, until after destructive changes had liberated Koch's bacilli for microscopic recognition. The best authorities confess their occasional regrettable errors of diagnosis in the incipency of the disease, when relying on the symptoms and physical signs alone. But while the tuberculin test has its admitted dangers, unless used with the greatest circumspection, the watery extract of tubercle bacilli, as prepared by Karl von Ruck, M.D., Asheville, N. C., appears entirely devoid of evil results, if used *secundum artem*, while its diagnostic value is equal to that of tuberculin.

It is now possible, therefore, for the general practitioner—may his tribe increase—who wishes to be entirely frank with his tuberculous patients, to make the diagnosis of pulmonary consumption in its incipency; to tell his patient with obligatory frankness the name and nature of his ailment; and to advise him what course of procedure will at that stage afford him a reasonable prospect of early and complete recovery. And, to my individual view, anything short of entire frankness under these circumstances appears to be ethically indefensible.

BOYD CORNICK, M.D.

A WELL equipped and endowed Institute of Bacteriology has been erected in Ceylon.

Deaths and Obituaries.

PAUL GIBIER, M.D., New York City, died, June 9, of injuries received in a runaway accident. He was born in France in 1851, and was graduated from the University of Paris. In 1885, he was commissioned by the French government to study the cholera epidemic then raging in Spain. His work there procured for him a gold medal from the French Republic and a membership in the Legion of Honor. In 1888 he was sent to study the yellow fever in Havana and Florida. In 1890 he established the Pasteur Institute in New York City. He has since been at the head of that institution, and also of a sanitarium at Suffern, N. Y.

ALFRED E. EMERY, M.D., died, May 23, in Penacook, N. H., aged 59 years. He studied medicine at Harvard University for two years, and was then appointed acting assistant-surgeon in the United States Navy. His first service was on the hospital ship of the Massachusetts squadron, but later he was attached to one on the North Atlantic. In 1865 he was graduated from the medical department of the University of Vermont. He located in Wilton, Conn., where he remained until 1879, when he moved to Penacook, where he lived until his death. He was a member of the New Hampshire Medical Society and of the United States pension examining board.

JOSEPH DAVIS OSBORN, M.D., Newark, N. J., died, June 2, after a long illness, aged 67 years. He was graduated from the New York College of Physicians and Surgeons in 1859. During the Civil War he served as surgeon of the Fourth New Jersey Volunteers, and since the close had practiced medicine in Newark.

EDWARD STEPHEN CLARK, M.D., San Francisco, Cal., died, June 1, aged 44 years. He was born in Kentucky, and educated at the Central University at Louisville, from the medical department of which he received his degree in 1880. He was a member of the San Francisco Medical Society, of the State Medical Society, the San Francisco Polyclinic, and the AMERICAN MEDICAL ASSOCIATION.

JOHN NIGHTINGALE, M.D., died in San Francisco, Cal., June 3, aged 45 years. He was graduated from the Cooper Medical College in San Francisco, and then went to France and Germany to complete his studies. In the winter of 1890, he had la grippe, and had never fully recovered his health.

MELANCTHON STORRS, M.D., Yale, 1853, died in Hartford, Conn., June 9, from septicemia contracted during an operation. He was born in Mansfield, Conn., in 1823, and served in the Civil War as a surgeon of the Eighth Connecticut Volunteer Infantry. He was once the president of the State Medical Association.

JOSIAH N. BOGGS, M.D., Allegheny, Pa., died at St. Louis, Mo., May 31, aged 71 years. He was graduated from Atlantic Medical College, in 1861, and served during the Civil War as assistant-surgeon of the Fourth Alabama regiment. At its close he settled in Pittsburg.

H. S. DEFORD, M.D., Jefferson Medical College, 1864, died in Osceola, Mo., May 24. In the spring of 1866, he located in Ottawa, Kan., where he lived until a few months ago.

CHARLES S. COLLINS, M.D., College of Physicians and Surgeons, N. Y., 1885, died at his home in New York City, May 20, aged 38 years.

J. D. KETCHUM, M.D., died at his home, Tunnelton, Ind., June 4, of smallpox, aged 35 years.

B. P. CLARK, M.D., De Ray, Tenn., died May 30, after a protracted illness, aged 73 years.

Miscellany.

Ptomain Paralysis.—A healthy boy of 15 and his mother, who was 40 years of age, were suddenly affected with paralysis of almost all the muscles innervated by the brain. This extended later to the muscles of the trunk and lower extremities, but there was no disturbance in sensibility nor in the sphincters, no preceding infectious disease, and no local

phenomena in the alimentary canal. Both mother and son had been eating fish, and Preobrashenski, who reports the occurrence in *Med. Obs.* for January, and also in *Deutsche Zft. f. Nerv.* xvi, and 6, attributes it to ptomain poisoning, the manifestations resembling those of intoxication with curarin. He believes that many cases of so-called "rheumatic polyneuritis" and paralysis were in reality due to a similar cause.

Cause of Inefficacy of Diphtheria Serum Per Os.—To the epithelium and lymphatic system of the intestines must be ascribed the chief rôle in the destruction or neutralization of diphtheria antitoxin when administered by the mouth. Nedrigaloff's numerous experiments and tests have shown that neither the gastric juice, the bile nor the pancreatic juice have any influence on it.—*Vratch*, xxi, 26.

International Medical Congress.—Quarters have been secured for the different sections so that members can go conveniently from one to the other. Ophthalmology will be centered at the Hôtel Dieu, with its special clinic; dermatology at St. Louis, on account of its superb museum, and urinary surgery at Necker, with its special equipment. A physician who sends his subscription, receives in return his receipt, membership ticket and railroad certificate. When he enters France he has his railroad ticket stamped at the frontier station. On his arrival in Paris he repairs at once to the offices of the Congress and presents his membership ticket. He is then conducted to a special department for his nationality, the name of his country being placed above the desk. Here he finds a special secretary, able to converse with him in his own language, who stamps his railroad ticket and then gives him a *dossier* or folder—a separate color for each nationality—and in this he finds the programs, meeting places, invitations to receptions, festivities, tickets to excursions, guide to the hospitals, etc. Each secretary is prepared to furnish information supplied by the various agencies in regard to convenient and economical rooms and board. When the visitor is ready to leave Paris the railroad gives him, free of charge, a ticket to the frontier station where he had his ticket stamped when he entered France. The grand night fête in the Luxembourg palace and gardens, we are assured, will be "worthy of its magnificent setting."

Hospital Ship "Relief."—The *Hongkong Telegraph* of Monday, March 5, 1900, gives a gratifying account of the impression made by the hospital ship *Relief* on those who inspected her while refitting in port. The article conveys a fuller and better description of the vessel than any which has appeared in our United States journals:

On Saturday afternoon the United States Army hospital ship *Relief* which has been lying here for a short time refitting, was *en fête*, the medical officer in command, Major Perley, having invited the officers of the garrison and of the British and foreign war ships in port to inspect the vessel. A great number responded to the invitation and were shown over the ship by Major Perley and his courteous staff.

The *Relief* is a vessel of 3000 tons, 313 feet in length over all, 455 feet beam, and draws from 16½ to 18 feet of water. She has engines of 4500 horse-power, and can steam seventeen knots, her bunker capacity being 850 tons and her consumption at twelve to fourteen knots forty to fifty tons per day. In appearance she is more like a river boat than a sea-going ship, having a low free board and two tiers of cabins above the main deck; despite her appearance, however, she is said to be a capital sea-boat and made the trip out here from the Atlantic seaboard without once wetting her deck.

There are five wards on board, containing beds for no less than 250 sick, and fine and airy places they are, too, well ventilated and with electric fans fitted at intervals to insure a free circulation of air and keep the temperature down in the tropics. The berths are arranged in rows with gangways between, and are in two tiers. These are on a steel framework and, being all fitted with spring mattresses, are most comfortable. There were about fifty sick on board Saturday, and they all appeared to be very happy and contented with their lot, indeed, a man would be hard to please who was not, for few shore hospitals can boast of such complete arrangements.

The operating-room is a most excellently planned establishment, being situated on the port side of the ship and supplied with large ports, which ensure a plentiful supply of light for

all operations. This, however, is supplemented by two groups of electric lights, so that the most delicate piece of work can be performed either day or night. Round the walls are ranged glass-fronted cupboards containing instruments of all descriptions, all beautifully bright and ranged in order so that any particular one that may be required can be got at in a moment. Another cupboard contains sterilized bandages, lint, and so on, all stored in air-tight glass bottles, while in all the cupboards a barometer is fitted in order that the officer in charge of the operation-room may be able to see at a glance the state of the atmosphere in each and take steps to exclude damp. Another excellent arrangement is a large electric sterilizing apparatus into which all instruments are put as soon as done with, and thoroughly sterilized against next being required for use.

The comfort of the patients in the matter of food and drink is not forgotten either, for the ship possesses a most complete refrigerating plant, which produces fifteen hundred pounds of ice a day, and, in addition to this, there is a large cold-storage chamber in which there is still a large supply of American beef, which came out with the ship six months ago. A couple of sides were hanging in the butcher's shop, and very nice it looked with its firm, yellow fat, which one so seldom sees on Hongkong beef. The cooking arrangements are capital, and, in addition to the regular galley, an electric kitchen is attached to one of the wards, in which any little delicacies that the patients may require at odd times are attended to. It was hard to believe that the neat looking dresser with its little brown pads could in reality be a stove, but a turn of the switch soon convinced one of the fact that coals or oil are not necessarily associated with cooking.

The lavatory arrangements are far and away above anything of the kind to be found in the ocean liner or even in the best hotels ashore. In addition to the ordinary lavatory attached to each ward, there is a bath fitted in the ward itself for the use of patients who can not be moved about much, and both hot and cold water are laid on, while a most ingenious contrivance mixes the two streams when desired and, by the manipulation of a couple of handles and the study of a thermometer attached to the tap, water can be drawn at any temperature required, to within half a degree. Down on the main deck is situated a laundry, and a very fine one it is, fitted with the most modern machinery, and capable of dealing with all the washing, both of patients and attendants. Here, too, there is a big sterilizer in which the clothing and bedding of patients suffering from infectious diseases can be rendered innocuous.

Facing the operation-room, on the port side, is the dispensary, which does not remind one of a chemist's shop so much as one would suppose, for though the bottles are all there they are small in size, and one wonders how two hundred and fifty patients can possibly be dosed from them. Major Perley, however, explained that they did not believe in filling their patients with medicines so much as in carefully studying the case and correcting matters more by fresh air and diet than by drugs.

Another very interesting compartment was the laboratory, with its groups of microscopes and other instruments for studying bacilli, and the rows of tubes and flasks containing cultures of all sorts. Mounted at the end of one ward was the X-ray apparatus, and the visitors were shown the bones of their hands by the means of this wonderful invention, which has revolutionized modern surgery. Photography has not been forgotten and a well-appointed dark-room is fitted on the starboard side of the vessel, with every requisite for the art.

The staff consists of four medical officers in addition to Major Perley, and these are assisted by eight trained nurses, of whom, strange to say, four are English, two German, and only two American, though all were trained in America. The whole vessel gives one an idea of comfort and thoughtful arrangement, from the india-rubber paving tiles to the seltzer plant, which, by the way, turns out a thousand bottles daily for the patients. The vessel is panelled throughout in white, and gives one more the impression of being on board a well-fitted yacht than a floating hospital. If the *Maing*, which our American cousins have so generously fitted out for our wounded in South Africa, is even half as well turned out and comfortable as the *Relief*, then our men have indeed much to be thankful for.

Metal Clamps for Suturing.—Michel has invented a suture device in the shape of a row of metal clamps, which are applied to the lips of the wound, somewhat similar to the old spring-wire forceps, called *serres-fines*. Michaux has been using the clamps for over a year, and recommends them as the

simplest, most rapid and most exact method of suture yet devised. In a communication to the Société de Chirurgie, reported in *La Presse Médicale* of May 19, he states that a laparotomy incision can be sutured with these *agrafes* in thirty to fifty seconds. They are removed after six to eight days, leaving a regular, linear scar.

City Freed from Mosquitoes.—A chart was made of the city of Sassari, on the Island of Sardinia, showing every cistern, pond, sewer, ditch, trough, etc., which could breed mosquitoes, and persons were hired to pour petroleum on the surface of the water twice each month. At the same time a vigorous warfare was waged against the mosquitoes in the air by chlorin in cellars and Celli's "zanzolina" or other insecticides in the houses. The results were completely successful, and establish that it is possible to free a city from mosquitoes unless the conditions are exceptionally unfavorable, as at Venice. The expense for a city of 50,000 inhabitants is about \$250, including service. Fermi's official report is summarized in the *Gazz. degli Osp.* of April 15.

Bathing of the New-Born.—The question whether the newborn should be bathed or not has occupied the attention of the Prussian and German obstetricians during the last decade. Dohrn, in 1880 (*Archiv. f. Gynecol.*, 1880), formulated the following procedure: Having washed the umbilical cord with a 2.5 per cent. solution of carbolic acid, it is wrapped up in carbolized cotton and secured with adhesive plaster. The dressing is left on for seven days. The child is not bathed at all. Artemyeff (*Arch. f. Gyn.*, 1887) modified Dohrn's dressing—he does not apply the adhesive plaster. Lvov (*Jour. Akush. i Jensk. Bol.*, 1888) advised powdering the umbilical cord with one part of iodoform and ten of bismuth. The child is bathed. In 1892, however, Lvov changed his opinion, and suggested another method: After the first bath, the cord is wiped dry, wrapped in absorbent cotton saturated with glycerin and bandaged with gauze. The child is not bathed until the cord falls off. Doctor (*Arch. f. Gyn.*, 1894) has studied this question on 1341 new-born children. His conclusion that children should not be bathed until the cord falls off is based on the fact that such children are less liable to febrile complications; their weight is more rapidly increased, and the cord falls off earlier than in children who are bathed daily. Keilman (*Deutsche Med. Woch.*, 1895, No. 21) reported his observations made on 400 children and arrived at the same conclusion as Doctor, with the exception that in his cases he did not notice the difference in time of the drying up of the cord. Weinstein (*Jour. Akush. i Jensk. Bol.*, 1895, p. 846) also advised against bathing the new-born. He based his conclusions on the observation that the cord in unbathed children falls off earlier. Knopp (*Monatschr. f. Geburtshilfe u. Gyn.*, 1887) warned against bathing the new-born, so as not to infect the vagina with gonorrhoea. Neuman (*Berliner Klinische Woch.*, 1898, No. 1), in his report before the Berlin Medical Society, pronounced bathing of the new-born as absolutely harmful. Arthes (*Ibid.*, 1898), made his observations on 150 children and arrived at an opposite conclusion, as did also Czerwenka (*Wiener Klin. Woch.*, 1898, No. 11). Kovarski (*Uvatch.*, 1900, p. 102) has conducted careful observations on 420 children; half of the number were bathed, and the other half were not. With the exception of a large percentage of icterus among the bathed ones there were no other perceptible differences. After summarizing the pros and cons of the subject Kovarski concludes that no scientific proof has as yet been adduced as to the harmfulness of bathing, and that we can follow, without perturbation of spirit, the time-honored custom of bathing the new-born.

The "Plague of Women in War."—The following interesting view of certain conditions in South Africa is taken from the *Army and Navy Journal* of June 2:

A very healthy sentiment that may work a decided reform has been awakened in England by Surgeon Treves' denunciation of the "plague of women" in the South African War. This phrase he curiously used in some brief remarks and it called out great protests from women who misunderstood his meaning. The mis-constructive was fortunate, for it focused attention on the subject and gave Dr. Treves occasion to reply at length to his critics, which he did in a speech at the Reform Club, London. That left no room for doubt. He prefaced his remarks with the almost superfluous statement that no one had a deeper sense than he had of "the splendid work which many large-hearted, unselfish women, professional and amateur alike, are doing in South Africa. Then he paid his respects to the other class—those "elaborately dressed ladies masquerading in sum-

mer toilets and arranging picnics about Cape Town, which was packed with women idlers, the majority of them 'society' or 'smart' people, who yearning for new excitements, had come out to South Africa to make a holiday. The condition of affairs, as brought about by the presence of these ladies, was an absolute disgrace to our country. If a sick or wounded officer came down from the front in search of accommodation he had not the slightest chance of getting into a decent hotel, the rooms being occupied by ladies who had not the faintest pretext for being in South Africa beyond their own desire to make the campaign a means of obtaining new pleasure and excitements. That, however, was not the worst side of their presence. When dinner parties and other junketing grew wearisome, they would make up parties to visit the hospitals. 'What shall we do to-day?' 'Oh, let's go and see the wounded,' would be the preparation for an invasion of the base hospitals and an incalculable amount of interference with the work of the medical staff. Officers in charge of the wounded know what influence means in the matter of promotion, and so the women would be taken round the wards and the wounded shown, to the utter disorganization of discipline and duty."

Surgeon Treves has been very generally supported. The *Westminster Gazette* says: "This 'social influence,' this 'petticoat patronage,' is, we are told, the canker which for years has been sapping the vitality of the British Army. It is a notorious fact that the surest method of obtaining a good appointment is for an officer to get his name noted on the list kept by a certain lady of title; the good word of the dame will more effectually secure the advancement of her nominees than any amount of meritorious service or hard work without such a backing."

BOOKS AND PAMPHLETS RECEIVED.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review as dictated by their merits, or in the interests of our readers.

TREATMENT OF FRACTURES. By Charles Locke Souder, M.D., Surgeon to the Massachusetts General Hospital. Assisted by Frederick J. Cotton, M.D. With 585 Illustrations. Cloth. Pp. 433. Price, \$4.50. Philadelphia: W. B. Saunders.

CONTRIBUTIONS TO THE SCIENCE OF MEDICINE. Dedicated by his Pupils to William Henry Welch on the Twenty-first Anniversary of his Doctorate. Cloth. Pp. 1060. Baltimore, Md.: Johns Hopkins Press, 1900.

CARE OF THE CHILD IN HEALTH. By Nathan Oppenheim, A.B., M.D., Attending Physician to the Children's Department of Mt. Sinai Hospital Dispensary. Cloth. Pp. 305. Price, \$1.25. New York: The MacMillan Co., 1900.

TWENTIETH CENTURY ANNUAL ILLUSTRATED CATALOGUE FOR 1900. Cloth. Pp. 1123. By Peter Van Schaack and Sons. Chicago: Blakely Printing Co., 1900.

REPORT OF THE HOUSING OF LABORING CLASSES IN THE CITY OF WASHINGTON, D.C. By George M. Kober, M.D. Paper. Pp. 120. Washington: Government Printing Office, 1900.

TRANSACTIONS OF THE MEDICAL SOCIETY OF DELAWARE. Held at Wilmington June 12, 1899. Paper. Pp. 70. Wilmington, Del.: Sunday Star Job Print., 1899.

REGISTER OF INTERNES OF THE CINCINNATI HOSPITAL (Formerly Commercial Hospital), 1830-1890. Compiled by Arch. I. Carson, M.D. Paper. Pp. 48. Published by the Society of Internes, 1900.

REPORT OF THE MINISTER OF AGRICULTURE FOR THE DOMINION OF CANADA, for the year ended Oct. 31, 1899. Paper. Pp. 258. Price \$1.15. Ottawa: S. E. Dawson, 1900.

PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF PHILADELPHIA, May, 1900. Paper. Pp. 188. Philadelphia: Published by the Society, 1900.

ACTS OF THE ONE HUNDRED AND TWENTY-FOURTH LEGISLATURE OF THE STATE OF NEW JERSEY AND FIFTY-SIXTH UNDER THE NEW CONSTITUTION. Paper. Pp. 639. Trenton, N.J.: MacCrellish & Quiley, 1900.

REPORT OF THE HEALTH OFFICER OF THE DISTRICT OF COLUMBIA, 1899. Cloth. Pp. 357. Washington: Government Printing Office, 1899.

THE APISTOPHILON. A Nemesia of Faith. By Frank D. Bullard, A.M. Cloth. Pp. 109. Chicago: R. R. Donnelley & Sons Co., 1899.

SCHERING'S FORMALIN LAMP AND DISINFECTANT. SCHERING'S FORMALIN DISINFECTANT AND DEODORIZING LAMP. New York City: Schering & Glatz.

NEW PATENTS.

Patents of May 22 and 29 of interest to Physicians.

650,218. Orthogonal sulfo-lead and making same. Emil Barel, Rome, Switzerland.

649,896. Head-bandage. Jacob Baughman, Burlington, Iowa.

650,003. Dissolving albumen. Hermann Bremer, Munich, Germany.

650,166. Pneumatic syringe-jar for soda fontainals. Charles N. Oppermann, Minneapolis, Minn.

649,984. Invalid bed. Lydia A. Goodson, Elgin, C. S. Burton, Oak Park, Ill.

649,938. Obtaining tuberculosis toxin. Gustav Landmann, Frankfort-on-the-Main, Germany.

650,080. Strychnine. John S. Nardynski, Marshall, Mo.

650,187. Making boracic acid and chlorates. Charles C. Moore, Liverpool, England.

650,022. Volatile chloral compound and making same. Heinrich Oppermann, Bernburg, Germany.

650,023. Making magnesium superoxid. Heinrich Oppermann, Bernburg, Germany.

- 650,203. Hypodermic syringe. Albert S. J. Stovall, Elberton, Ga.
- 650,287. Draft-tube for effervescent drinks. Wm. M. Wheildon, Boston, Mass.
- 650,348. Hypodermic syringe. Charles Witowski, Boston, Mass.
- 650,774. Surgical appliance. Robert W. Barton, Marion, Ark.
- 650,714. Hernal tract. Henry Fehr, Kansas City, Mo.
- 650,760. Gelatin capsule. Frederick H. Metcalf, Franklin, Ill.
- 650,676. Automatic measuring cork and recording dial. Fernand Salomon, Philadelphia, Pa.
- 650,617. Combined dropper and liquid measurer, recording dial, and dose-indicator. Fernand Salomon, Philadelphia, Pa.
- 650,496. Tonsillotomy. Frederick A. Stohlmann and L. G. Pffar, New York City.
- 650,696. Emetin salts and making same. Wm. G. Whiffen, London, England.

- Iowa: Des Moines, May 1-31, 6 cases.
- Kansas: Wichita, May 26 to June 2, 1 case.
- Kentucky: Covington, May 26 to June 2, 11 cases.
- Louisiana: Caddo, May 12-26, 5 cases; New Orleans, May 26 to June 2, 3 cases; 16 deaths.
- Massachusetts: Fall River, May 26 to June 2, 1 case; Lowell, May 26 to June 2, 3 cases.
- Michigan: Grand Rapids, May 19 to June 2, 5 cases.
- Minnesota: Chippewa, May 15-29, 4 cases; Duluth, May 15-29, 2 cases; Hennepin Co., May 15-29, 4 cases; Houston Co., May 15-29, 4 cases; Jasper, May 15-29, 2 cases; Meeker, May 15-29, 2 cases; Minneapolis, May 15-29, 38 cases; Northfield, May 15-29, 4 cases; Redwood, May 15-29, 7 cases; St. Paul, May 15-29, 8 cases; Sheldon, May 15-29, 4 cases; Waverly, May 15-29, 4 cases; Wright Co., May 15-29, 3 cases.
- Ohio: Cleveland, May 26 to June 2, 24 cases; Dayton, May 26 to June 2, 1 case; Portsmouth, May 26 to June 2, 1 case.
- Pennsylvania: Pitsburg, May 26 to June 2, 3 cases.
- South Carolina: Greenville, May 19 to June 2, 4 cases.
- Utah: Salt Lake City, May 26 to June 2, 5 cases.
- Wyoming: Aspen, May 19-26, 6 cases; Rock Springs, May 19-26, 8 cases.

Queries and Minor Notes.

TREATMENT OF PELLAGRA.

NEW ORLEANS, June 1, 1900.

To the Editor:—Will you kindly answer in your query column, the treatment of "pellagra," an endemic erythematous disease of Italy. By doing so you will oblige. Respectfully, M. D.

ANSWER:—The treatment of pellagra is, first of all, prophylactic, the avoidance of or the discontinuance of the use of the diseased corn that causes it. The drug that appears to be most depended on is arsenic, but its use will depend somewhat on the condition of the gastro-intestinal tract. For the digestive disorders, the usual remedies are indicated, with gastric lavage, milk diet, intestinal antiseptics, etc. When the disease has seriously involved the nervous system, treatment is not, as a rule, very effective. The disorder is practically unknown in this country, and no method of treatment has been extensively tried here.

The Public Service.

ARMY CHANGES.

Movements of Army medical officers under orders from the Adjutant-General's Office, Washington, D. C., May 25 to June 1, 1900, inclusive:

- John S. Fogg, acting asst.-surgeon, previous orders amended so as to require him to report to the commanding officer, Columbus barracks, Ohio, for duty.
- Henry S. Kilbourne, major and surgeon, U. S. A., member of a retiring board convened at Governor's Island, N. Y.
- John L. Phillips, captain and asst.-surgeon, U. S. A., member of a retiring board at Governor's Island, N. Y.
- Francis J. Pursell, acting asst.-surgeon, to duty in the Department of California.
- J. W. Richards, acting asst.-surgeon, to Governor's Island, N. Y., and thence to Havana, Cuba, for temporary duty on the transport *Ingha*.
- Henry E. Wetherell, lieutenant and asst.-surgeon, U. S. A., to duty in the Department of California.
- Halsey L. Wood, acting asst.-surgeon, leave of absence granted.

NAVY CHANGES.

- The changes in the medical corps of the United States Navy for the week ending June 2, 1900.
- Asst.-Surgeon W. H. Barber, detached from the *Albatross* when placed out of commission and ordered to duty at the naval hospital, New York City.
- Asst.-Surgeon C. N. Flisk, commissioned assistant-surgeon from May 15, 1900.
- Surgeon O. D. Norton, detached from the *Moundnock* and ordered to the *Bennington*.
- Asst.-Surgeon J. S. Taylor detached from the *New Orleans* and ordered to the *Catago*.
- Asst.-Surgeon J. J. Grow, detached from the *Richmond* and ordered to the *Moundnock*.

MARINE-HOSPITAL CHANGES.

- List of the changes of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital Service for the 7 days ending May 31, 1900.
- Surgeon Preston H. Bailhache, detailed as official delegate of the Service at the meeting of the American Medical Association at Atlantic City, N. J., June 5-8, inclusive.
- Asst.-Surgeon L. E. Cofer, to proceed to San Francisco, Cal., and report to Surgeon J. J. Kinyoun for special temporary duty.
- Acting Asst.-Surgeon R. S. Primrose, granted leave of absence for 6 days.
- Hospital Steward S. W. Richardson, granted leave of absence for seven days from May 20, 1900, under the provisions of paragraph 201, Regulations, M. H. S.

SMALLPOX—FOREIGN.

- Austria: Prague, May 12-19, 3 cases.
- Belgium: Antwerp, May 12-19, 2 cases.
- Brazil: Bahia, April 21 to May 6, 1 case, 1 death.
- Canada: Winnipeg, May 1-30, 16 cases, 8 deaths.
- Egypt: Cairo, May 6-13, 5 deaths.
- England: Liverpool, May 12-19, 2 cases; London, May 12-19, 3 cases; Southampton, May 12-19, 1 case.
- France: Lyons, May 12-19, 5 cases; St. Etienne, May 1-15, 4 cases, 1 death.
- Greece: Athens, May 12-19, 2 cases, 1 death.
- India: Bombay, May 1-8, 15 deaths; Calcutta, April 7-14, 31 deaths; Kurrachee, April 29 to May 6, 16 cases, 14 deaths; Madras, April 28 to May 4, 1 death.
- Mexico: Vera Cruz, May 16-23, 6 cases, 4 deaths.
- Russia: Moscow, May 3-12, 19 cases, 3 deaths; Odessa, May 12-19, 11 cases, 2 deaths; St. Petersburg, May 5-12, 216 cases, 9 deaths; Warsaw, May 5-12, 1 death.
- Scotland: Glasgow, May 18-25, 30 cases, 1 death.
- Straits Settlements: Singapore, April 7-14, 7 deaths.
- Uruguay: Montevideo, April 1-8, 1 case.

YELLOW FEVER.

- Colombia: Barranquilla, May 5-12, 1 case, 1 death; Panama, May 22-29, 3 cases, 1 death.
- Cuba: Cienfuegos (Santa Clara Barracks) May 16-23, 1 case; Havana, May 16-23, 1 case.
- Mexico: Vera Cruz, May 19-26, 22 cases, 6 deaths.

CHOLERA.

- India: Bombay, May 1-8, 28 deaths; Calcutta, April 7-14, 113 deaths; Madras, April 28 to May 4, 1 death.

PLAGUE—UNITED STATES

- California: San Francisco, March 8 to June 8, Reported present.
- ARABIA—FOREIGN.
- Arabia: Aden, April 7-28, 266 deaths.
- Australia: Sydney, April 28 to May 5, 38 cases, 10 deaths.
- China: Hongkong, April 22-28, 33 cases, 28 deaths.
- Egypt: Alexandria, May 8-11, 5 cases, 2 deaths; Port Said, May 3-5, 8 cases, 3 deaths.
- India: Bombay, May 1-8, 340 deaths; Calcutta, April 7-14, 465 deaths; Kurrachee, April 29 to May 6, 219 cases, 173 deaths.
- Japan: Osaka and Hogo, May 7-13, 8 cases.
- Kurdistan: April 2-17, 138 cases, 122 deaths.
- Turkey: Smyrna, May 29, 1 case.

CHANGE OF ADDRESS.

- Dr. F. S. Alger, from Keokuk, Iowa, to Bentley, Ill.
- Dr. E. P. Adams, from 762 E. McMillan St. to St. Cloud Flara No. 1, Grand St., Cincinnati, Ohio.
- Dr. C. H. Alden, from Washington, D. C., to Col. U. S. A., Hyannisport, Mass.
- Dr. D. Ames, from Baltimore to Catonsville, Md.
- Dr. L. D. Alexander, Jr., from Charlottesville, Va., to New Canaan, Conn.
- Dr. F. W. Bates, from Charlottesville, Va., to 512 Peun Ave., Ft. Worth, Texas.
- Dr. J. T. Baker, from Main St., Charlottesville to Box 309, Pulaski City, Va.
- Dr. T. H. Barlow, from 204 S. Lincoln St., Chicago, Ill., to Alexandria, Minn.
- Dr. H. B. Blackwell, from Charlottesville, Va., to Wilmington, N. C.
- Dr. J. H. Blackburn, from Woodburn to State St., Bowling Green, Ky.
- Dr. W. J. Bauer, from Promise City, Iowa, to 3348 22d St., San Francisco, Cal.
- Dr. E. S. Barker, from 245 to 238 La Salle Ave., Chicago, Ill.
- Dr. H. L. Baker, from 4 S. Kedzie Ave. to 655 W. 12th St., Chicago, Ill.
- Dr. S. K. Burgess, from 9 S. Ada St. to 165 S. Wood St., Chicago, Ill.
- Dr. B. J. Callahan, from Philadelphia, Pa., to Dakota City, Ia.
- Dr. J. H. Canon, Jr., from Louisville, Ky., to Caton, Tex.
- Dr. J. Clements, from Kansas City, Mo., to Nutley, N. J.
- Dr. M. Crook, from University, Va., to Jacksonville, Ala.
- Dr. J. H. Crawford, from Augusta to Martin, Ga.
- Dr. W. Durrett, from Emden, Mo., to Ralston, O. T.
- Dr. B. G. Dyer, from Des Moines to Gilbert Station, Iowa.
- Dr. M. De Costa Bates, from Terry, S. D., to Jackson Boul. and Haisted St., Chicago, Ill.
- Dr. A. O. Eckhardt, from Silverton to San Jose, Colo.
- Dr. T. W. Greenley, from Hot Springs, S. D., to Loon Lake, N. Y.
- Dr. T. A. Groover, from Greytown, N. C., to Pldcock, Ga.
- Dr. A. H. Geiger, from 18 Lincoln Ave. to German Hospital, Larrabee St. and Grant Pl., Chicago, Ill.
- Dr. O. R. Hendrixson, from 26 E. Duncan St., Columbus, to Yellow Springs, Ohio.
- Dr. W. D. Hoyer, from 18 W. 4th St. to 155 Dakota Ave., Columbus, Ohio.
- Dr. P. A. Hohenschuh, from Iowa City to 223 5th Ave., Clinton, Iowa.

HEALTH REPORTS.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon General, Marine-Hospital Service, during the week ended June 9, 1900:

- SMALLPOX—UNITED STATES
- Colorado: Logan Co., May 25, 1 case; Mesa Co., May 25, 1 case. District of Columbia: Washington, May 26 to June 2, 1 case.
- Florida: Jacksonville, May 26 to June 2, 1 case.
- Illinois: Chicago, May 29 to June 2, 1 case.
- Indiana: Indianapolis, May 19 to June 2, 5 cases.

- Dr. E. P. Hummel, from LaPorte City to Dysart, Iowa.
 Dr. Wm. Hendricks, from 59th and Center Sts., to 336 W. 63d St., Chicago, Ill.
 Dr. A. F. Hillman, from 171 La Salle Ave. to 328 La Salle St., Chicago, Ill.
 Dr. A. E. Hoadley, from 683 Washington Boul. to 84 S. Robey St., Chicago.
 Dr. W. Van Hook, from 4043 Grand Boul. to 5739 Washington Ave., Chicago, Ill.
 Dr. P. F. Knafl, from Chilton to New Holstein, Wis.
 Dr. A. F. Kemp, from Venice to Benton City, Mo.
 Dr. M. F. Lee, from 177 E. Long St. to 49 N. 9th St., Columbus, Ohio.
 Dr. J. A. Miller, from Detroit to Bedlow, Mich.
 Dr. Olin McCrnick, from Saunemy to Herscher, Ill.
 Dr. H. M. W. Moore, from 243 E. Town St. to 656 E. Long St., Columbus, Ohio.
 Dr. J. S. Mott, from Commerce Bldg. to Rialto Bldg., Kansas City, Mo.
 Dr. W. T. Moffett, from Williamsville to 346 W. State St., Jacksonville, Ill.
 Dr. J. J. Minot, from Boston to Blue Hill Ave., Mattapan, Mass.
 Dr. L. D. Mason, from Brooklyn, N. Y., to P. O. Box 226, Greenwich, Conn.
 Dr. G. H. Moldenhauer, from 13 Clarinda St. to 418 Chicago Ave., Chicago, Ill.
 Dr. E. E. Morse, from 4327 to 4311 Berkley Ave., Chicago, Ill.
 Dr. W. L. Moore, from Charlottesville, Va., to Policlinc Hospt., Philadelphia, Pa.
 Dr. W. H. Prioleau, from Charleston, S. C., to Buffalo Lithia Springs, Va.
 Dr. B. J. Read, from Charlottesville to Bedford Springs, Va.
 Dr. E. F. Reese, from Richmond to Assamook, Va.
 Dr. L. F. Richardson, from 41 Latin St., Chicago, Ill., to Fairfax, Iowa.
 Dr. G. F. Ramsey, from Charlottesville, Va., to Union Springs, Ala.
 Dr. R. Stonestreet, from Paragon Mills to Flat Rock, Rural Del. No. 2, Tenn.
 Dr. S. L. Scott, from Charlottesville to Box 212 Fredericksburg, Va.
 Dr. C. W. Snyder & Son, from Strasburg to Dry Ridge, Va.
 Dr. R. J. W. Smathers, from Charleston, S. C., to Turpike, N. C.
 Dr. Mrs. M. S. Schmidt, from 892 Kedzie Ave. to 1596 W. 22nd St., Chicago, Ill.
 Dr. J. F. Sloan, from 530 W. Adams St. to 296 Marshfield Ave., Chicago, Ill.
 Dr. Gould Smith, from Homer to Piercen, Ill.
 Dr. C. M. Shanely, from Foran to Lidgerwood, N. D.
 Dr. J. E. Sawyer, from 4643 Evans Ave. to 472 E. 47th St., Chicago, Ill.
 Dr. G. A. Trueman, from Chicago, Ill., to Munising, Mich.
 Dr. J. A. Townsend, from Unionville to City Hospital, St. Louis, Mo.
 Dr. S. J. Torney, from Saratoga to Stacyville, Iowa.
 Dr. E. B. Tutenor, from 3553 Prairie Ave. to 3645 Grand Boul., Chicago, Ill.
 Dr. J. P. Williams, from 1511 W. Broad St., Nashville to Bon Air, Tenn.
 Dr. O. K. Womack, from Nashville to Stewart, Tenn.
 Dr. J. W. Warrinton, from 11th and Walnut Sts. to 554 New Ridge Bldg., Kansas City, Mo.
 Dr. A. J. Westlake, from Washington, D. C., to Breesport, N. Y.
 Dr. S. M. White, from Minneapolis, Minn., to Somonauk, Ill.
 Dr. C. L. Wheaton, from 42 E. Madison St., Chicago, Ill., to 1683 Ogden St., Denver, Colo.
 Dr. J. J. Yates, from Nashville to Roberson Fork, Tenn.
 Dr. J. M. Yarborough, from Charlottesville, Va., to Navasota, Tex.
 Dr. C. E. Zink, from Baltimore, Md., to care F. E. Boardman, Little River, Conn.
- 17.—*Course in Pathology at Harvard Medical School. Wm. T. Councilman.
 18.—*Case System in Medicine. W. B. Cannon.
 19.—*Personal Experience in Teaching of Surgery. Herbert L. Jurell.
 20.—*Consideration of Principal Objections to "Section Teaching" Together with Some of Its Advantages. A. H. Wentworth.
Medical News (N. Y.), June 2.
 21.—*Treatment of Membranous Colitis. W. H. Thomson.
 22.—*Sanitarium Treatment of Incipient Pulmonary Tuberculosis and Its Results. E. L. Trudeau.
 23.—*Prevention of Scarlet Fever. Floyd M. Crandall.
 24.—*Status of New York and Pathology of Insanity. P. M. Wise.
 25.—*Hip-Joint Amputation. Wm. D. Hamilton.
 26.—*Stump Pregnancy. John C. Morfit.
Cincinnati Lancet-Clinic, June 2.
 27.—*Some Points on Benign Stricture of the Rectum. Louis J. Krouse.
 28.—Present Status of Abdominal Surgery. Rufus B. Hall.
 29.—*Alcohol; Its Place. R. T. Trimble.
 30.—Errors in Diagnosis. George Sprague.
Medical Review (St. Louis, Mo.), May 26.
 31.—*Nature of Some Epithelial Growths and Their Treatment with Formalin. Martin F. Engman.
 32.—Progress in Medicine. J. D. Brumhall.
 33.—Case of Acute Yellow Atrophy of Liver in Child 4 Years of Age. M. J. Lippe.
Medical Fortnightly (St. Louis), May 25.
 34.—*Remarks on Vasectomy Relative to Enlarged Prostate and Bladder Atony. Reginald Harrison.
 35.—*Efficiency of Our Health Laws. H. W. Chapman.
 36.—*Defectus Uteri—Report of Case. J. H. Miller.
 37.—Physical Basis of Insane Delusions. W. J. Chenoweth.
Medical Age (Detroit), May 10 and 25.
 38.—Addiction to Drugs, Especially in Reference to the Medical Profession. Richard Dewey.
 39.—Dislocation of External Semilunar Fibrocartilage of Right Knee; Removal of Cartilage—Case of Complete Rupture of Quadriceps Extensor Tendon Treated by Suture of Tendon. A. E. Halstead.
 40.—Typhoid Fever in Infant Nine Months Old. Recovery. Wm. P. Northrup.
 41.—Posthum Shadows in Medical Science. W. P. Manton.
 42.—*Application for Life Insurance Should Receive More Protection in Its Medical Examination. J. Howe Adams.
 43.—Malignant Disease of Uterus; Malaria. Wm. H. Wathen.
Virginia Medical Semi-Monthly (Richmond), May 11.
 44.—*Physiologic Treatment of Typhoid Fever. T. S. Dabney.
 45.—Case of Morphinism, Cigarette Smoking, Dropsy, Convulsions. W. P. Carr.
 46.—*Treatment of Pneumonia. J. C. Walton.
 47.—Liability of Mistaking Locomotor Ataxia for Rheumatism. E. L. Tompkins.
 48.—Clinical Significance of Albuminuria and Tube Casts. A. L. Gray.
 49.—Irregular Case of Cerebrospinal Meningitis. Wade H. Atkinson.
 50.—Advanced Remedies of To-day. W. P. C. Hazen.
Bulletin of the Johns Hopkins Hospital (Baltimore, Md.), May.
 51.—*Urinary Anomalies. Thomas R. Brown.
 52.—*Acute Leukemia in Childhood with Report of Case. Thomas McCrae.
 53.—*Personal Experience in Operations for Stone in the Bladder. A. T. Cabot.
American Journal of Obstetrics (N. Y.), May
 54.—*Problem in Antenatal Pathology: Recurrent Monstrosity. J. W. Ballantyne.
 55.—*Indications, Technique, and Results of Improved Alexander Operation in Aseptic Adherent Retroversions of Uterus. When Combined with Inguinal Celotomy via the Dilated External Inguinal Ring. A. Goldsoph.
 56.—Concerning Some Fallacies of Diphtheria and Antitoxin Statistics. Adolph Rupp.
 57.—Some Recent Experiences in Intestinal Surgery. B. C. Hirst.
 58.—Multilocular Cystic Growth of Ovary, Accompanied by Increased Growth of Hair and Change of Voice, with Recurrence in Abdominal Incision. Gwilym G. Davis.
 59.—Abdominal Pregnancy. Report of Case. H. Meek.
 60.—Preventive Gynecology. Richard K. Smith.
 61.—Review of Five Years' Experience with Pelvic Diseases at Vanderbilt Clinic. Wm. S. Stone.
 62.—Results of Modern Aseptic Surgical Technique. Hunter Robb.
 63.—New Speculum. H. F. Gau.
Cleveland Journal of Medicine, May.
 64.—Case of Diplegic Idiocy in Its Clinical and Pathologic-anatomic Aspects. A. P. Ohlmacher.
 65.—*Otitis Media. Howard S. Straight.
 66.—*Some Causes of Pains in Feet. C. A. Hamann.
 67.—Sarcoma of Bladder. Wm. C. Bunce.
 68.—*Enteropneosis Relative to Disorders of Digestive Tract and Circulation. (To be Continued). N. Rosewater.
 69.—Feeding in Typhoid—A Case in Point. G. S. Whiteside.
 70.—Aseptic Pocket Hypodermic Syringe. James H. Montgomery.
 71.—Case of Extreme Genu Valgum Corrected by Supracondyloid Osteotomy. Wm. E. Wirt.

Current Medical Literature.

Titles not marked with an asterisk (*) are noted below.

New York Medical Journal, June 2.

- 1.—*Microbes—What Are They? Henry G. Grisham.
- 2.—*Estivo-Autumnal Fever in New Orleans, Summer and Autumn, 1899. (Continued). H. A. Vezle.
- 3.—*On a Little-Known Method of Treatment of Furunculosis. Gustav Langmann.
- 4.—*Diseases of Blood in Their Relation to Surgery, and Their Treatment. George G. Van Schaick.
- 5.—*Desultory Remarks Concerning Diphtheria. J. Wilkinson Jervey.
- 6.—Case of Mediastinal Growth with Subsequent Tuberculosis Disorganization. Mistaken for Aneurysm of Arch of Aorta. Frederic Griffith.

Philadelphia Medical Journal, June 2.

- 7.—*Hospitals for Insane and Study of Mental Diseases. Stewart Paton.
- 8.—*Diagrams of Genito-Urinary Tract, with a Table for Keeping Records. Ramon Gultéras.
- 9.—Registration of Tuberculosis. Lawrence F. Filck.
- 10.—*Asthma. Richard B. Faulkner.
- 11.—*Siphonage of Partitioned Bladder for Individual Kidney Urines. Andrew J. Downes.
- 12.—*Prognosis in Fractures. Clinton B. Herrick.

Medical Record (N. Y.), June 2.

- 13.—*Radical Cure of Epithelial Cancer by Argentic. C. Trueneck.
- 14.—*Cystic Tumors of Testis and Epididymis. James B. Bullitt.
- 15.—*Health Conditions in Hawaiian Islands. Charles E. Davis.

Boston Medical and Surgical Journal, May 31.

- 16.—*Inductive Method Applied to Medicine. C. W. Elliot.

Physician and Surgeon (Ann Arbor, Mich.), April and May.

- 72.—*Education of Laity in Medicine. Theodore A. McGraw.
- 73.—*Observations on Influenza. David L. Walmisley.
- 74.—*Early Methods of Education as Cause of Neuroses in Children. Arthur D. Holmes.
- 75.—*Diagnosis of Chronic Catarrh of Stomach. Charles D. Aaron.
- 76.—Some Causative Factors in Certain Diseases of Women. Otto T. Toepel.
- 77.—*Infantile Nephritis. Charles Douglas.
- 78.—*Intestinal Sand. Conrad Georg, Jr.
- 79.—*Use of Ethyl Bromid as General Anesthetic. Walter R. Parker.
- 80.—*Electricity in Treatment of Menstrual Derangements. Peter M. Campbell.
- 81.—*Therapeutics of Nitrites. Delos L. Parker.

Medical Herald (St. Joseph, Mo.), June.

- 82.—Post-partum Hemorrhage. W. S. Thompson.
- 83.—Some Interesting Genito-Urinary Specimens. Bransford Lewis.

Journal of Eye, Ear and Throat Diseases (Baltimore, Md.), May-June.

- 84.—Electric Treatment of Exophthalmic Goiter and of Simple Chronic Glaucoma. M. E. Valude.
- 85.—*Coecygdynia. Barton C. Hirst.
- 86.—*Tumors of Vermiform Appendix. A. O. J. Kelly.
- 87.—*Perforation in Typhoid Fever from an Operative Standpoint, with Report of Cases. Gwilym G. Davis.
- 88.—Rhythmical Hysteria. James H. Lloyd.
- 89.—Two Cases of Interscapulo-Thoracic Amputation. J. Wm. White.

Regular Medical Visitor (St. Louis, Mo.), May 15.

- 90.—Two Cases of Chancere of Groin. A. H. Ohmann-Dumesnil.
- 91.—Enlarged Tonsils. Oscar F. Baerena.
- 92.—Can Fractures Always be Cured by Perfect Apposition and Immobilization? Emory Lanphear.
- 93.—Thermometry. C. Frederick Pfingsten.

International Medical Magazine, (N.Y.), May.

- 94.—Abdominal Operation for Multiple Uterine Fibroid: Tubal Disease and Pregnancy. E. E. Moutgomery.
- 95.—*Some Points in Connection with Etiology and Treatment of Diabetes Mellitus. Alexander W. Beck.
- 96.—Chronic Hypertrophy of Prostate. (Concluded). J. D. Thomas.
- 97.—Some Diseases of Ear in Children. (To be Continued). George C. Stout.
- 98.—Prognosis and Treatment of Gastric Ulcer. Boardman Reed.
- 99.—Chemical Examination of Urinary Sediments and Albuminous Urine. A. Robin.

Medical Mirror (St. Louis, Mo.), May.

- 100.—What the World Owes to Vaccination. J. F. Marchand.
- 101.—*Intestinal Antiseptics by Means of Chlorin Water in Typhoid Fever. O. D. Fitz-Gerald.
- 102.—Fernand Henrotin, M.D. I. N. Love.

Medical and Surgical Bulletin (Nashville, Tenn.), May.

- 103.—Two Weeks' Experience with Cancer. M. C. McGannon.
- 104.—Amputation of Breast After Method of E. J. Senn. T. J. Happef.
- 105.—Report of Case and Operation Under Difficulties. J. B. Jackson.

Denver Medical Times, May.

- 106.—*Transscapular Amputation. N. Senn.
- 107.—*Practice of Medicine and Surgery in the Higher Altitudes. R. Harvey Reed.
- 108.—Presentation of Code of Ethics. W. P. Munn.
- 109.—*Patient in Colorado. E. P. Hershey.

Richmond Journal of Practice, April.

- 110.—How Can the Physician Rest Collect His Fees? R. L. Payne and S. W. Dickinson.
- 111.—Clinical Microscopy in Diseases of Respiratory Organs. H. Stuart MacLean.
- 112.—Difference in Cause, Symptoms, Results and Treatment of Grip and Colds. Wm. S. Gordon.

Columbus Medical Journal, May.

- 113.—*Treatment of Pulmonary Tuberculosis by Collapsing the Lung. Sherman Leach.
- 114.—Pneumonia and Its Treatment. S. C. Dunn.
- 115.—What We Want from Doctors. W. F. Oldham.
- 116.—Address on Behalf of the Faculties at Eighth Annual Commencement Ohio Medical University. Otto Arnold.

Peoria Medical Journal, May.

- 117.—Eye-Strain as Cause of Simpler Eye Disease. Charles D. Thomas.
- 118.—Study of the Hand for Indication of Disease. Charles H. Brobst.
- 119.—Pulmonary Tuberculosis. B. T. H. Stetter.

The Stylus (St. Louis, Mo.), May.

- 120.—*Limitations of Tuberculosis. (Concluded). William Porter.
- 121.—*The Therapy of Miscarriage. R. B. Turner.
- 122.—Valedictory to Graduating Class of Beaumont Hospital Medical College. Walter B. Dorsett.
- 123.—Cyanosis Neonatorum. John A. Hale.
- 124.—Use of Creosote in Treatment of Malarial Conditions in Children. L. P. Walbridge.

- 125.—Recent Improved Methods in Stomach Diagnosis. (To be continued). M. D. Schmalhorst.

Obstetrics (N.Y.), May 1.

- 126.—Bacteriologic and Clinical Researches with Reference to Slight Elevations of Temperature During Puerperium. K. Franz.
- 127.—On Treatment of Abortions. J. S. Boer.

International Journal of Surgery (N.Y.), May.

- 128.—Rupture of Liver and Gall-Bladder. Carl V. Vischer.
- 129.—Up-To-Date Treatment of Fractures. H. L. Stickney.
- 130.—Technique of Surgical Gynecology. (Continued). Augustin H. Goelet.
- 131.—Regional Minor Surgery. (Continued). George G. Van Schaick.
- 132.—Treatment of Fractures. (Continued). W. L. Estes.
- 133.—Treatment of Large Caliber Urethral Impediments. Ferd. C. Valentine.
- 134.—Enchondrosis; Compound Comminuted Fracture of Skull; Acute Appendicitis; Appendicitis with Perforation of Appendix, and General Septic Peritonitis; Hysterectomy; Ovariotomy; Tubo-Oophorectomy; Exploratory Laparotomy. George P. Morgan.
- 135.—Heroin in Surgical Practice. J. Wiesner.
- 136.—New and Simple Method for Surgical Treatment of Hemorrhoids. C. S. Parkhill.
- 137.—Attitude of Accident Insurance Companies Toward Railway Surgeons. M. C. Day.
- 138.—Railway Surgeon and Lawyer. (Continued). W. K. Vance.
- 139.—Medical Suggestions. (Continued). Thos. H. Hancock.
- 140.—Importance of Railroad Hospitals. J. M. Thoma.

Carolina Medical Journal (Charlotte), May.

- 141.—Report on Progress of Rhinology and Laryngology. Edward F. Parker.
- 142.—*Surgical Treatment of High Myopia, with Report of Case. Charles W. Kollock.
- 143.—Abscess of Liver, Operation, Recovery. Wm. M. Love.
- 144.—Epidemic of Polymyelitis. W. P. Ivey.

Georgia Journal of Medicine and Surgery (Savannah), May.

- 145.—Amputations from Standpoint of Railway Surgeon. W. H. Elliot.
- 146.—Abdominal Versus Vaginal Section. J. G. Carpenter.
- 147.—Hydrophobia and Necessity for Pasteur Institute in Georgia. Henry R. Slack.
- 148.—Ovarian and Tubal Disease as Factor in Excessive and Prolonged Menstruation. Edward N. Liell.
- 149.—*Pseudoleukemia—Report of Two Cases. A. H. Ohmann-Dumesnil.

Canadian Practitioner and Review (Toronto), May.

- 150.—Some Cases of Intestinal Obstruction and Strangulated Hernia and Their Treatment. A. T. Hobbs.

AMERICAN.

1. **Microbes—What Are They?**—Graham holds that the bacteria are low forms of life, derived from the protozoans, and that they are practically identical with these simple forms of animal life.

2. **Estivo-Autumnal Fever.**—Yeazie discusses the treatment, the main stay of which is quinin, that must be taken in forms easily absorbed. Aside from quinin, the treatment should be expectant, and the patient should be closely watched. During an epidemic or where the disease is prevalent, small doses of quinin aid the prophylactic effect. Those subject to malaria should avoid night air, keep their systems in order, drink wholesome water, and secure a proper amount of sleep under a mosquito-netting. He gives also his reasons for considering the disease entirely malarial. See also abstract in THE JOURNAL of June 2, ¶ 11, p. 1436.

3. **Furunculosis.**—Langemann holds that in addition to the ordinary cause by the invasion of staphylococcus aureus into the skin, there is a nervous element in the production of furunculosis, and thinks that it is possible that this is present in all cases. The method of treatment described is the galvanic current. The cathode is placed on the furuncle, the anode somewhere in the neighborhood, and a current of 2 to 5 milliampères is applied for from five to ten minutes. As a rule, one sitting daily is sufficient. Lacking the galvanometer, the sensation of the patient may be taken as a guide; the feeling of a lively sting at the center of the boil, just as much as can be tolerated, indicates about the proper strength of the current. Almost all furuncles, when thus treated in their incipency, abort. When a little pustule has been formed, this mass of pus is extruded, but no suppuration follows, and even in more advanced cases it is diminished. Where there is extensive suppuration, he uses a flat pledget of cotton, soaked in 1 to 1000 sublimate solution between the sponge and the skin. Under this treatment, some boils disappear after one or two applications, others require as many as eight. On the average,

four or five are sufficient. He notices the literature in regard to the use of electricity for boils or similar conditions, and only one author, Bigelow, speaks expressly of the use of galvanism for this purpose.

4. Blood Diseases and Surgery.—The various blood conditions are discussed in their relation to surgery. Simple anemia frequently complicates surgical disease, and when it exists to any marked extent, should contraindicate extensive operation. Mikulicz insists that operation should not be performed when the percentage of hemoglobin has fallen below 30. Symptomatic anemia is a condition complicating various disorders, especially of the gastro-intestinal tract, and, while it is of less importance from a surgical point of view, the preliminary disease must be looked after. Chlorosis is another condition which, when serious, is a contraindication to surgical operation. In malignant anemias, no surgeon would operate, though in Hodgkin's disease there may be a possibility of benefit from operative treatment, and he reports a case. The importance of leucocytosis as a symptom of pus formation is noticed and the conditions in which it occurs. The treatment of anemias depends largely on the use of iron, and Van Schaick gives the report of cases so treated.

5. Diphtheria.—The points made on diphtheria, by Jervoy, are the occasional atypical course of the disease, the existence of what is called latent diphtheria, and the occurrence of a mild chronic type, with or without membrane, though when this occurs it is usually limited to the nose and nasopharynx. He reports a case and refers to a similar one reported by Baber, of London, as supporting the existence of this type, which is not conceded by writers of all modern text-books. In some forms of this disorder, it is not possible to positively diagnose the disease, and he mentions the complications with other conditions and the possible relationship between rheumatism and diphtheria, believing that the diphtheria bacteria may sometimes be responsible for rheumatism. He points out what should be regarded as suspicious in any case, difficulty of swallowing, fever, enlarged glands, and albumin in the urine. For treatment, he speaks of the method of preventing infection and the use of antitoxin for prophylactic and therapeutic purposes.

7. Insane Hospitals in Mental Diseases.—Paton points out the value of pathologic studies in insane hospitals and the necessity of giving personal daily attention to the condition of each patient, also the need of keeping in touch with the scientific work throughout the world. The method of employing internes, as at the Worcester Hospital, is commended as a course that should be followed. He thinks that the future study of mental diseases in America will be governed by the answer to two questions in regard to hospitals: 1. Will these institutions demand and employ only the best and most skilled workers who can be found? 2. Having obtained their services, will these institutions give any return in the way of time, opportunity and facilities for working out these problems on which will depend so largely the welfare and happiness of the whole human race?

8. Genito-Urinary Diseases.—Guitéras describes his method of examining and recording cases of diseases of the genito-urinary tract and publishes his case-blank and schematic plans.

9. Registration of Tuberculosis.—Flick considers that the first step in the prevention of tuberculosis is registration. The disease is contagious, that is, its germ goes from one host to another without passing through any intermediary host or culture-medium, and this point must be considered. The intensity of the contagion is in proportion to the intimacy of contact. In every sense it is contagious, and in none infectious. The individual liability is to be considered and the intensity of contagion is not as great as that of exanthemata, but it more than makes up for this by its duration. If tuberculosis lasted no longer than smallpox or scarlet fever it would probably die out, but its contagion is a lasting, not a temporary, one. He maintains, therefore, that it should be as much subject to registration as are other diseases which have long been thus treated. If tuberculous patients decline to enter sanitariums and hospitals, the contact can be sufficiently controlled for pre-

ventive purposes by the enforcement of specific rules, and maintenance of personal cleanliness. Lack of attention to this should subject the individual to commitment to a hospital or sanitarium. He claims that fomites are a frequent means of spreading the disease, and that the efforts that are made at present in the way of prohibition of spitting, etc., are misdirected. Spitting is a necessity for the consumptive, so he demands that it should be prohibited only in public places, street-cars, sidewalks, etc. In conclusion he says that without registration the prevention of tuberculosis can not be placed on a scientific basis because the requisite data can not be obtained, and that registration is necessary in order that: 1. contact may be controlled; 2. the creation of fomites may be prevented; 3. fomites may be sterilized and 4. innocent parties may be given an opportunity to protect themselves against contamination in dwelling places. Many cases of tuberculosis are undoubtedly contracted in contaminated houses, and this mode of distributing the disease can not be stopped in any other way than by registration.

10. Asthma.—By asthma, Faulkner means a spasm of the bronchial tubes, and peribronchial hyperemia, approaching or amounting to inflammation, accompanied by rales on both inspiration and expiration and great difficulty of breathing. The term is applied to the paroxysm alone. Different forms of it are discussed, and, in the treatment, he suggests the local use of strychnia by intralaryngotracheobronchial injection, of from .02 to .25 gr., *pro re nata*, not often than twice in twenty-four hours. To prevent the return of paroxysms, he advises exercise of the respiratory muscles; removal of all exciting causes and toxic influences, such as dust, irritating plants, odors, etc.; the restoration of general good physiologic conditions of digestion, respiration, circulation, nervous system, etc.; removal of reflex irritation, nasal, rectal, and uterine; relief of bronchial hyperemia and bronchitis; repair of emphysema, and climatic suggestions. Asthmatics should wear woolen undergarments throughout the year, and their skin should be stimulated by salt baths and friction. Climate is largely a matter of individual peculiarity.

11.—See abstract in THE JOURNAL of March 31, p. 815.

12. Prognosis in Fractures.—The general assumption that simple fractures do well is questioned by Herrick, and he points out the need of acquainting the patient in regard to the state of affairs, so that a perfect understanding may exist, and that that which is broken can never be restored without leaving some blemish. No man should ever say to his patient that his leg will be as good as ever, for it will not be, and he should be made to anticipate the surety of a permanent defect as a natural consequence of a broken limb.

13. Arsenic in Cancer.—The method recommended and described by Trunczek consists in the use of an alcoholic solution—50 per cent. alcohol, 50 per cent. distilled water—of arsenious acid the strength of 1 to 150, which is painted over the surface of the cancer with a brush. The eschar gradually becomes black and finally detaches itself and is thrown off after repeated applications of the solution, the strength of which is gradually increased up to 1 to 50. After it has fallen off, another application is made and if a yellow crust is produced which is readily detached without hemorrhage, nothing further need be done; but if a dark, undetached eschar appears, the treatment should be continued until the last cancerous cell has disappeared. Trunczek describes two cases that were cures, and sums up the mechanism of the treatment as follows: 1. The cancer cells are first of all dehydrated by the alcohol, and then their protoplasm coagulates in the presence of arsenic. 2. The cells of cancerous connective tissue—cancerous stroma—degenerate and provoke a serous exudation, which in its turn determines alteration in the cells mummified by the arsenic. 3. In the surrounding healthy tissue a circumscribed inflammation is set up by the remedy, which always goes on to suppuration, and by means of which the neoplasm is first cut off from the circulation, and is finally eliminated from the organism as a foreign body.

14. Cystic Tumors of Testis and Epididymis.—Bullitt describes the types and variations of hydrocele and epididymal cysts and illustrates by schematic drawings. He thinks that

the epididymal cysts may originate as retention cysts due to dilatation of seminal tubules, as new formations in the connective tissue from rupture of one of the tubules, and from certain fetal relics such as the parapitidymis, vestiges of the duct of Mueller and the vas aberrans. These cysts are slow in development and may cause such slight discomfort as to scarcely demand relief. Simple evacuation may produce a cure, or the injection of iodin or carbolic acid may be practiced, but the best method is to dissect them out.

15. Health Conditions in Hawaiian Islands.—Davis describes the general topography and climatic conditions of the Hawaiian Islands, and the peculiarities of the population, and points out that in the city of Honolulu, owing to the mixed character of the population, some very unsanitary conditions have prevailed. While the island government is doing all it can to improve matters, there is much prejudice among the natives and Chinese residents that hinders their progress. When the sewerage system of Honolulu is complete, the marshes and stagnant waters filled up and the breeding of animals stopped in its limits, it will be the garden city of the world.

16, 17, 18, 19. Medical Education.—Eliot discusses the methods of medical education and points out the advantages of newer methods, or rather of the inductive method. He believes that a four-year course will not suffice unless methods can be improved and instruction condensed, but hopes that they may succeed in so doing. Councilman describes the methods of pathologic instruction of the Harvard Medical College in detail, showing its advantages and difficulties. The things that are prominently brought out, according to him, are: 1. That the mind of the student must be active and not passive. That he can only acquire knowledge by his own powers of observation and deduction; he can not acquire it by being told things. 2. That teaching should be individual as far as possible. That the central idea should be to give opportunities to the student, and to assist him in the effort which he himself makes. 3. That medical education should not be directed solely to teaching the medical art, but education in its true sense, the development of the individual, must not be lost sight of. Cannon speaks of the case method of medical teaching as viewed by the student. Burrell insists on the importance of the student acquiring as well as simply receiving knowledge, and thinks that the most marked advance is the use of the case method of teaching surgery. It will counteract the danger of making surgery too mechanical, as is the tendency of the present day.

20. Section Teaching.—According to Wentworth, the disadvantage or objection to section teaching is the large number of instructors required; the suggestion that it should be substituted for clinical lectures is also objectionable. That it may be injurious to patients or that lack of clinical material may interfere with such a course, is not probable, while its advantages are that it requires the students to do most of the work, and they learn systematic methods of examination, to state results, to make provisional diagnoses and defend them, and in this way to express their opinions. He thinks that it would be difficult to overestimate the value of such a course when combined with competent instruction.

21. Membranous Colitis.—According to Thomson, membranous colitis is not, as sometimes held, a nervous disorder, as it may be entirely independent of any antecedents of neurotic order. Its pathologic and clinical symptoms, however, do not point directly to the nature of the disease, but rather to what it is not. It is different from ulcerative colitis or catarrhal inflammations of any kind. It may be due to local irritations of various character; pressure of a uterine fibroid or horseback riding has been known to produce it, but the most common cause is prolonged retention of hardened scybala. The first indication in the treatment is to relieve the symptoms, and nothing is so soothing for the tenesmus, the cutting and bearing-down pains, and general abdominal distress as free irrigation of the colon with normal saline solution, to which may be added five drops of oil of peppermint to the pint. Three to five gallons with a temperature of 100 F. may be employed with Kemp's rectal irrigator, once in twenty-four hours; care must be taken, however, that

all the fluid is returned. In some cases, he has derived benefit from using, at the end of the irrigation, a gallon of water in which from 60 to 100 gr. of resorcin has been dissolved, being careful that it is all expelled afterward. Once a week a pint of clean water with 30 to 40 gr. of silver nitrate may be used instead of the resorcin. Unfortunately all this is not curative, but it should not be omitted from the treatment. The best medicinal remedy is the small alterative dose of castor-oil. He gives it in emulsion, in which each tablespoonful contains from 5 to 1 dram of the oil, to be taken one-half hour before or one hour after meals. This should be continued for months and only intermitted when it seems to disagree. Nitrate of silver in quarter-grain doses combined with turpentin is sometimes serviceable when given three times a day. General indigestion is met with 5 gr. of resorcin in a solution of tinctura nucis vomica, a half hour after meals, supplemented by 10 gr. each of sodium benzoate and bismuth salicylate, in capsules, one hour after meals as intestinal antiseptics. The dependence of the disease on chronic constipation should be kept in mind and salines used to meet this condition. Daily massage of the bowels and attention to diet are also important. He excludes beans, corn, spinach and woody vegetables, and encourages the patient to eat meat, poultry, eggs, etc., and most cereals. On general principles he advises out-of-door exercise and change of scene to the country if possible.

22. Tuberculosis.—Trudeau describes the sanitarium treatment at Saranac Lake and gives a table showing the results, which are certainly remarkable. Of 113 incipient cases, 82 were apparently cured, 25 had the disease arrested, 4 were improved and only 2 did poorly. In 151 advanced cases 27 were apparently cured, 67 had the disease arrested 43 improved, 13 failed, and only 1 died. Of 59 far advanced ones 12 were arrested, 26 improved, 16 remained stationary, and 5 died. These figures include only the patients who remained eight months on an average.

23.—See abstract in THE JOURNAL of May 5, p. 1132.

24. Pathology of Insanity.—Wise gives the position of the state commission in lunacy in regard to the questions that have arisen regarding the state pathologic laboratory. He publishes the report of a commission consisting of Drs. Cowles, Blumer and Councilman. Its conclusions are: 1. The Pathologic Institute should be maintained, but reorganized on a basis that shall have systematic teaching as its main function. 2. It should teach the fundamental principles whose study and application must lead to the clinical, anatomic and chemical research necessary for the advancement in the curative and preventive treatment of insanity. 3. It should have as its director a physician who has had a training in clinical psychiatry, besides being a competent pathologist. 4. It should be located on property of the State, in a building of its own, as near to the metropolitan medical schools as is practicable. 5. As an essential of its teaching function its building should adjoin, or be a part of, a small hospital for the insane for the reception of acute cases and other appropriate for investigation. 6. Entrance into the medical service of the state hospitals should be conditioned upon previous training in the Pathologic Institute.

27. Stricture of the Rectum.—Krouse believes that non-malignant rectal strictures are more frequent than has been generally held and reports six cases. He does not find them always situated near the anus, but more often beyond the reach of the finger. In 20 cases, 12 were situated high up near the sigmoid flexure, 6 only near the anus.

29. Alcohol.—Trimble rejects the idea of alcohol as a food, and believes that its evil effects should remove it from any such category even when it is advantageous to a slight extent. Its use in medicine is discussed. He concludes by giving the rules of Armstrong, sanctioned by Graves, regarding the use of alcohol in fever, which he says have the general indorsement of the profession. 1. If the tongue becomes more dry and baked, alcoholic stimulants generally do harm; if moist, they do good. 2. If the pulse becomes quicker, they do harm; if slower, they do good. 3. If the skin becomes hot and parched, they do harm; if more comfortably moist, they do good. 4. If the breathing becomes more hurried, they do harm;

if more tranquil, they do good. To these Ringer adds a fifth: Alcohol does good when it produces sleep and quiets delirium.

31. **Epithelial Growths.**—Engman speaks of the treatment of warts, condyloma acuminata, verruca senilis, epithelioma and rodent ulcer, and tuberculosis verrucosa cutis by formalin. He first cleans and softens the surface to be treated with hot water, benzoin, salicylic acid plaster, etc., sometimes with peroxid of hydrogen, and cocainein, if necessary, before applying the formalin. He has had success in nearly all these conditions when this method was used.

34. **Vasectomy.**—Harrison states that vasectomy has been shown to be especially effectual in the earlier stages of prostatic enlargement by effecting shrinkage of the glands and the restoration of the natural processes; that in cases where there is evidence to show that the prostate has in its degeneration assumed the form and structure of a fibrous growth, the conditions are such, provided the symptoms of obstruction warrant the adoption of other measures than catheterism, as to render some form of prostatectomy preferable to either vasectomy or castration; that where as a sequence of sudden or protracted prostatic obstruction secondary changes have taken place in the bladder itself, in the form of sacs, pouches, or trabeculation, the possibility of restoring its natural function by any means is extremely unlikely. Under such circumstances, the induction of shrinkage of the enlarged gland will do good in affording a readier access for the catheter and in removing spasms, pain or hemorrhage connected with this or other similar processes.

42. **Life Insurance Examinations.**—Adams calls attention to the importance of more thorough protection of the applicant for life insurance, in order to avoid excluding him when there may be conditions only temporarily suspicious. He suggests that the agent of the company or the family physician of the applicant should call his attention to the fact and that he be allowed a prior examination before going before the company. The various possibilities of mistake or injustice from urinary examination, for example, are discussed. No applicant should be rejected in reality, because he should know his condition in advance, and if there is a risk he should not apply.

44.—See abstract in our Therapeutics Department this week.

46.—Ibid.

51. **Urinary Anomalies.**—The first of the anomalies noted by Brown is the "simulative nephritis" occurring after operation on the kidney, by which he means a condition of the urine accompanied by blood-cells, numerous granular hyaline casts and considerable albuminuria immediately following operations of nephrectomy or nephropexy and clearing up afterward. None of the other symptoms of nephritis are present. The casts appear for only a few days at the most, and in all the cases the urine is perfectly normal before the operation. He discusses the possibility of the ether anesthesia and handling of the kidney as factors, and thinks it likely that of these the stitching and handling are the most important. The second condition noticed is that of post-operative glycosuria, he mentions three cases of this and thinks it probable that many would show this symptom, if properly examined. Lastly, he mentions a case of simulated diabetes in which sugar was found in the urine, but careful examination showed that it was cane-sugar and the case was one of factitious mellituria. He mentions this as the first case of which he has heard where diabetes was wilfully simulated.

52. **Acute Leukemia in Childhood.**—The case reported by McCrae was in a male, aged 3 years. He reviews the literature of similar cases and analyzes the symptoms of this rather rare condition. He emphasizes the importance of careful study of the anemias of early life and more careful attention to blood examination in diseases of children.

53. **Stone in the Bladder.**—Cabot remarks on the difference of opinion as regards the future of litholapaxy and discusses the operation, which is the one of choice in all his cases except in a few instances where for some reason it could not be used. He has done litholapaxy 122 times, suprapubic lithotomy 12, and perineal lithotomy once. In his 122 litholapaxies 6 patients died within a comparatively short time after operation. He details the cases to show that no other operation

could have afforded a better chance of life. In his whole series, he has had but one serious accident and that was rupture of the bladder, and the patient recovered. The fear that many surgeons have of nipping the bladder wall is without basis and can be wholly avoided by having the bladder contain a proper amount of fluid and operating in the center of the base of this organ. The disadvantages of perineal lithotomy are occasional impotence, occasional stricture, and rarely also fistula. Recurrence of stone after litholapaxy, he thinks, is not a serious danger if care is used in washing out the bladder ten days or a fortnight after the operation. In conclusion, he reproduces the exceptions to this operation, which he published in 1889, and states that he has no reason to change his belief as to the value of litholapaxy in all other cases except where exist coincident lithobronchitis or other conditions rendering etherization dangerous. His mortality of 4 per cent. in a series of patients averaging 60 years of age is considerably less than can be expected from suprapubic lithotomy in a similar class of patients, and the avoidance of fistula and shortened convalescence are decided advantages.

54. **Recurrent Monstrosity.**—Under the head of "A Problem in Antenatal Pathology," Ballantyne reports the case of a woman, with congenital family tendency to malformation of the thumbs, who bore 7 children: 2 males and 1 female normal, 4 females either still-born, deformed, or congenitally weak and incapable of being raised. The anomalies of the thumbs were present in 3 of the children. The first 2 were boys and healthy, therefore, the tendency to producing defective births appears to have been to some extent acquired.

55. **An Improved Alexander Operation.**—Goldspohn describes a method of shortening the round ligaments. It resembles a modified Bassini hernia operation rather than the original one by Alexander. The celiotomy element is, he claims, necessary at least to the extent of careful digital exploration, in the shortening of every single round ligament in order to be sure no obscure formations or adhesions exist, and that there is no diseased condition overlooked; and that the round ligament proper pulls from the fundus uteri and not from the lateral portion of the broad ligament. The technique is described in detail, with a list of forty-nine cases operated on during 1897 and 1898. The advantages, aside from those already mentioned, are the practically no mortality, absence of hernia in normal conditions, chance of relieving other disordered conditions, the possible saving of the patient from a complete abdominal section and the freedom of any feature that will prevent functional activity of the genitals in after life.

65.—See abstract in THE JOURNAL of March 24, p. 750.

66.—Ibid.

67.—See abstract in THE JOURNAL of March 10, p. 622.

72. **Popular Medicine.**—McCraw's article is a criticism of the teaching of physiology in the schools and the popular education in medicine. He thinks that there is too much of the little knowledge that is a dangerous thing, and that many troubles are largely overworked in the popular information, as even in hygiene there are no universal rules that can be laid down.

74. **Neuroses in Children.**—Holmes calls attention to the defective methods of education as a cause of neurasthenic troubles in children and gives the following factors as of importance: 1. The neurotic condition not properly recognized by teacher or parents. 2. Failure on the part of principals or superintendents of schools to recognize the different abilities, etc., of different pupils. 3. Neglect of parents to study the mental peculiarities of their children to tell when the danger point is at hand. 4. The impossibility, under the present condition of medical practice, of properly instructing parents and teachers in regard to the dangers which beset the neurotic child.

75.—See abstract in THE JOURNAL of February 17, p. 428.

77.—See abstract in THE JOURNAL of March 10, p. 623.

78. **Intestinal Sand.**—Georg remarks on the rarity of reports of this occurrence and notices the leading cases in the literature. He then reports a case of his own observation and finds that the organic material which has been noted in the majority of cases reported as intestinal sand is vegetable

derenchyma. The variety depends on the nature of the food. The true intestinal, like biliary or renal, sand is formed by a deposit from the secretions of the living body, and consists largely of the salts of lime, magnesium and ammonium, but the greater proportion of the so-called intestinal sand consists largely of the above-described vegetable products and a secondary deposit of a small amount of inorganic salts, including a few silicious particles.

79. **Ethyl Bromid.**—Parker speaks of the value of ethyl bromid as an anesthetic, his own experience having covered about one hundred cases in ophthalmic practice. He has never seen any untoward effects and thinks that we have in it an ideal anesthetic for general obstetric work and short operations, and that it is at least as safe as ether and chloroform and without their disagreeable features.

80. **Electricity in Menstrual Derangements.**—The following are the deductions of Campbell in regard to the use of electricity in menstrual disorders. 1. That electricity properly applied will always relieve pain. 2. That it will lessen excessive discharges. 3. That it will increase the menstrual flux if deficient. 4. That it is sedative, astringent, tonic, alterative, hemostatic or congestive according to the pole in action. 5. That it fills every indication in the treatment of derangement of that important function—menstruation.

81. **Therapeutics of the Nitrites.**—Parker reviews the uses of the nitrites as vasodilators in disorders of the arterial system such as angina pectoris, asthma, arteriosclerosis, Bright's disease, etc. He thinks that the size of the dose is of much importance; and that the usual method of administering 1 or 3 minims of amyl nitrite is in every way satisfactory, but that there is much fault to be found with the ordinary methods of administering nitroglycerin. Nearly every one begins with 1/100 gr. and increases it gradually; he thinks his amount too large, and has seen just as satisfactory results from half that dose, and without the disagreeable after-effects. He believes another fault is the common custom of combining nitroglycerin with digitalis, which is wholly unscientific and logical, since the action of one is immediate and temporary while that of the other is slow and continuing, and so to get benefit from the one, the other is liable to be used too liberally.

85. **Coccygodynia.**—After calling attention to the apparent neglect which this condition has received of late and its lack of mention in some recent text-books, such as those of Fritsch and Veit, Hirst describes the etiology and pathologic anatomy, as he understands it, also the symptoms and diagnosis. The technique of the operation is thus described: The skin over the coccyx is cleansed by the operator after the patient has been anesthetized. A straight incision is made in the raphe from the tip of the coccyx to the end of the sacrum, down to the bone. The tissues are separated by retractors, and, with heavy scissors, sharp-pointed and curved on the flat, all the soft structures are cut loose from the bone. The forefinger of the left hand inserted under the bone acts as a guide and protects the rectum. If there is ankylosis of the sacro-coccygeal joint, it is difficult to tell when the top of the coccyx is reached, and the mistake of leaving the coccyx behind is often made. The apex of the first coccygeal bones are the best guides. The dissection must extend above these points. Into the cavity beneath the isolated coccyx a sponge is stuffed to catch fragments of bone or bone dust and to control hemorrhage. A chain saw is now slipped under the bone and pushed up so that it takes off the tip of the sacrum. Two or three to-and-fro movements sever the bone. The one vessel as a rule requiring ligation is the median sacral artery, which is tied with catgut. A drain of five strands of silk-worm gut is laid in the rather deep wound, which is united with five or six interrupted silk-worm gut sutures. The wound is scarcely distinguishable from the raphe after a few weeks.

86.—See abstract in THE JOURNAL of April 7, p. 876.

87. **Perforation in Typhoid.**—The following is the summary of Davis' article: The diagnosis is not always easy. A decided and sudden increase, especially of pain, in the abdominal symptoms associated with an abrupt fall of temperature, is diagnostic of perforation. Leucocytosis is likewise a confirmatory sign. Hemorrhage is accompanied with sudden fall of temperature, but not by a sudden increase of abdominal

symptoms. Dulness in the right iliac region is not to be expected in cases of perforation. Localized impairment of resonance may be due to free abdominal fluid; change of position causes it to disappear. Localized pain and dulness may be due to a plastic peritonitis around the site of perforation. This may be observed in one case in ten, possibly one in five. It is impossible to recognize that a perforation is about to occur, and it is not necessary to operate before it does, but it is before collapse is marked. Typhoid fever patients when not in total collapse bear operation much better than was expected. Patients operated on in marked collapse are liable to die on the table. Washing out the abdominal cavity with hot normal salt solution, even if no perforation is present, seems to improve the condition of the patient at the time of operation, and to favorably influence the subsequent course of the disease. We should operate as soon as the diagnosis of perforation is made. It is less danger for the patient to run the risk of having an operation done during the first period of depression than to wait and run the risk of having collapse preclude all operative measures. In operating incise as for appendicitis, and not in the median or semilunar line.

95. **Diabetes.**—Beck thinks it highly probable that many cases of diabetes are due to bacterial influence. He bases this belief on the non-existence of uniform lesions after death, occurrence of disease between certain ages, its repetition in more than one member of the same family at the same time, its occurrence in certain races, the Jews for instance, and its endemic form in certain countries. He thinks that the soil suitable for the growth of diabetes is found in certain neurotics, drunkards, masturbators and drug habitués. The formation of such toxic substances as acetone and diacetic acid may be the direct outcome of bacterial activity. A systemic disturbance allows bacterial invasion and growth, and it in turn produces a poison which gives rise to further metamorphic disturbances. It may be that the production of fermentation in the intestinal tract by the bacteria is an intermediate stage in the formation of the diacetic acid. These toxic substances may originate during this stage, but not before its occurrence. He reports a number of cases treated in accordance with his theory, using liquor auri et arseni bromidi with apparently good results.

101.—See abstract in our Therapeutics Department this week.

106. **Transscapular Amputation.**—Senn reports two cases of malignant disease of the humerus, in which operation was performed by sawing across the neck of the scapula instead of removing the bone as a whole. He thinks that in this surgeons have gone rather too far and that in the future a distinct line must be drawn between cases in which it is absolutely necessary to remove the entire bone and a part of the clavicle and those in which a radical operation can be performed by resorting to transscapular amputation. One of his cases was also of interest as being a recurrence after twelve years, reproducing the same histologic picture as in the first infection.

107. **Medicine and Surgery in High Altitudes.**—After giving a general description of the climate of Wyoming, Reed describes some peculiarities of medical practice in this region. He finds a striking difference between medical and surgical cases in these high altitudes from those of lower level. The extreme bodily temperatures are notable; he has seen them range between afternoon and morning from 107 to 96 without any serious effects. In typhoid, hemorrhages are frequent and sometimes apparently serious and yet a good recovery occurs. In pneumonia, the low atmospheric gravity favors pulmonary congestion, which if not promptly relieved passes to hepatization and death by asphyxia. Frequently capillary pulmonary hemorrhage occurs and is a relief. Capillary bronchitis is a very common and fatal trouble in children, and the extreme dryness of the atmosphere desiccates the pulmonary secretions and makes it often necessary to moisten the atmosphere of the sick-room. Intestinal complications are also frequent. There are no two other diseases probably so fatal in high altitudes as are capillary bronchitis and pneumonia. Pulmonary tuberculosis is almost unknown. Shock is very much less serious and rarer than in lower altitudes, and infection is less to be

dreaded. He reports cases showing the little danger from apparently very serious infection in this region. Dry powder dressings are not advisable, as moist ones are necessary. For anesthesia he discards ether, as it is too irritating at the high altitudes, and uses chloroform instead, excepting when it is necessary to give it as an anesthetic during shock.

109. **The Patient in Colorado.**—Hershvey advises the physician who wishes to recommend Colorado to his patient to observe the following rules. If the patient is bed-ridden, keep him at home. If it is a case of phthisis florida, Colorado is no place for him. If the pulse-beat is over 110, or there is a decided daily rise of temperature, guard your advice, and caution the patient only to try the climate. If there are large cavities, try a lower altitude than Colorado. Send the patient with a letter to some reputable physician, with the diagnosis and history of his case. Request a reply, placing the physician there on record. Advise the patient to take no exercise whatever until he has consulted his physician there. If the patient has incipient phthisis, do not wait until the disease becomes well advanced before sending him away. The earlier he reaches Colorado, the more decided are the chances for ultimate recovery.

113. **Tuberculosis.**—Leach calls attention to the value of the Murphy method of collapsing the lung, and reports two cases where it has been used to advantage.

120. **Limitations of Tuberculosis.**—The conclusions of Porter's article are: Tuberculosis is not a self-limiting disease, but belongs to the class of progressive and aggressive diseases, as nothing in it tends to recovery. It is limitable under certain conditions, which may be accomplished by sanitation and sanatoria and special hospitals in a general way, and in the individual by prophylaxis and early diagnosis, repair and restoration to normal function, by antiseptics and germicides and lastly by the production of artificial immunity. He has used the antiphthisic serum T. R., but does not use tuberculin, which he considers dangerous.

121. **The Therapy of Miscarriage.**—Turner does not believe in active interference in cases of abortion, and if the case is progressing favorably he would let it alone. If, after expulsion of the fetus, the afterbirth or membranes are retained by adhesions, and hemorrhage develops, he would introduce a Sims' speculum through which he could tampon the vagina with absorbent cotton, thoroughly pressing it up so as to control the hemorrhage, and allow the patient to rest. After fifteen or twenty-four hours he would cautiously remove the tampon. In a great majority of cases, the retained matter is removed with the fetus, and the ease is practically through. In cases where the placenta is still retained, however, and the hemorrhage recurs he would re-tampon and use the faradic current to the fundus of the uterus. When the tampon is now removed, he would expect to find the uterine contents following it, or protruding from the os. By this method the patient is kept quiet and hopeful without nervous irritation or anxiety, and there are no wounds or abrasions to be treated and no open avenues for septic infection. In his experience of over thirty years, he has followed this treatment and has no ill results to record.

140. **High Myopia.**—Kollock concludes that operation is justifiable in most cases of 12 D. and over, in which degenerative changes have not caused floating bodies in the vitreous, retinochoroiditis, hemorrhage and beginning retinal detachment. The existence of these changes in a passive state should not be a contraindication in all cases. The best results will be obtained in children, young adults and in those whose parts are in a healthy condition. In all cases, dissection should be performed a number of times in order that the absorption of the lens may be given a fair chance, which abates the dangers of retinal hemorrhage and detachment and does not seriously increase that of infection. Detachment and retinal hemorrhage are less apt to occur if the condition change gradually. The results in the way of increase of visual acuity and field far more than counterbalance the danger of operation when proper precautions are used.

147.—This article has appeared elsewhere: see abstract in THE JOURNAL of April 28, p. 1055.

FOREIGN.

British Medical Journal, May 26.

Vaginal Hysterectomy for Uterine Prolapse. R. C. CHICKEN.—In this operation, it is aimed to secure a peritoneal adhesion high up so as to supply a new pelvic floor. The plan he recommends is a removal of only a part of the uterus and the unattached portion of the posterior fornix. In complete prolapse, the fundus of the uterus by its descent carries the posterior half of the bladder and ureters with it, so that the posterior wall becomes the anterior, and the anterior walls and sides are covered by the bladder and ureters. To guard against accident in operating, made liable by this condition, a sound is passed backward and downward into the bladder as it lies exposed in front of the uterus. The continual dexterous manipulation of this by an assistant shows the limits of the bladder. By the means of scissors, the bladder is dissected off the sides and cervix, the incision being in the uterine tissue; the points are now turned sharply backward and the uterus cut across at the level of the cervix and Douglas' pouch. Two fingers of the left hand are passed through into the peritoneal cavity, the uterine fundus is seized, retroverted, drawn down and amputated at the point of peritoneal reflection on its anterior surface, the broad ligaments having been previously seized with forceps and ligated. There is now left, attached to the base of the bladder, a solid piece of uterine tissue. On the breadth and firmness of union which this is able to make, enabling it to resist the downward pressure in micturition and defecation, depends partly the success of the operation. At this stage there is left the cervix and os uteri, hanging on to a long flap of mucous membrane and peritonium, which is the stretched and useless posterior fornix. This is cut off close to the base, and to this raw surface at the base of the pelvis, the stump of the uterine tissue is easily brought in contact after the bleeding has been stopped and a posterior fixed attachment is secured. The parts are retained in position by gauze tampons. With this operation, he claims there is a broad firm union of fixed inelastic tissue to give fixed support to the neck of the urinary bladder. The points of advantage are: 1. A solid piece of uterine tissue remaining. 2. The transverse cut across the uterus, allowing of easy retroversion of fundus and facility of applying ligatures to vessels. 3. The removal of the whole of the floor of the Douglas' pouch. 4. The incision in the posterior fornix being made as far back as possible, the resulting scar admits of no "play" between the bony pelvis and the neck of the bladder. The only part where special care is required is the dissection involved in separating the displaced bladder.

Treatment of Puerperal Eclampsia by Diuretic Infusions. ROBERT JARDINE.—This writer reports the results of treatment in 22 cases of puerperal eclampsia by infusion of sodium chlorid and potassium bicarbonate or sodium acetate, to control the first spasms, and chloral and bromid as an immediate drug resource, and magnesium sulphate to clear the bowels. Hot applications were used to keep the skin active; but the most important part of this treatment is the saline infusions under the skin in the region of the breast, a dram of sodium bicarbonate or sodium acetate to the pint of normal saline solution, one to three pints being used at a time. Three of the 22 cases were hopeless from the first. Of the 5 deaths, including the 3 mentioned, 1 occurred from duodenal ulcer on the seventh day after treatment, the other from double pneumonia, gastric ulcer and acute enteritis. Omitting the ulcer case we have only 4 deaths in 22 cases. Of the 23 children, 10 were alive and 13 dead. In 2 cases they were macerated. Craniotomy and perforation were performed on 3, and 3 were too premature to live. Of the 10 full-term children, 2 were lost, as craniotomy had to be performed. No other treatment has given him as good results.

The Lancet, May 26.

The Wounded in the Present War. SIR WILLIAM MAC-CORMAC.—The writer reviews the surgery of the present war and compares it with the results of the Cuban contest. The Lee Metford and Mauzer bullets are practically the same in their effects, and the number of recoveries in the Transvaal War so far has been exceedingly large. At the beginning of the war, he did not anticipate any successful results from

abdominal surgery, and his experience has confirmed his opinion, though he did not realize the comparative immunity of abdominal wounds from these bullets. He knows of one patient who recovered in spite of operation. He thinks that a number of recoveries from abdominal wounds, when not interfered with, were probably due to the empty state of the intestinal tract at the time of the injury, and that the rule in the future will be to give patients a chance to recover without operation. In the case of chest wounds, the principle of non-interference and antiseptic dressing was still more strongly affirmed, and he illustrates by a number of cases. Uncomplicated gunshot fractures rarely required amputation and very few resections were practiced. He saw only one, and the result did not promise well. He also calls attention to the number of lodged bullets, which also agrees with American experience. He speaks against active interference to remove bullets, which are usually better left alone, and in this he disagrees with Sir William Stokes, whose reasons he considers altogether insufficient. He thinks that the place of the female nurse is at the hospitals, not at the front.

Operative Treatment of Simple Fractures. W. ARBUTHNOT LANE.—The author notices the inaccuracy of statements in surgical works as to the relative frequency of various kinds of fractures, and the incorrect explanation given of their causation, such, for example, as fracture of the acromion, which he believes is much more frequent than is usually recognized. He points out the mechanics of fractures and notices the alteration of the axes of the bones and consequent disturbance of function. He calls attention to a condition which he calls traumatic arthritis, due to displacement thus produced. The supposition that the surgeon is able to "set" fractures satisfactorily and restore the original forms and function of broken bones by simple manipulation and splints is a myth. He insists that in simple fractures it is important to the individual that the original form of the skeleton should be retained, without any alteration in its mechanism. The surgeon should, failing to secure accurate apposition as determined by radiographs, cut down on the site of the fracture and restore the bones to their original condition and hold them there by wiring or with nails.

Summer Diarrhea. F. J. WALDO.—Waldo points out that the most satisfactory hypothesis of the cause of summer diarrhea is in the dust from the streets, and that the most important element in this is the excretions from horses. Narrow streets, permeable pavements and dry hot weather are especially favorable to the condition. Heavy rains and clean streets are advantages, and, in the systematic street cleaning, we may look for the most potent remedies or means of prevention. Another way will be the increase of horseless carriages. Other unwholesome sanitary conditions must have attention. He speaks of the part that milk plays in the causation of this disorder and to the defective conditions existing in regard to its sale.

Congenital Word-Blindness. JAMES HINSHELWOOD.—Remarking first that he has already published four different papers dealing with distinct varieties of letter- and word-blindness, Hinshelwood describes another variety, showing that the subject is not yet exhausted. He reports four cases of what he calls congenital word-blindness, a defect of the brain which renders it almost impossible for the individual to form visual memories of words and letters. The first and second cases of this condition were rather marked, but the recognition of figures was in both, especially the second, much better than for words. In the last two cases there was no difficulty in figures, which he thinks indicates that these memories are registered in different portions of the cerebral cortex. He believes that these cases are by no means as rare as the absence of recorded ones would lead us to believe. The fact is they are not recognized and the children are whipped for stupidity, when the trouble is a congenital and only partially remediable defect.

Incubation Period of Plague. FRANK G. CLEMON.—The incubation period of plague is discussed by Clemon, who notices a number of cases bearing on this point. He concludes that the maximum period may be considered eleven or twelve days; where it is received by direct inoculation the period is not more than two or three days as a rule, and it

may be as short as twenty-four hours. He appears to favor the opinion that in cases where the interval between exposure and the onset of the symptoms has been several weeks, the virus has been preserved in fomites outside the body.

Inefficiency of Board of Trade Tests for Detection of Color-Blindness. F. W. EDRIDGE-GREEN.—Holmgren's method of testing for color-blindness is again considered by Edridge-Green, who says that persons with normal sight may be rejected by it, and he criticizes especially the directions by Holmgren that we should ignore color names. A color-blind person names colors in accordance with his color perception and he emphatically denies that the name is guessed, as is often stated. A person with central scotoma will escape detection by the Holmgren test, and the red end of the spectrum may be considerably shortened without causing a failure by it. He describes his own methods, which he calls the "classification test" and the "lantern test," both of which are described in detail in his work on color-blindness.

Revista Medica de S. Paulo (Brazil), April 15.

First Gastrectomy in Brazil. V. DE CARVALHO.—The success of the complete extirpation of the stomach in the observation reported warrants further intervention of this nature. The malignant tumor of the pyloric region had invaded the ganglia of the greater curvature, which showed in the preparation like a close row of large beads extending almost completely around this portion of the organ. The patient was fed with alimentary ementa and complained of great hunger. She is 46 years old, a mulatto cook, and will be kept under supervision.

Etiology and Prophylaxis of Typhoid Fever. VERGEMO.—The theory sustained by this writer, who has made a special study of the etiology of yellow fever in its haunts, is that the germs live in the infected subsoil of closely inhabited, unsewered towns. When they find a particularly favorable condition for growth—association with a fungus or whatever it may be—they become virulent and rise with the emanations from the subsoil and are inhaled or swallowed with the saliva after passing through the nose. He cites arguments to show that the immunity enjoyed by farms, plantations and sewerage towns built on a clean foundation can only be explained by this etiology, which also suggests prophylactic measures, avoiding exposure to emanations from the subsoil after sundown, etc., advisable also for the prophylaxis of malarial infection.

Bulletin de la Soc. Med. des Hop. de Paris, May 17 and 24.

Suppurative Cerebrospinal Meningitis. NETTER AND JOSTAS.—Nine recoveries from severe suppurative meningitis are reported. All the patients were treated by hot baths, 38 to 40 C., for twenty-five minutes every three or four hours, night and day. Lumbar puncture disclosed the Weichselbaum diplococcus in pure cultures, also in the majority of thirty non-suppurative cases. The lumbar puncture was repeated as a therapeutic measure after three or four days. Large numbers of the pathogenic germs were evacuated in the fluid; they had evidently settled to the lowest portion of the cavity.

Treatment of Pneumonia with Beer Yeast. P. MARIE.—The fine results obtained with fresh beer yeast or the extract, levulin, in furunculosis have been mentioned in THE JOURNAL. Marie recently had occasion to treat a patient with pneumonia complicated with severe furunculosis. In order to relieve the latter he administered yeast, and found that the pneumonia was also favorably affected by it. The patient rapidly recovered, though the prognosis had been grave. He has since given it to seven other pneumonia patients with equally favorable results.

Echo Medicale du Nord (Lille), May 13.

Cholera at Antwerp, 1892-4. E. TRETTOP.—This issue of the *Echo* is devoted to the study of the epidemic of cholera at Antwerp in the years mentioned. The apartments were disinfected with sulphur fumes after thorough saturation of the air with steam; the combination of steam and sulphur rapidly killed the germs. The proportion of recoveries from the disease varied from 44 to 62.7 per cent. in different years. The benefits of artificial serum were strikingly evident in a number of cases in which it was the only treatment.

Journal de Méd. de Paris, May 13.

Simple Methods of Sputa-Investigation. A. GIRARD.—A dissolving fluid for the sputa, with none of the disadvantages of the usual media, will be found in the alkaline hypochlorites of sodium or potassium, especially Javelle water. Treated with this fluid the ordinary histologic elements come out clearly, and concretions of mucus having the shape of pulmonary alveoles are also noted. The technique is extremely simple; no heat is required. The sputum is placed in about ten times its volume of good Javelle water, diluted to a third, and shaken. In fifteen to twenty minutes the nascent chlorin has completely dissolved the sputum and the fluid is then centrifugized and set aside to settle for twenty-four hours. The sediment contains all the solid matters in 2 or 3 cm. of chlorinated fluid. Five or six drops of normal solution of sodium or potassium transform the chlorin into sodium chlorid. The tube is filled with sterilized water and centrifugized again, the sediment spread on a slide and the preparation finished as usual by the Ehrlich method.

Presse Medicale (Paris), May 12, and 19.

Pathogenesis of Mitral Nanism. GILBERT AND RATHERY.—The special clinical type designated by these writers as mitral dwarfs was described in THE JOURNAL of June 2, p. 1441. They ascribe the etiology to a pure mitral stenosis, congenital or acquired very early in life. The heart is regulated to accomplish an abnormally small amount of work, and the entire body accommodates itself to this condition, as the function makes the organ. This adaptation is more or less complete, and hence the existence of malformations, anomalies in development. The nanism of the brain is shown in the special psychic conditions described. The chlorosis is due to the hypoplasia of the vascular system. A few similar instances of nanism have been observed with pulmonary stenosis and other heart troubles, showing that there is not only a mitral but a cardiac nanism. An organic lesion of the heart may thus exist and develop with no manifestations except those of a dystrophic nature, which at first sight would seem to have no connection whatever with the valvular affection.

Musset's Sign. A. DELPEUCH.—The biographer of Alfred de Musset mentions that, in 1842, a slight involuntary jerk of the head was noticed, accompanying each pulse-beat, "the first symptom of the affection to which he succumbed fifteen years later, a lesion of the valves of the aorta." Two Italians called attention to this sign of aortic trouble in 1895, and Delpeuch describes two recent observations in which this rhythmic movement of the head was the only symptom to call attention to the aortic lesion, of which it is pathognomonic. The rhythmic jerk is evidently merely the propagation to a distance of the attempt of the aortic arch to straighten out under the influence of the arterial wave, as the loss of elasticity—whether from an aneurysm or endarteritis—opposes an obstacle to the wave.

Progres Medical (Paris), May 5 and 12.

Resection of Superior Maxillary Nerve. R. BELIN.—A severe, rebellious neuralgia of two years' standing was completely cured last November by the simple method of resection of the superior maxillary nerve, described by Poirier in April. The scar is scarcely visible, and mastication has not been interfered with in the slightest. The method is based on the anatomic facts established that the upper edge of the pterygo-maxillary fissure is from 2 to 6 mm. above a horizontal plane grazing the superior border of the zygomatico-malar arch, while the external plate of the pterygoid process and the above fissure average about 4 cm. distance from the zygomatic arch. The pterygo-maxillary fissure is always perpendicular to the axis of the zygoma passing through the temporo-maxillary articulation, i. e., 1 cm. behind the angle formed by the axis of the zygoma and the external orbital process of the malar bone. The operation consists first in opening up the infra-orbital branch through a separate incision, taking it up on a thread and tying it. The superior maxillary nerve is then reached through an incision 4 cm. long, perpendicular to the zygomatic arch, at the temporo-malar articulation—avoiding the temporal artery. The temporal aponeurosis is then cut, and lightly loosened to the right and left. A small gouge, held

perpendicularly, is then worked through the fibers of the temporal and external pterygoid muscles until it comes in contact with the external plate of the pterygoid process, and emerges in the pterygo-maxillary fossa. A sound substituted for the gouge can not fail to touch the superior maxillary. The nerve is then loosened by pushing it down several times, pulling it up by means of the thread tied to the infraorbital branch. The nerve is then cut in the pterygo-maxillary fossa with the gouge or forceps, and the end is extracted by traction on the infra-orbital thread. As soon as it is divided it follows the thread through the suborbital incision. The operation required forty minutes. The patient spat a little blood and there was slight conjunctivitis in the eye, but these inconveniences had all vanished, with the pain, by the third day.

Morphi Cocainomania. P. SOLLIER.—The method of curing the morphin habit followed by Sollier is gradually to diminish the dose to complete suppression in four to six days with calomel purges every day and an injection of pilocarpin on the sixth, with exclusive milk diet. This promotes the physiologic mechanism of throwing off the morphin by eliminating the intoxicated elements, favoring in every way the glandular and epithelial desquamation, and proceeding as rapidly as possible, in order to induce a lively and thorough reaction on the part of the organism. Four to six days accomplishes the desired result, and he has never had the slightest menacing accident, never syncope, and he doubts whether any other method can compare with this in its certainty, rapidity, simplicity and the complete restoration of the health. He describes as typical a very severe case of a physician who had acquired both the morphin and cocain habits. The heart was normal but pulse rapid; the oxyhemoglobin was reduced to 4.5; over 50 cg. of albumin were noted in the urine, and there had been a recent uremic attack. The blood coagulated as it emerged, appearing like asphyxiated blood both in its aspect and in the spectrum. There was chronic infiltration of abdomen and thighs, also "prick" abscesses. The entire body was twisted and bent almost double, one knee flexed. During the six days of deprivation there were no ill effects noted, no tendency to syncope nor lipothymia. Appetite and sleep returned the fourth to fifth day. By the end of two months the patient had gained 22 kilos, returning to his normal weight.

Pernicious Dysenteric Fever. KANELLIS AND CARDAMATIS.—The long experience of the writers in Greece has convinced them that so-called pernicious dysenteric fever is not a morbid entity; the malarial infection has nothing to do with the essential dysenteroid catarrh. This process and malarial infection may coincide, but their only reciprocal influence is the debility each occasions. The term "pernicious dysenteric fever" should therefore be discarded, and the condition be known henceforth as the complication of malaria with dysenteric catarrh.

Revue de Chirurgie (Paris), May 10.

Wounds of the Rectum. QUÉNU.—In this comprehensive study of traumatic lesions of the terminal portion of the rectum, Quénu supplements his article on wounds of the peritoneal portion, published January, 1899. The first indication in treatment, he observes, is to prevent infection; the danger of hemorrhage is less important. Recovery is the rule when the peritoneum is not involved. If the wound enters the rectum from without, the rectal wall should be sutured and ample drainage be established through the pararectal opening. In all cases the intestine should be kept in repose. When the wound involves the bladder the permanent sound is necessary. When rectoscopy and catheterization show that the peritoneum is involved, laparotomy and suture of the rectal solution of continuity are indispensable. Of thirty-six wounds of this class 33 per cent. of the patients thus treated died, while the mortality was 82 per cent. in the twenty-nine cases in which laparotomy was not done. In cases of wounds from firearms, the indication is to drain as amply as possible, and the best results were attained in cases in which the anal sphincter was incised to prevent stasis of fecal matter in the rectum. A large intrarectal permanent drain might possibly accomplish the purpose, combined with opium and means to induce constipation.

Median Osteotomy of the Hyoid Bone. M. VALLAS.—This simple, easy and essentially benign operation allows entrance to the pharynx and opens up the lower portion of this organ and the vestibule of the larynx much more extensively than other procedures for the purpose. It is especially serviceable in removing foreign bodies, benign, enucleable tumors, circumscribed cancers of the epiglottis and, chief of all, severe syphilitic constrictions in this region. It facilitates the ablation of intramuscular tumors of the base of the tongue, lipomata and cysts, whose extirpation by the lateral suprahyoid route is often difficult. It also offers the most favorable condition for ablation of the tongue. The transhyoid amputation is total, and is less serious than other methods by artificial routes. There are no remote inconveniences, no deformity nor functional disturbances peculiar to this method. Swallowing is accomplished without difficulty, as the muscles learn to compensate the absent member. There are no vessels of any consequence on the median line. The bone is cut with Liston's forceps; when the halves separate, the opening can be enlarged with retractors to 4 cm. The epiglottis is drawn out and held with a thread. A drain should always be inserted in closing the wound, fastened by a pin or stitch. Cicatrization is always rapid. The soft parts hold the halves of the bone in contact so that direct suture of the bone seems superfluous.

Centralblatt f. Chirurgie (Leipzig), May 26.

New Method of Sterilizing Catgut. C. A. ELSBERG.—The chemical principle on which our New York confrère bases his method is that organic substances are insoluble in the fluids which precipitate them from their solutions. Albumin is precipitated by ammonium sulphate and hence it is insoluble in even concentrated solutions of this salt. Applying this principle to catgut, it is treated as described in Elsberg's preliminary communication summarized in THE JOURNAL of May 5, p. 1133, first with chloroform-ether and then with a hot, saturated solution of ammonium sulphate. It retains all its physical properties and the smaller sizes gain in strength. The sterilization can be repeated three to six times without injury. The sulphate crystallizes as it cools and can be used again and again. A table of tests shows the efficacy of the sterilization. The catgut was soaked for twenty-four hours in bouillon cultures of various bacteria and then boiled in the solution at 108 C. Even anthrax spores were killed in five minutes, and when a 2 per cent. carbolic acid solution was substituted for the plain water, they were killed in two to three minutes.

Dermatologisches Centralblatt (Berlin), May.

Treatment of Acute Gonorrhoea. H. LOEB.—The capacity of the anterior urethra varied from 4 to 22 cm. in a hundred men examined. This fact imposes the necessity of individualizing for each patient the quantity of fluid to be injected in treating the anterior portion. Any amount over the capacity of this part will find its way into the posterior portion and set up inflammation there. For this reason Loeb never fills the anterior portion even to its full capacity; one-third to two-thirds is sufficient for the purpose. Another point in the technique is to rest the hand on the thigh while holding the injected fluid in the urethra. If the hand is not suspended it is liable to alter its position unconsciously, and possibly force some of the fluid into the posterior portion.

Deutsche Med. Woch. (Leipzig.), May 17 and 24.

Industrial Poisoning and Accident Insurance. L. LEWIN.—The German laws for accident insurance cover "sudden injuries" received in the course of wage-earning work. Lewin asserts that the toxicologist sees in the chronic intoxication of a workman handling substances that may have an insidiously injurious action on his organism an accumulation of repeated "sudden injuries," representing a total entitling the workman to indemnity.

Kraurosis Vulvae. P. JUNO.—In 6 of the 60 cases of this affection collected by von Mars, carcinoma coincided with the kraurosis, and also in 1 of the 4 observations described in this communication. This seems to indicate the influence of preceding chronic inflammation in the genesis of the neoplasms. With the exception of this 1 case, the 4 observations terminated in complete recovery. Two were treated with excision

of a narrow strip of the labium majus; the other by excision of the entire affected region, as it was a very severe case, with intense pruritis and chronic leucorrhoea.

A Case of Glanders. ZAUDY.—The overseer of an estate entered Ebstein's clinic with glanders in its acute stage and died in fourteen days. None of the animals on the estate were known to be affected, but two horses later showed symptoms of the disease. No portal of entry for the infection could be discovered except inflamed tonsils.

Blood-Pressure in Neuropathic Children. P. HEIM.—Tests on nearly a hundred children, with Goertner's tonometer, showed that neuropathic symptoms and high blood-pressure usually coincided with a neuropathic heredity, while no physical cause could be found for the high pressure. If his results are confirmed by others high blood-pressure will be found an important aid in differentiating doubtful cases of neuropathy. The cause of the higher pressure is probably the facile excitability of the cortex, the constant condition of psychic excitement. The amount of pressure does not seem to be proportional to the intensity of the neuropathic symptoms.

Improved Gastroenterostomy. O. WITZEL AND C. HOFMANN.—The Bonn clinic has not lost a single patient out of the last 120 gastroenterostomies whose death could be imputed to the operation in any way, and this fine result is attributed to the improved technique employed. A rubber tube is introduced into the stomach through a buttonhole in the anterior wall and passed through into the efferent portion of the jejunum after the gastroenterostomy has been completed. The patient is fed at once and abundantly through this tube, which not only assists in restoring his strength, but has a still more important purpose in stimulating peristalsis and starting the natural evacuation of the stomach contents into the intestine, establishing the current in the right direction. The stomach function is usually more or less compromised in patients requiring gastroenterostomy, and a little assistance in this way is of the utmost importance and benefit. It avoids the danger of the collapse of the efferent intestine and the dilatation of the afferent portion with stasis of the stomach contents. The writers lay equal stress on another point in their technique: the patients are required to sit up the same day or the day after operation, or at least sit up in bed, and are warned that if they do not cough freely, no matter if it does hurt the operated region, they are liable to have post-operative pneumonia. They are ordered to take twenty-five deep breaths every hour, and if necessary an injection of morphin is made to enable them to breathe full and deep and cough up accumulated mucus. By this means post-operative pneumonia can generally be avoided. In Czerny's latest reports death was due to this cause in fifteen out of the twenty fatal cases. The patient is fed through the tube for eight to ten days and then feeding by the mouth is gradually resumed. The tube is usually left three weeks; it serves to keep the lumen expanded and promotes favorable adhesions even when no longer used for feeding the patient.

Muenchener Medicinische Wochenschrift, May 22.

Recurrences After Operations for Gall-Stones. H. KEHR. Reviewing an experience of 500 operations Kehr reports the remote results of 302 carefully followed to date. There has not been a true recurrence among them, i. e., a new formation of stones after all had been removed, but stones were overlooked during the operation in 19 cases: 11 times in 302 cholecystotomies; once in 104 cholecystectomies and 7 times in 82 choledochotomies. In one case two years after removal of the gall-bladder violent colic and jaundice terminated in the expulsion of two stones, each with a silk thread in the center. Twelve patients complained of oppression in the stomach region and colic after cholecystotomy, and puncture disclosed a turbid gall containing the bacterium coli, two requiring the opening of the old cicatrix and evacuation of mucopurulent matters, cured by three weeks' drainage. These inflammation colics should not be ascribed to stones but to the progress of the cystitis favored by the interference with normal contractility of the organ after this operation. Kehr recommends draining for four to six weeks in all suppurative processes in the gall-bladder. He personally examined 248 patients for traces of hernia after

making a fistula, and found it in only 12, or 21 in his total of 302 followed to date. He considers this a very favorable showing. Only one of his 500 patients has a persisting biliary fistula, and this is due to complicating chronic pancreatitis. Adhesions caused trouble in 33 cases, 4 after cholecystectomy and incision of the duct, and 29 after cholestostomy, but the disturbances were comparatively slight. He received from 85 per cent. of his patients enthusiastic assurances that the operation had been a perfect success, and in nearly all the rest the complaints were transient. Cholecystectomy with drainage of the hepatic is his preferred method, supplemented by dietetic and water cures.

Wiener Klinische Rundschau, April 20 to May 20.

Perforation of the Uterus. BRAUN-FERNWALD.—An imposing array of instances of perforation or rupture of the uterus during gynecologic interventions has been collected by Fernwald. They demonstrate the necessity of extreme caution in even the most insignificant gynecologic operations. The consistency of the uterine wall often proves a disagreeable surprise. Instances are cited in which the weight of the sound alone, without pressure, was sufficient to penetrate the wall.

Arthrodesis of Both Knees. H. PROPPER.—The loose joints in both knees consecutive to paralysis, in a boy of 7, prevented his standing upright, and he could only drag himself along on all fours. The joints were operated on separately. The lad is now moving about on crutches, the knees in splints, a great improvement over his previous condition.

Grece Medicale (Syra), April.

Is Hemoglobinuric Fever Malarial? J. FOUSTANOS.—The physicians of Greece have made a special study of hemoglobinuric fever, and the consensus of opinion seems to be that the disease is not caused by malarial infection, nor exclusively by quinin. Cases have been known in which it occurred without the ingestion of quinin, and it is extremely seldom that the malarial parasites are found in the blood of persons affected. Quinin sometimes aggravates the hemoglobinuria; sometimes cures it. Usually, patients recover more rapidly without it. These contradictions are explained by the generally accepted assumption that in most cases of hemoglobinuric fever malarial infection is the predisposing, and the abuse of quinin the determining, cause, but exposure or physical overtaxation may induce it even without quinin.

Hemoglobinuric Fever. J. CARDAMATIS.—This important work is based on observation of 4022 cases of bilious hemoglobinuric fever. It states that the disease may occur without any manifestations of malarial infection at the time or previously, and without exposure of more than a few days to malarial influences. Some exceptionally malarial regions are entirely free from it. Children between 2 and 4, and aged persons, seem to be comparatively exempt, and no case has ever been known in a nursing. Pregnancy and confinement also seem to confer immunity. Becoming chilled is an evident cause in the production of the disease, and it is probable that the suppression of the functions of the liver from the chill is one important factor in the pathogenesis of the disease. Possibly the destruction of the corpuscles occurs in the liver instead of in the circulation. Nutritional disturbances, as from arthritis, arsenic, phosphorus, alcohol, quinin, syphilis, may produce a predisposition. The fever is not proportional to the importance of the other symptoms. No alterations characteristic of malaria could be discovered at the autopsy of persons succumbing to hemoglobinuric fever in many cases. He asserts, therefore, that it is a disease due to a special cause, but that it may develop conjointly with malarial infection, which, like arthritis, affords a favorable soil. He disapproves absolutely of quinin in the treatment, stating that the mortality of quinin-treated cases was 26.1 per cent. in the 3008 cases on record, while it was only 7.5 per cent. in those not treated with it. Quinin should never be administered unless the malarial plasmodium is found in the blood, and even then methylene blue is much better, as it not only destroys the parasite but favors the excretion of urea and uric acid and diminishes the amount of albumin. Europeans in the colonies, who use quinin freely in the prophylaxis of malarial fevers, suffer frequently and severely from hemoglobinuric fever, while the natives, who

do not use this drug—"from fear of the hemoglobinuria"—are rarely affected.

Physiologic Explanation of Menstruation. N. G. SACHINIS.—According to the theory proposed, the female organism—in complete harmony of energy and matter, like all living organic beings—is trained to lose a certain amount of substance in plethoric periods, in order that it may not become debilitated when pregnancy arrives and a portion of the substance is diverted to develop the fetus. The same quantity of blood that would be required for the nourishment of a fetus during pregnancy is eliminated in the menstrual flux. The female organism thus becomes habituated to the loss, which, without this preliminary preparation, would result in the debility of the mother, and consequent defective development of the fetus.

Gazzetta degli Ospedale (Milan), May 13.

Automatic Paquelin Thermocautery. G. OVIO.—Paquelin's thermocautery is rendered automatic by the pneumatic attachment described in this communication. A two-quart cylinder with a bicycle pump arrangement to compress the air is connected by a small tube with a receptacle for benzine. Less than a minute's work with the pump will compress the air sufficiently for the cautery to work a couple of minutes. The benzine lamp is lighted and the valve turned to admit the compressed air. When the cautery becomes incandescent, the cover of the lamp is turned to a certain point and the apparatus continues to work automatically, without further attention.

Improved Process for Preserving White Corpuscles. S. DRAGO.—The disadvantages of the various processes of making preparations of the corpuscles stimulated Petrone and his assistants to seek some other fluid than those usually employed for the purpose. They finally succeeded in finding one that acts rapidly and preserves the constituents of the blood for prolonged observation, showing all the details of the structure of the white corpuscles with remarkably delicacy and certainty. This fluid is the ordinary Lugol's solution.

Pathogenesis of Gastric Ulcer. S. SAIITA.—Two cases of gastric ulcer occurring after long gastrosuccorria in one and digestive disturbances in the other, both concomitant with a serious general disease of the nervous system, progressive paralysis or chloroanemia and neuralgia, suggested to Saitta vagus of a predisposed soil. To test this theory he severed the that the gastric ulcer was due to abnormal innervation by the pneumogastric on each side in sixteen rabbits, and fed them with a weak solution of hydrochloric acid, which induced multiple ulceration in the stomach with general gastritis, while it had no effect on control animals with the pneumogastrics intact.

Lymphosarcomatosis of Mother and Metastases in Fetus. G. BERGHINZ.—Miliary metastases were found in the liver of a child delivered during the mother's death agony, as she succumbed to acute lymphosarcomatosis. Berghinz cites, in opposition to this, the case described by Pennati in which the blood and organs of a 6 months' fetus showed no trace of malarial infection, although the mother had died of malarial cachexia.

St. Petersburger Medicinische Wochenschrift, May 12.

Report of the Finland Sanitarium. A. FELDT.—Sixty pulmonary invalids were treated at the Pitkaejaervi tuberculosis sanitarium in 1898-99, with 21 very much improved and 23 negative results, due in many cases to insufficient stay or intercurrent affections. The average stay was 66.7 days and the average gain in weight 10.02 Russian pounds. As most of the patients had passed the incipient stages of the disease, the results are considered very encouraging for this northern sanitarium.

Gaceta Medica (Mexico), May 15.

Pulverization of Mercury with Turpentin. M. R. LOZA.—If turpentin is put into a bottle with mercury and shaken, the metal will separate into the finest particles, which facilitates the preparation of salves, etc. The essence of turpentin used can be the cheapest variety, but the mercury will not become pulverized unless it is chemically pure. Turpentin can thus be used as a test of its purity.

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Oration.

A PROTEST AGAINST SOME OF THE EVILS IN THE PROFESSION OF MEDICINE.

ORATION ON MEDICINE BEFORE THE FIFTY-FIRST ANNUAL
MEETING OF THE AMERICAN MEDICAL ASSOCIATION,
HELD AT ATLANTIC CITY, N. J., JUNE 5-8, 1900.

BY J. A. WITHERSPOON, M.D.

NASHVILLE, TENN.

The honor of delivering the annual address on general medicine, which you have seen proper to confer on me, is one which I fully appreciate, and I now take the first opportunity presented to express to the ASSOCIATION as a whole my grateful thanks for so distinguished an honor.

I also take the liberty of hoping that what I may say at this time will receive the hearty approbation of this large body of representative men. Nearly all of my predecessors have spoken of the wonderful progress and brilliant successes of the profession, and, indeed, they have been truly marvelous. The latter half of this century has been one grand triumphal march to the present high plane of rational, scientific, preventive medicine, until to-day we are utilizing every element in nature to solve the many problems of disease.

Chemistry, with its fixed laws of precision, is now receiving its proper recognition, and clearing many hitherto unknown fields of empiricism and doubt. The modern laboratory, with its multiplied methods of investigation, has done much to lift the veil of ignorance and mysticism which has so long obscured the true etiologic factor in many diseases, and made preventive medicine the grandest achievement of the age.

The modern methods of differential diagnosis, more accurate clinical observations, confirmed by pathologic investigation, have done much toward making medicine an exact science.

We are justly proud of these accomplishments, and when we think of the vast army of laborers in this noble work of humanity and the daily spreading of this wonderful store of information broadcast through the medium of modern journalism, making it possible for the most obscure country doctor to keep fully abreast of the times, and by this means to acquire more knowledge in one year than could have been attained in a life-time, a century ago, we have every cause for self-congratulation.

But it is not the object of this address to linger over these bright, golden fields, except to express my thanks and grateful appreciation to my brothers in the profession. I deem it the proper time and place to call attention to some of the most grievous fallacies and hurtful errors

that have fallen into the ranks during the onward march, in some instances obstructing the path to true and honorable progress. I am well aware that it is not politic at these annual reunions to call to mind unpleasant things, but we have a high and noble calling, the untarnished honor of which has been placed in our keeping by our illustrious forefathers in medicine, the protection of which should be as a sacred trust; hence, I dare strike the alarm-bell and call to arms those who are resting in a security born of a sense of duty well done. The old guard have long stood at the helm and safely guided the grand ship of honorable medicine into a harbor of calm where the Code of Ethics offers immunity to quacking, pathics and commercialism. But, while they are taking a well-earned rest, dark clouds have arisen, and threatening waves are breaking over the old ship. Therefore, I may be pardoned if I do not follow in the footsteps of some of my predecessors in omitting the advances of the past year, my excuse being an honest conviction of the necessity, and an earnest desire, without malice, to protect the profession from the hurtful tendencies of the times.

DICTATION BY PHARMACAL COMPANIES.

The first stupendous error, one which is so vast in its influence that it hangs like a withering blight over the individuality of every man in the profession, is the dictation of the innumerable pharmaceutical companies, the self-constituted advisers in the treatment of diseases about which they know nothing, to the entire profession. All honor to worthy and legitimate scientific pharmacy; we should welcome it as a child of medicine, but as is often the case, the child, as soon as it is out from under the wing of the parent, has grown "bigger than the daddy" and not only tells him how to treat every disease to which flesh is heir, but is condescending enough to formulate his prescriptions with full directions on them, many times omitting the formulae, but always kindly telling him in what diseases to use them. They are so solicitous that they flood your office with blatant literature full of bombastic claims and cure-alls, and I am sorry to say, too frequently with certificates or articles used by permission from physicians who call themselves reputable. Of course, none of these doctors are members of this body, or even inhabitants of the United States; they live in our new possessions, or some other country without the privilege of resting in the bright light of the Code of Ethics of this ASSOCIATION—a code written by the fathers, broad and liberal enough for any true doctor to practice medicine under for a life-time, without a blush upon his cheek.

But that is not all; these drug-houses are so afraid that some one will die through your ignorance or before dull comprehension becomes alive to the merits of their preparations, that they send a man, frequently a doctor

who was a howling success in the profession before his health failed, to tell you all about how to treat disease. He leaves you with the parting injunction to always specify his preparations, and with the friendly warning to watch the local druggist—whom you know all about—to keep him from substituting, while he assures you that he and his firm—about whom you know nothing—are the personification of honesty, and that you can always depend upon them and their preparations, as the plants from which they are compounded were gathered by their special agent from the grave of Esculapius. And thus they come, with samples galore, until you are reminded of the old southern negro song, "They are coming father Abraham, forty thousand strong," to spread the glad tidings of joy, and make every doctor their walking advertising agent. They are the only people in the world who, without seeing the patient, can tell you how to feed the baby, until he blossoms like the rose, or how to restore the rosy-tinted bloom of health to the blanched cheek of the convalescent. They have an antiseptic that can chase the bacilli typhosi through the lymph-channels and pound them to death in the blood-vessels by throwing red blood-corpuscles at them, or the white blood-corpuscles are called up as a reserve, and the war of the roses is again enacted in the human body. Or, they make the emaciated consumptive so fat that he can hibernate and convert his distressing cough into a laugh of joy. Thus, I might enumerate indefinitely what great things they are doing for us, but seriously speaking, gentlemen, this is a curse to the profession, and takes from it its real scientific application, viz., treating each case upon its merit.

In my humble judgment, the fostering of these establishments is a disgrace to honorable medicine. The true sphere of pharmacy is to make the official preparations of drugs and compound our prescriptions. When a doctor acknowledges his inability to formulate his own prescriptions to suit each case, then he should seek some other occupation, more to his taste of commercialism, or less trying by reason of his lack of qualification.

These institutions have such powerful influence that every medical society meeting must furnish space for their wares, this frequently becoming a place of popular resort where various drinks are served, this taking from the meetings the interest in their scientific work. Yet they are not satisfied with this; it is reported that they have even gone so far as to insinuate themselves into the very body of some of the sections, and that at this meeting they propose to dictate and control the election of officials who are kindly disposed to the manufactured products of their laboratories. Can this be true? Can we rest under such an imputation and retain our self-respect? If these reports be true—and the journals are agitating them, and I have in my possession a letter from a drug house to a journal, making the charge—then, indeed, has the reputation of regular medicine descended to a lower level than I thought. We must have an investigation, and if these charges are true, the time has come for vigorous action. If there are those who are making our holy temple a house of merchandise, then we should drive them from our midst by the scourge of our indignation and contempt as did Christ the money-changers of Jerusalem.

MULTIPLICATION OF MEDICAL COLLEGES.

Next, I desire to call your attention to the rapid multiplication of medical colleges in this country. In doing

this I do not wish to ignore the great work that has been done by the profession through the development and progress of medical education. The notable advances of the past twenty years, such as lengthening the course of study, laboratory work, etc., have been inspired by the profession, and we have greater reasons to be proud, when we remember that these improvements have been carried out without assistance of large endowments, for very few even of our best institutions have had such aid. But, while we give credit, we must also lay to the charge of the profession the increase in poorly equipped institutions that have been born of no need, and that are fostered to no good end. This evil has become especially marked in our great cities. It has become a fad and a means of advertising to organize a poorly equipped medical college, both in teachers and modern means of instruction. The result is cheap notoriety, half-prepared students, cheap rates and cheap doctors who bring discredit upon the profession and death to innocent people and who, as a last resort, go into politics and help enact laws harmful to the high standard of honorable medicine.

This induces young, inexperienced graduates to go immediately into a specialty, without experience or special fitness, which is never justifiable. No man is prepared to go into any special field until he has done general work enough to familiarize himself with disease in all of its phases, and neglect of this training is responsible for so many extremists who never temper their thirst for notoriety with common sense. It is this which has caused the loss of many lives and much unnecessary mutilation of the human body. It is this that gives birth to fads and faddists. It is more than probable that the appendix of our forefathers occupied a position downward from its cecal attachment until the surgical dictum went forth, "No man is a perfect man, so long as he has his appendix." Now you find this troublesome little remains of the "missing link" has left its normal habitat and hidden behind the cecal pouch.

Again, take the spectacle fad. Glasses in the past were an insignia of honorable old age; now we truly find them from the cradle to the grave. Even the negro "coon," who has been noted for keenness of vision, following the uncertain meanderings of the opossum with unerring precision during the dark of the moon, or seeing a chicken on the highest roost the darkest night, must now have "specs" to walk the streets in broad daylight.

All honor to true and legitimate specialism; it should be welcome and aided by every general practitioner, as a scientific and correct division of labor in a field broad enough for all, but, this rushing into specialism without the above preparation is truly appalling, and, in my opinion, is injurious, not only to the general profession, but to the truly well-equipped specialist.

LABORATORY DIAGNOSIS.

I desire to call attention to another serious error which seems to be the popular tendency of the times. I refer to laboratory diagnosis regardless of clinical symptoms. The microscopic demonstration of the presence of etiologic germs of a disease is not sufficient for diagnosis, but only confirmatory: the clinical manifestations should be present, and the close and careful observer at the bedside must remain the highest court, and chemical and microscopic tests his aids. I believe in adhering to bedside experience. The considering of the

case in all its details—history, tendencies, vitality, general aspect, physical signs, subjective and objective symptoms—aided by the microscope and modern methods of research, when needed, is the only way to practice medicine with justice to yourself and safety to the patient. It is an unfortunate fact that many laboratory men know the habits, morphology and methods of culture and staining of pathogenic bacteria far better than they understand by experience or observation the diseases these bacteria produce. We must not lose sight of the fact, while it is right and gratifying that this work is being done and is of great value to medicine, that our true mission is to save human life.

MEDICAL POLITICS.

Here let me express my earnest condemnation of medical politics. I am old foggy enough to believe that we should confer honor upon those to whom honor is due; any method of wire-pulling or resorting to the tricks of ward politicians is unbecoming, and should not exist in a medical body, especially in this, the largest and most influential medical society in the country. It can only bring discredit to its members and cripple its usefulness. Here, the queen of professional ethics should reign supreme, and, by the light of example, shed her beneficent luster upon the world. The man of true merit, to whom his professional brethren would naturally turn when honors are to be conferred, is often overlooked because his modesty prevents him from advancing his own interests, while men of less ability, but more pull, are placed in positions of honor. This should not be.

One of the most grievous and dangerous errors is the present system of quarantine against epidemic diseases. I refer to local boards of health acting independently, often composed of most inefficient men who owe their position to political preference rather than to any special fitness for the place. State boards acting independently of other boards are largely responsible for the shotgun quarantines, useless disturbance of business and often ineffectual attempts at protection.

If there is any one department of medicine which stands pre-eminently in the front rank of advancement in this progressive age it is preventive medicine, and, with our increased knowledge, it is a reflection that any serious epidemic disease should gain a foothold on American soil. The only way to prevent this is by giving the power to a National Board of Health. Away with the old political cry of state rights when the lives of our people are threatened. Let us place the strong arm of this government around this land, unhampered by petty jealousy and minor boards. We are confronted by a serious and grave question involving this very principle. Even now, at the Golden Gate, which has always stood wide open to welcome the stranger, that fearful scourge, bubonic plague, has insidiously gained admission. This ASSOCIATION has time and again, directly and indirectly, expressed its views upon this subject, and appealed to the nation through its representatives, but as yet, the full measure has not been meted out. When war with Spain was declared, millions of good "coin of the realm" was voted, and a million men stood ready to enlist and fight for the flag of the grandest country on earth. And yet, a disease is threatening us now, which has claimed more victims than the combined armies of the world, and finds us un-

prepared to properly meet it. We must make united efforts in the establishment of a National Board of Health, clothed with legal power and supplied with the necessary funds, to protect our people from these threatened invasions of the pestilence that stalketh by night, and wasteth by noonday, peering with his grim face and shaking his matted locks, while from his parched lips he emits the gibberish of a foreign tongue. When armies and strong men falter, and tardy statesmen sit with faces made pallid by fear and guilty conscience, then the world will turn to us, as the protectors of human life, to buckle on our armor and advance to meet the foe, and we must be prepared to do as our profession has always done—advance with a cool head, a brave heart, and unselfish love for our fellow-man.

If by united effort we can get Congress to see that no department, not even the Treasury, is more important than the health of our people, and if we can have our Chief Executive appoint the man for the position, allowing the same assistants and clerks as that of any other of the departments, then we shall be able to stop the invasion of foreign disease, and surely every patriotic citizen can trust the President, regardless of politics, under proper laws enacted by our representatives, to solve this weighty problem.

INDISCRIMINATE USE OF NARCOTICS.

We should at this time sound a note of warning upon the growing tendency on the part of many physicians to use morphin and cocain indiscriminately. There are but few men here of wide experience who do not daily come in contact with practitioners whose panacea for everything is opium in some of its forms, and while I regard it as a wonderful remedy, capable of great good when judiciously used, I am bound to say that when used as it is by some doctors, it is productive of terrible results. The morphin habit is growing at an alarming rate, and we can not shift the responsibility, but must acknowledge that we are culpable in too often giving this seductive siren until the will-power is gone, and a moral and physical wreck is sent down to shame and degradation, often committing crimes while in the toils of his perverted nature. Nor do the fearful results stop here; too often these tendencies are transmitted to the offspring and these innocent victims are brought into the world, half-made mentally, morally and physically, thoroughly unfitted for the many emergencies of life. Ah, brothers! we, the representatives of the grandest and noblest profession in the world, with the God-given mission of making growth more perfect, life more certain and death more remote, must shoulder the responsibility, follow in the footsteps of the Great First Physician, and warn and save our people from the clutches of this hydra-headed monster which stalks abroad throughout the civilized world, wrecking lives and happy homes, filling our jails and lunatic asylums, and taking from these unfortunates the precious promises of eternal life. The hypodermic "shot," as it is affectionately called, is too often given in a stomach-ache, when a dose of oil is needed, or to relieve painful menstruation month after month, until the bright, rosy-tinted cheek of health and the brilliant eye of youth and healthy young womanhood give way to the dry, pigmented skin and the leaden, expressionless eyes of the morphin habitué, and a life full of promise and usefulness is blighted forever. Why not seek and remove the cause of these, as well as many other

ills for which morphin is given, and thus avoid the spectre which, if you are a conscientious physician, will follow you through life, and like Banquo's ghost, will not down? The same can be said of cocaine, which is rapidly becoming a national evil, because of its indiscriminate use in minor surgical operations, and of the unnecessary and hurtful information too often given the laity of its seductive influence on human beings.

USELESS MULTIPLICATION OF BOOKS.

In approaching the next subject, I feel, before this body, like following the example of the great lawgiver and taking off my shoes, for I realize I am on holy ground. But remembering the maxim of one of the pioneer heroes of my native state, "Be sure you are right, and then go ahead," I have determined to offer my feeble protest against the useless multiplication of books and authors. Every progressive man in the profession feels the necessity of keeping fully abreast of the times, and when a new book is published, will purchase it for fear he may lose some valuable information, too often, to find many of them poor copies of other works, without an original thought, or any necessity or reason for their existence, except perhaps, the ambition of the author. Every medical library, public or private, is groaning under its load of useless repetition, in systems of many volumes. There is a prevailing tendency amounting almost to mania in young men, to rush into print, and I feel that I can talk freely to them, being one myself. This is especially true in our great cities, for, how often do we see a young graduate, after staying in a hospital a year, and then in a laboratory a short time, suddenly unfurl his banner to the world as an authority, and while his English is excellent and his diction perfect, I doubt whether his experience warrants him in assuming the grave responsibilities of an authority on any subject where human life is at stake. I would not be understood to mean that the young men should remain in the rear and withhold any information they may have acquired by arduous labor, nor would I check their worthy ambition or pluck one laurel from their brow, but I do claim their medium should be the medical journals, which are, after all, the greatest educators of the busy physician. When such a man as Osler, a walking encyclopedia of medicine, regrets the day when he sold his brain to the medical publisher, it is time for younger men to pause and consider before they assume the rôle of authorship.

In conclusion I desire to say that a conscientious sense of duty alone induces me to call attention to the threatening storms which, if not checked, while they are yet young and harmless, will eventually undermine the very foundations of true and honorable medicine. Mr. President: when all of these injurious things have been forever eliminated, and the regal robes of ethical medicine rendered aseptic from their present pollution, then we can exclaim with pride, "Sound the loud timbrel o'er Egypt's dark sea, Jehovah hath triumphed; his people are free."

A CHARLATAN was plying his trade at Zittan, a town in Saxony, advertising extensively throughout the country, when the physicians combined and secured his arrest on the ground of "unlauteren Wettbewerb." The local court acquitted him, but the physicians carried the case to the higher court in Dresden, which condemned the quack to 400 marks fine and forty days' imprisonment.

Address.

THE IDEAL PHYSICIAN.*

BY W. W. KEEN, M.D., LL.D.

Professor of the Principles of Surgery and of Clinical Surgery,
Jefferson Medical College.

PHILADELPHIA.

When casting about for a suitable topic on which to address you, I was much perplexed at first, but finally bethought me that perhaps I could not do you a better service than to sketch in very brief outlines the characteristics of the ideal physician. Let me address you therefore as aspirants for the realization of this ideal.

Few of us, perhaps, at the close of life, can say that we have realized our ideals. But unless we have a high ideal, the trajectory of our life will never have risen to any noble height. "Hitch your wagon to a star," said Ralph Waldo Emerson. Even though you fail you will more nearly reach the firmament than if you had never made the attempt.

The physician may be regarded from three points of view: 1, his personal life; 2, his professional life, and, 3, his public life.

Personal Life.—The ultimate basis of esteem is personal character. Wealth for a time may lend its glamor; intellectual attainments for a time may dazzle the judgment; power for a time may achieve apparent success, but when the testing time comes, as come it must to every man when some great temptation to do wrong confronts him, wealth and intellectual power are as if they were not; character is the one thing that tells in this life and death struggle. Having that, you will win the fight and be crowned with the laurel of victory. Wanting that you will succumb, defeated and dishonored. The struggle may be a public temptation known of all men, and if you fall your fall will be like that of Lucifer; or it may be hidden in your own breast, known only to God and yourself; but if you win, the victory is just as great as measured by the eyes of Omnipotence, for a character has been saved and strengthened; a true man has attained his growth.

It is due, I am glad to say, to this prevalence of high character that our profession has won such a lofty place in the esteem of the community. Its purity is almost never impeached. Remember that every time you are alone with a woman-patient in your consulting room, with every eye barred out, she gives her honor into your hands and in turn you place your reputation unreservedly in hers. A whisper will destroy either of you. In my opinion, it is the highest tribute that can be paid to the character of our profession and equally to the credit of our patients that this mutual confidence is so seldom abused and the tongue of scandal is so seldom busied with noxious tales. When you remember that there are over one hundred thousand physicians in this country with daily possibilities of wrong-doing, is it not marvelous that this sacred trust is so jealously conserved?

Greatness of character finds its best expression in kindness. To no one are so many opportunities for this fine trait given as to the physician. In the heyday of health and happiness he is not needed, but when sickness and weariness and woe come, when the bread-winner may be taken, or the loved mother's gentle life may be in peril,

*The Commencement Address delivered to the students of Rush Medical College, in affiliation with the University of Chicago, June 21, 1900.

or a sweet little child in whom is centered all the tenderness of unbounded love is lying ill, and death seems to dog the doctor's footsteps, then the trusted physician, wise of head and kind of heart, is indeed a welcome visitor. Then can his gentle touch give assurance; then can his sympathetic voice bring hope; then can the thousand and one acts of thoughtful kindness bind to him for life the anxious hearts looking to him as the messenger of life. Even in the daily routine of a hospital clinic, a kind word is often better than any medicine.

Manners make the man. The boor has no place among us. The physician should never be the fop, but always the gentleman; never unclean of clothes or speech, but always neatly dressed and so careful of his words that he need not ask, as did one of General Grant's aids: "There are no ladies present, are there?" "No," was Grant's stinging reply, "but there are several gentlemen." Soiled linen and unclean finger nails are as much condemned by antiseptics as they are by decency. The flavor of stale tobacco smoke about his beard and clothes will never characterize the ideal physician, nor will indulgence in alcohol ever cloud his judgment or disgust his patients.

Make it a point not to let your intellectual life atrophy through non-use. Be familiar with the classics of English literature in prose and verse; read the lives of the great men of the past, and keep pace with modern thought in books of travel, history, fiction, science. A varied intellectual life will give zest to your medical studies and enable you to enter not unequipped into such social intercourse as will beget you friends and will relieve the monotony of a purely medical diet. Let music and art shed their radiance upon your too often weary life and find in the sweet cadences of sound or the rich emotions of form and color a refinement which adds polish to the scientific man.

I suspect the next characteristic of the ideal physician will meet with a ready assent—marry as soon as you can support a wife and the hostages to fortune who will make your home life happy beyond compare. But choose wisely and not too hastily. A bachelor doctor is an anomaly. He can not fully comprehend the hopes and fears and desires of parents. He knows not the lions in the path of childhood. Imagine if you can some sweet lassie confiding to him the symptoms of a heart disease which digitalis can not cure. The ideal physician is a good husband and a good father, and so will he enter into the lives and hearts of parents and children, not as a stranger, but as one who can partake of all their emotions, because he has felt the same joys, partaken of the same sorrows, loved as they have loved, and it may be, drunk to the dregs the same cup of loss.

But the ideal doctor lives also a spiritual life. You gentlemen will have to deal with the entrance and the exit of life. You must often ask yourself what and whence is this new *ego* that is born into the world; whither goes the spirit when it quits this tabernacle of flesh which is left to moulder and decay. The tremendous problems of life and death are daily put before you for solution. You can not avoid them if you would; they are forced upon you by your daily occupation.

As man to man, may I not ask you to give them that consideration which befits the highest problem that can be presented to any human being. That this life, with its hopes and its joys, its diseases and its disasters is all denied alike by common sense, by reason, and by revelation. He is the best physician who takes account of the life hereafter as well as the life that now is, and who

not only heals the body but helps the soul. Let your lives, therefore, be thoroughly religious, religious in your inmost soul, though often you may be denied its customary outward observances. Then shall character, which was my first postulate for our ideal physician, find expression in an ideal altruistic life.

Professional Life.—The ideal physician is a member of a learned guild. He should be above the tricks and petty jealousies of trade. True, he lives by his profession, but he who practices for gain is only a hireling and not a true shepherd of the sheep. If you would attain, therefore, to this professional ideal, you must be a constant student, keeping abreast of that scientific progress of which in your community you must be the exponent. You must not be satisfied with the knowledge which you now possess, but you must read, especially the medical journals, or you will be left behind in this day of rapid progress. You must know not only your own language, but must be familiar at least by a reading knowledge, with French and German, and if possible with other tongues. He who knows two languages is twice the man he was when he knew only one.

You must not only be skilful, but careful. I have made not a few mistakes in my own professional life, and in reviewing them I can see that for every one made by reason of lack of knowledge and skill, two at least have been committed by haste or want of care. With all our varied instruments of precision, useful as they are, nothing can replace the watchful eye, the alert ear, the tactful finger and the logical mind which correlates the facts obtained through all these avenues of information and so reaches an exact diagnosis, institutes a correct treatment and is rewarded by a happy result.

Be careful in your relations to your patients to deal with them conscientiously. In no other calling is the amount of service to be paid for committed absolutely to the judgment and conscience of the person who is to be paid for his services. Whether you shall make few or many visits is left to your discretion and honest judgment. Sordid motives may occasionally lead to the giving of unnecessary attention. But again it is a glory of our guild that very few physicians betray this trust, and those who do quickly lose their professional standing. Watch yourselves jealously in this and never let the greed of gain dull the fine edge of professional honesty.

You will be the father confessor to many a penitent. Family skeletons will be unveiled to you alone. The conscientious duty of professional secrecy is given, I am proud to say, into not unworthy hands. True, physicians are sometimes too lax in the repetition of petty gossip, but the profession as a whole is worthy of the confidences so freely given. Be careful, even to reticence, of any betrayal of this trust. Better suffer misconception and unmerited blame yourselves than betray your patients.

Be brave men. Your fathers were brave men. When pestilence stalks in the streets and contagion lurks in every chamber of illness, where have the doctors been found? Fleeing from danger with the frightened multitude? Nay, verily. If you wish to find them you must seek in the crowded tenements, in the hospitals and in the charnel houses. There you will find them cheerfully tending the sick, facing disease in the midst of its victims and seeking, even in the bodies of the dead, the knowledge that will make them masters of the plague. Witness Rush in the yellow fever of 1797. Gross in the cholera of 1832. Haffkine and Koch in the bubonic

plague of the present time. War has given us many fine examples of personal bravery, but pestilence has bred its many quiet heroes who have gone about their daily duty, simply, fearlessly, devotedly. No granite shaft, no enduring brass may mark their last resting-place, but the Recording Angel has dropped a tear, blotting out their faults, and writ their names high in the roll of fame.

In your professional relations, never forget to be charitable. The best patients you will ever have will be the grateful poor, and your hearts will often find a sincere and grateful glance better payment than any gold. In your relations with other physicians, you will find many opportunities for that same brotherly kindness which is so beautiful a characteristic of our guild. Always extend to other physicians and their immediate families the courtesy of faithful attendance without pecuniary return. Avoid the petty jealousies, which, I am sorry to say, not seldom estrange physicians from each other. Always believe the best motive unless you know the worst is present. Never say an unkind word of a brother doctor when you can utter a kindly one. Try to be just even to those who are unjust to you.

Public Life.—In most communities, especially in minor towns and villages, the doctor is one of a small circle of educated men. His scientific studies make him familiar with many public problems, especially those concerning sanitation, the water-supply, the prevention of epidemics, the preservation of the public health, the problems of school life, the fostering of a proper athletic indulgence, the management of prisons, the care of the feeble-minded, the insane, the poor. On all of these questions you must make your voices heard in the communities in which you live or else you give them over to others less qualified and only mischief can follow.

No one, perhaps, is more of a leader than the physician in the various philanthropic enterprises of the day. These are closely allied in many respects to the topics just mentioned, and you will be on boards of directors and managers and trustees where you must bring your influence to bear for a wise outlay of charitable gifts and civic appropriations and for harmonizing the antagonistic elements which too often produce discord and confusion. If you combine the qualities which I have sketched for the ideal doctor, you will find that men will easily recognize you as wise leaders whom they will be glad to follow.

My best wish for you is that you may realize in your own lives these characteristics of the ideal physician. It will matter little then whether your life be long or short, for the proper measure of a life is not how long, but *how* it has been lived, and if you attain to old age, when the hairs whiten and the crow's feet begin to show, when your natural forces are abated, you will then not be alone in the world, but will have honor, love, obedience, troops of friends and one Friend above all others, the Great Physician. And when you pass from this life into the next, then shall you be greeted not only by this one great Friend, but by many from whose pathway you have plucked the thorns and briars of this earthly life; many whom through the devious paths of convalescence you have led back to perfect health, to home, husband, father, mother, children; and even if you have not been able to stay the hands of the grim reaper, those too will greet you whose last hours you have soothed amid the pangs of death and have helped through the new birth into the heavenly Jerusalem.

1729 Chestnut Street.

Original Articles.

SHOULD THE MEDICAL UNDERGRADUATE BE INSTRUCTED IN THE PRINCIPLES OF DENTISTRY?*

BY M. L. RHWIN, M.D., D.D.S.

Lecturer on Dental Pathology, University of Pennsylvania.
NEW YORK CITY.

It is, at the outset, necessary that the term "principles of dentistry," as used in this paper, should be specifically defined. Such a definition is required, both because there should be a definite understanding of the points that the discussion should embrace, and because, mindful of the fact that the path of the medical student already bristles with subjects, we should be loath to add an unnecessary amount of work to his daily routine. A requisite knowledge of the shape and uses of the various dental instruments can not be expected of the general practitioner; indeed, all the variations in dental technique as applied both to laboratory and operating-room are distinctively beyond the scope of dental principles, in their relation to general medical education.

The question at issue then narrows itself down to the advisability of the medical undergraduate being acquainted with principles of dentistry as they bear on general medicine. That the general practitioner should appreciate fully the process of dentition, in its relation both to local and constitutional results, can not be denied. Equally as important is it that he should be able to distinguish an incipient alveolar abscess from tic-douloureux, simple caries from caries complicated by exposure of the pulp, or the inflammation attending the eruption of a third molar from that caused by follicular tonsillitis. The medical undergraduate should be taught that no tooth need of necessity be lost through the ravages of caries; to judge of the efficacy of remedying these carious defects, he must of necessity be able to appreciate whether or not a tooth cavity has been properly filled. He should be taught to know that more teeth are lost through disease of the periodontal membrane than through all other pathologic conditions of the mouth combined, and that prophylactic measures tending to preserve this membrane are of vital importance. He should be made cognizant of the intimate relationship existing between the general nutrition and proper mastication, so as to realize when artificial teeth are required, and if supplied, whether they are properly inserted. Such knowledge implies a proper understanding of the normal occlusion of the upper and lower teeth; it also leads to the appreciation of the value of orthodontia as a corrective for malocclusion.

A proper appreciation of the foregoing facts necessitates that medical undergraduates be taught dental embryology, anatomy, histology, and pathology, in order that these principles should form a foundation for a correct clinical observation of oral conditions. This will enable the general practitioner to serve best both his own interests and the interests of his patients, and at the same time tend to elevate the standing of the dental specialty.

No more opportune time than the present could have been selected for this discussion. For through the

*Presented in a Symposium on Dental Education, before the Section on Stomatology, at the Fifty-first Annual Meeting of the AMERICAN MEDICAL ASSOCIATION, held at Atlantic City, N. J., June 5 S, 1900.

efforts of our medical schools, and of our state boards of medical examiners, the standard of medical education is advancing yearly. Moreover, this is an era of curriculum extension in all of our medical schools. With the advent of each scholastic term, there is either an extension in the number of subjects taught or a marked improvement in the methods of teaching them. Physiologic chemistry, bacteriology, orthopedics, and the other limited specialties are yearly receiving more attention and very rightly so. Yet, this era of educational progress is utterly ignoring the importance that the principles of dentistry should play in the education of all medical undergraduates. Dental instruction not only is not represented by any individual chair in any of our large eastern medical schools, but the teaching of dental principles is not embraced in any of the allied chairs of medical instruction. A medical education which neglects to train the undergraduate in the principles of stomatology is deplorably deficient. Thinking thus, we desire to show not the *modus operandi* by which the medical curriculum should be recast or altered, but rather the disadvantages resulting from the present deficiency in medical training and the advantages to be gained by supplying this deficiency.

Such oversight in the method of medical instruction results in creating a disposition on the part of the general practitioner, not only to underestimate the importance of the principles of dentistry, but also to consider the dentist rather as an aid to comfort than as an active and important element in preserving the human economy. The evil results of the medical undergraduate's lack of knowledge of dental principles are all-pervading. On the staff of most of our hospitals it is rare to find the name of a dental specialist; yet, only obstinate bigotry may deny the frequent occasions arising in a hospital service that distinctively demand dental treatment.

The poor results that have attended the long-continued agitation for dental representation in the army service well illustrate the poor esteem in which dentists are held by their medical colleagues. All this too, despite the fact that the recent war demonstrated beyond a doubt that lack of official attention not only worked havoc among the soldiers, but also required the establishment of the sporadic and so-called "dental tents," where emergency dental work was performed by volunteers, taken mostly from the ranks.

Not less productive of evil results is the lack of dental representation in our naval service; for can a more disagreeable exigency be conceived than an intractable toothache occurring in a naval cadet on a cruise miles from home—a simple case for a qualified dentist to handle, and yet one which at present usually results in the extraction of the offending tooth, and the conversion of a possible future naval officer into an incipient cripple? And all this, because our medical confrères have failed to appreciate the importance of dental principles.

That ignorance of the principles of stomatology characterizes the general medical practitioner can not be denied; and as a result of this lack of knowledge his opportunities are greatly handicapped, owing to his inability to appreciate the diagnostic, therapeutic, and prognostic aids afforded by the clinical appearances found in the oral cavity.

As regards the diagnostic aid offered by the mouth, a thorough appreciation of normal appearances is both presupposed and necessary, in order to enable the prac-

titioner to recognize the significance of incipient pathologic changes, symptomatic of systemic disease. A red, dry, glazed tongue, with characteristically swollen, hemorrhagic gingivæ, and rapid caries of the teeth are frequently the only signs of an incipient diabetes. Likewise, the characteristic whipcord-like tumefaction of the gum, over the palatal surface of the teeth, is one of the earliest signs of chronic Bright's disease. Similarly in gout, one of the earliest manifestations is the hard, smooth, blackish incrustations of salts found on the roots of the teeth. The peculiar linear discoloration of the gums, found as an accompaniment of metallic intoxication, renders the diagnosis of these sometimes obscure cases both easy and assured. In infantile scorbute there is no sign of more diagnostic value than the spongy, bleeding, hypertrophied gums, accompanied by an extensive resolution of the infantile tooth structure. Finally, it may be said with confidence that study and observation of the oral cavity will yield many more invaluable diagnostic points to the seekers of them, and thereby serve to lighten the task of the well-grounded general practitioner.

As regards the aid in therapeutics afforded the general practitioner by the recognition of oral malconditions, it is only necessary to recall the pertinent relationship existing between the many neuroses and caries of the teeth. A few citations will best illustrate this fact: Remedying a carious and irritable tooth has often succeeded in abating the intractable vomiting of pregnancy; in the treatment of chorea, attention directed to carious teeth, considered as centers of reflex irritation, has often lessened the severity of the nervous affection. And finally, how well we know the numerous forms of neuralgia that baffle medical skill until the dentist discovers an exposed pulp and removes it.

As regards the influence of oral conditions on the prognosis of systemic disturbances, we have here a field whose full value is unknown not only to the general practitioner, but also to many dentists. The minute differences in local appearances can not fail to suggest to the careful observer a proportionate idea of the systemic disturbance, and thus these appearances lead to a much more exact prognosis. At a recent meeting of the Odontological Society of New York, I recited the history of a case of military pulmonary tuberculosis, in which, with no clinical knowledge of the case, I was yet able to give an absolutely fatal prognosis, based on conditions found in the mouth, and verified later, unfortunately, by the course of the disease.

Thus far we have attempted to outline those principles of dentistry, the knowledge of which would be of undoubted value to the general practitioner of medicine, and which, therefore, he should learn as a medical student. Not merely from the standpoint of the general practitioner of medicine, however, should this question interest us. As dentists, it behoves us not to lose sight of the fact that the education of medical undergraduates in dental principles would serve a double utility. There would result an incalculable gain to the medical man, it is true, but it is equally undeniable that the dental profession would also greatly profit by such an educational advancement. The newly-developed ability of the medical man to recognize early pathologic conditions of the teeth and mouth would result in more thoroughgoing prophylaxis, and in the earlier application of treatment. Even more than this, the properly educated medical practitioner would recognize innumerable cases

of important diseases of the mouth, that would otherwise run their insidious course unnoticed and untreated. Granting that early recognition and the early application of treatment were in force, the task of the dental surgeon would thereby be rendered not only less arduous and more satisfactory to himself, but also far less unpleasant to his patients.

Nor is this the only benefit that the dentist would derive from such a change in the medical undergraduate's curriculum. I vouchsafe that there is known to all the members present to-day, that class of dentists, who, like the proverbially stubborn bird, can work well, but refuse to work well. Good dental work is distinctly time-consuming. There are any number of men eminently fitted to do excellent dental work, and who indeed do accomplish excellent results, until they have established a fairly large clientele. Then, suddenly discovering that their rewards are seemingly incommensurate with their labor, and realizing that the discrepancy is due to the time consumed in doing proper work, they sacrifice their ideals. Such a sacrifice is made, largely because the dentist realizes that he is the final judge of his own work. He is fully aware of the general practitioner's inability to pass judgment as to whether his patients are receiving intelligent or mediocre treatment. Armed with such knowledge, the unscrupulous dentist is able to continue the nefarious practice of working against time. The claim that the patient's appreciation of proper work serves as a check against such undesirable practices, is not tenable; for the average patient does not value a piece of work properly. Appreciation of dental work is in a large measure regulated by the confidence reposed in the dentist by the patient; and an incompetent politic man, often succeeds better in inspiring his patients with confidence in him than does an honest, qualified practitioner.

I have compared the above class of unscrupulous dentists to the bird that can but will not sing. The analogy may be carried further. The little bird, you know, was made to sing, and likewise the capable dentist can be made to do proper work. Let him realize that Dr. A., who sends him many patients, has graduated from a medical school where dental principles receive merited recognition, and that he therefore values good dental work, and discovers faulty results; and the dentist will cease to work against time, and attempt rather to maintain the professional opinion and favor of Dr. A. In this way, then, also, the education of the medical undergraduate in dental principles will serve to bring about a much needed elevation in the standard of the dental specialty.

Still another way remains, by which an addition to the burden of the medical student's work would redound to the well-being of both dentist and general practitioner. I refer now to the cultivation of a stronger bond of sympathy between the two branches of practice. Educate the medical man properly, and he will learn to appreciate the dentist at his true worth. The value of the dentist's advice and opinion will be on a par with the advice offered by the ophthalmologist, otologist, or laryngologist. He will be consulted by the general surgeon, before a plastic or prosthetic operation is done on the jaws or mouth, and his ideas will be sought by the general practitioner attempting to treat some obscure lesion of the alimentary tract, which might have some connection with oral disease.

Valuable as such a change in medical education would

be, and productive of unlimited good, it is nevertheless opposed on various grounds, and for numerous reasons. A discussion of the subject, therefore, would be lacking in completeness did it not consider these objections and show the tenuous foundations on which they rest.

First of all we meet the statement that the medical student, of all other professional students, labors most. His days are taken up with practical work, and his nights with study, and it would therefore be impossible for him to shoulder an additional burden of work. That the medical undergraduate's lot is an arduous one, none of us can gainsay, yet the scope of his work never has and never should be regulated, either by his capabilities for strenuous labor, or by the amount of time requisite for him to complete his course of study. It must not be imagined that the additional amount of study would be excessive; for it is not the mastery of dental technique that is asked of the medical undergraduate, but merely that he acquaint himself with those oral conditions having a bearing on systemic disease. The problem before him is solvable, even if it be difficult. His utility to the community depends on his ability to recognize and alleviate disease; and if a knowledge of dental principles will aid him, as it undoubtedly will, this knowledge must be acquired, at whatever cost of additional expenditure of time and labor involved.

This objection disposed of, what can be said to the often repeated statement that the testimony afforded by the mouth is at best of only slight corroborative aid to diagnosis? Such a statement is truly absurd. The philosopher's stone was never more assiduously sought than are aids to medical diagnosis. If conditions of the mouth will serve to guide a practitioner properly even in a small number of cases, the knowledge of these should be as assiduously cultivated as are the physical signs of the chest and abdomen. In a very recent brochure on pyorrhea alveolaris, Fitzgerald, of London, calls attention to the frequency with which diseases of the gum cause antral empyema, chronic gastritis, phlegmonous gastritis, systemic toxemia, and other infectious diseases, whose early recognition and scientific treatment can not be divorced from the absolute necessity of recognizing and appreciating the primary focus of disease about the gums. There are those who are in honest accord with us in all that has so far been said, but who believe that since there is no lack of good dental practitioners, the medical man can always refer his cases to his dental confrères, and thus conscientiously avoid the disagreeable duty of himself mastering the principles of dentistry. Such a statement, however, is one of the strongest arguments in favor of our proposition. In the first place, the medical practitioner of today is incapable of judging whether or not a particular man is an efficient dentist, and again he is oftentimes equally incapable of discovering early pathologic conditions due to oral disease, and requiring simple dental treatment, in order to effect a cure. We do not deny the existence of innumerable dentists capable of aiding the general practitioner; but we do affirm the general practitioner's lack of proper appreciation of the scope of these dentists and their work in remedying systemic disease.

In conclusion, let it be noted that the mouth and teeth are as much an integral part of the human economy as are the eyes, ears, larynx, or genito-urinary apparatus. The interdependence of systemic diseases and of diseases of the oral cavity is as close as that between the body

and any other of its functioning organs; and therefore the general practitioner is in duty bound to acquaint himself with the appearances of the normal and abnormal oral cavity. The seemingly complete separation of stomatology from general practice, in existence in this country to-day is a result of the failure of medical men of sixty years ago to appreciate the importance of dental principles. What we are striving for to-day is the closure of this gap, and the only feasible way to accomplish it is to acquaint the medical undergraduate with the important bearing that a study of the mouth has on the application of the general principles of medicine. Our thesis is to emphasize the fact that in knowledge lies power, and that the resulting power is always commensurate with the comprehensiveness of the knowledge. That this knowledge need not be all-embracing, we have tried to point out by distinctly limiting the term dental principles; but that it would be of unqualified value, we have also tried to show by pointing out the advantages to be gained from acquiring such knowledge: There would result the necessary feeling of sympathy between the dentist and general practitioner; the general practitioner's work would be of a higher standard, the dentist's work would be more satisfactory, and, lastly and most important, the patient would be better served. These results are truly to be hoped for. Although it is true that the medical profession contains men, who by a self-imposed duty of study and observation, after graduation, have rendered themselves capable of recognizing and properly appreciating diseased conditions in the mouth, yet such men form a glittering minority. We firmly believe that the only way of increasing the number of this conscientious minority is by instructing the medical undergraduate in those principles of stomatology which will make of him a truly broad general practitioner.

38 East Sixty-first Street.

THE HANDWRITING ON THE WALL: WHAT DOES IT PORTRAY?

BY A. E. BALDWIN, LL.B., M.D., D.D.S.

FELLOW OF THE CHICAGO ACADEMY OF MEDICINE
CHICAGO.

The founders of American dentistry had high professional ideals. The methods of practice at their command were the most crude and almost if not wholly mechanical. They deemed the specialty a part of the healing art and hence a department of the science of medicine. Such profound regard had early practitioners of dentistry for their calling that in almost every instance before or after they had begun practice they took up the study of general medicine. They were capable of practicing and did practice general medicine. The illustrious Haydon, Jeffries and many others were graduates of the best American and foreign medical colleges. Later, from 1810 to 1840—the latter date being that of the establishment of the Baltimore College of Dental Surgery—a long list of medically educated men gave honor and dignity to their special calling. These men were the peers of any in the practice of medicine. I doubt if there has ever been a period in our history when such a large percentage of cultured gentlemen graced the dental specialty. They were men of dignity and stand-

ing, men of influence, holding the respect of the people in the community in which they lived.

The foundation of a dental college in 1840 and the creation of a degree divorcing dentistry from medicine, marks the period of the narrowing of our calling. No matter what the views of others may be, the motto of our country—"together we stand, divided we fall"—is as applicable to dentistry as to national affairs. The dental student and too often his teacher have forsaken the broad principles of medicine and have dwarfed the teaching of physiology, pathology, and treatment of the human tooth into mere side issues in comparison with the instruction in extraction, in insertion of dentures, and in crown and bridge work. A single attendance on a dental society and slight perusal of dental journals suffice to show the exceedingly narrow lines into which the profession has drifted. Scarcely a dental journal is issued in which the handwriting is not noticed upon the wall. Indeed, outside of filling cavities and roots of teeth and other mechanical operations the profession is almost at sea. Multitudes of instances might be quoted from current dental literature, but the few following will suffice.

A paper was read recently before the New York Institute of Stomatology, on "Pyorrhea Alveolaris from a Bacteriological Standpoint, with a Report of Some Investigations and Remarks on the Treatment." Experiments familiar to mere tyros in bacteriology were cited, and the following concerning rabbits that were infected: "All were made sick, some were sicker than others, an abscess formed in one." The bacteriologic ignorance in the omission of Koch's law should have prevented its serious consideration by a medical society.

A professor in a western school, commenting on a recent article—"Interstitial Gingivitis due to Auto-intoxication"—remarks: "I can not agree with the author as to the folly of local treatment, the cases have grown to large proportions in my hands, where local treatment has effected a cure, in fact, I feel so sure of this, that I can not reconcile my experience with his positive conclusions." Can it be seriously assumed that dentistry is so far ahead of the mother profession as to cure constitutional diseases by local treatment?

In August, 1894, in a paper read at the meeting of the American Dental Association, held at Old Point Comfort, Va., the following method of classification of the different forms of so-called pyorrhea alveolaris was given: "This classification is made by simply prefixing to pyorrhea, an adjective stating the name of the disease which is causing the pathological symptoms in the oral cavity, as 'gouty pyorrhea,' 'diabetic pyorrhea,' etc. It is unnecessary to enumerate the subdivisions that might be listed, as they embrace all causes that may disarrange nutrition." With all the admittedly valuable data of the paper, its author ignored the simple fact that bacterial infection implied a suitable culture-medium only. So far as the established infection present in pyorrhea was concerned, that culture-medium might or might not be resultant on any auto-intoxication due to these diseases. For purposes of clinical study and treatment the pre-pyorrhic stages were all-important. The complexity of the proposed classification would destroy its value for clinical purposes.

In a certain city, dentists were urged to form a society to furnish money to enable a brother dentist to make scientific researches in bacteriology in relation to so-

*Presented in a Symposium on Dental Education, before the Section on Stomatology, at the Fifty-first Annual Meeting of the AMERICAN MEDICAL ASSOCIATION, held at Atlantic City, N. J., June 5 S, 1900.

called pyorrhea alveolaris. This dentist was an amateur in microscopy, who knew almost nothing as to what had already been done in dental bacteriology—the same was true of those who were to furnish the funds—and nearly as little as to bacteriologic laws. He was a man of fair education, but it would have required years to have fitted him to undertake expert work. Would a business man who required an accurate analysis of a certain spring water or compound of drugs or adulterated food employ an individual who had yet to be trained as an analyst? Fortunately for those who were to furnish the money and who expected results, the plan was dropped. This scheme illustrates excellently the unscientific conception of dentistry held by many well-meaning men in the profession.

Under the heading, "Etiology of Pyorrhea Alveolaris,"² an attempt is made to determine the etiology of a disease by the examination of deposits about the roots of the teeth, made in three cases by a chemical expert and "six or eight by Professor _____ in my presence, the results obtained corresponding to those of Professor _____." How much weight would such experiments have in a scientific body?

Some years ago the Faculties Association formed a species of trust and appointed professors to write textbooks to be used in the colleges. These honors were parcelled at random on stock-holding principles, regardless of ability or qualification. As might have been expected, the books published, except in one or two instances, are a disgrace alike to author and the professor. Almost all are uncritical compends of a limited field of dental literature. A notable disgrace in this particular is a puerile work on "Orthodontia." Here is a work without a single original idea, a hazy compilation of other men's thoughts reduced to the level of the teacher's capacity and the requirements of the students. The author's mind proved unequal to the task of comprehending works already extant and held in high esteem for their scientific basis. Yet this man was supposed to teach science.

A professor on theory and practice in a dental school, recently speaking of so-called pyorrhea alveolaris, said: "I would advise you to read the views of both Drs. Rhein and Talbot and choose for yourself which theory is correct." This reminds one of the difficulty Lord Timothy Dexter had on punctuation. Lord Timothy gained a fortune by sending warming pans to Africa. He wrote a book, but gave up the problem of punctuation in despair, placing at its end all works of punctuation so that the reader might "pepper and salt to suit himself." The task of scientific analysis was similarly too much for our professor.

In a discussion of prosthesis and orthodontia, before the Columbian Dental Congress, another professor remarked: "I am particularly interested in the correction of irregularities of the teeth and I find that the etiology has very little to do with the correction. I find I can correct almost any case of irregularity regardless of the cause." Can it be that dental science has reached such a stage of perfection that disease can be eradicated without the knowledge of cause? This seems strange when it is remembered that the entire trend of medical thought and energy is directed toward the etiology of disease.

In the discussion of a paper on "Degeneracy in its Relation to Deformities of the Jaws and Irregularities of

the Teeth," read before the Odontographic Society, another professor said: "The subject is an interesting one, but it is rather one of to-morrow than of to-day. Our knowledge of these facts is not sufficiently advanced to form positive data on which to base certain opinions and I am sure that the subject will not under such circumstances appeal to the members present as something perhaps of another thing would."

The first paper on the subject of irregularities of the teeth was published in 1794. Is it possible that the profession has made no progress in the study of the etiology of such irregularities during the past century? From such remarks by a teacher in two dental colleges, and from the further fact that there was no further discussion of the subject, the inference seems plain that the profession knows nothing about one of the most important questions in its specialty.

Discussing Dr. Frederick Peterson's paper, read before the New York Odontological Society, on "Deformities of the Hard Palates in Degenerates," one dentist remarked: "I feel just a little foolish to-night, because I have brought with me a case full of models that seem to me to be rather out of place. I labored under a misconception of the subject. I understood that it was to be a discussion on cleft palate in its relation to degeneracy, and when I was asked by the chairman of the executive committee to bring some models with me, I agreed to do so. . . . There is one point that I would now make in connection with the models, and that is, whilst they are exceedingly abnormal mouths they are casts from normal people. The patients are not degenerates in any sense of the word, so far as I know."³ This is, as the newspapers say, very important if true, since congenital cleft palates are generally regarded as most marked expressions of degeneracy.

The following reply was sent to Dr. Vernon Hall in response to a letter as to the use of his "Chemistry and Metallurgy applied to Dentistry":

Dear Sir:—Pardon us for not replying to your favor of recent date, but we have been so exceedingly busy with the college rush. We regret now to say that your work on Metallurgy did not meet with very much approval, for the reason that the professors here seem to be "stuck" on Hoggden, of San Francisco, Cal., and claim that there is more chemistry than is practical for students' use in your work; and we were very much disappointed at the reception your work received.

A bill is now before Congress for the appointment of dentists in the army and navy. A mail report from General Otis contains an alarming statement regarding the condition of the teeth and jaws of the troops in the Philippines. The case of Walter Fitzgerald, Company C, 28th Infantry, formerly of the Montana Volunteers, is cited: "This young man, 23 years old, has been in the Philippines for a year and seven months. He was one of the first volunteers to reach Manila after Dewey's victory. Nineteen months in the tropics, subsisting on the rations of the army, have resulted in the loss of nearly every tooth in his mouth. It is not the climate alone which is responsible. It is that which undermines the roots of the teeth, while the tropical fever, which has afflicted nearly every volunteer now in the islands, affects the gums of the mouth and loosens the teeth. Grinding on army biscuits and canned beef doesn't naturally improve the teeth. In the case of Fitzgerald, the teeth did not decay, but they dropped out one by one. This is a common ailment in the Philippines and the cause generally is the fever. The hospital surgeons are

2. *Ibid.*, January, 1894.

3. *Ibid.*, December, 1895, page 755.

able to relieve the condition of the patient to some extent, but constant care after the fever is necessary to save the teeth. If this bill should pass and become a law, how many dentists are there who are capable of coping with such conditions as mentioned above? To be sure the dentist might look wise and plug the cavities in these teeth.

An editorial review of a work on "Interstitial Gingivitis" claims: "To say that gingivitis in the dog and sheep resembles or is analogous to the lesions found in man, calls for a very broad imagination. . . . The environments of man are so totally different from those of street or pound dogs or domesticated sheep or guinea-pigs that we must consider this otherwise excellent work as failing to throw much light on the etiology or pathology of interstitial gingivitis."⁴ This review speaks for itself. In the light of the great advance in medicine through biologic experiments during the past two decades such an editorial seems an emanation from a Rip Van Winkle who had remained asleep from the days of fetishism suddenly to awaken in the closing years of the nineteenth century and to insist that not he but the world had been asleep.

Many more illustrations could be added, as the dental journals of the past year are replete with examples of such ignorance; still, a sufficient number have been cited to demonstrate the need of a broader education. Until this is acquired no advancement can be made along the lines of original research and no progress is possible. The handwriting upon the wall marks the standard of the profession.

826 West Adams Street.

LIMITATIONS IN DENTAL EDUCATION.*

BY EUGENE S. TALBOT, M.D., D.D.S.

FELLOW OF THE CHICAGO ACADEMY OF MEDICINE.
CHICAGO.

In dealing with limitations in dental education, we are brought face to face with their greatest evil—divorcement of dental from medical teaching. Removal of a special department from general medicine and tuition along narrow lines have so narrowed teaching that even diseases of the general system which affect the mouth, jaws and teeth are excluded. The medical profession has been content to let the dentist entirely alone. In studying systemic diseases, therefore, it has not trespassed on the field of dentistry. The result is that study of the general diseases which affect the mouth, jaws and teeth have been neglected. Limitations of a dental education have prevented the dentist from associating local diseases with systemic causes.

The very title, "Doctor of Dental Surgery," has so closely and exclusively limited the profession, as it is called, that the dentist is known by the laity as doctor of the teeth. A letter received by me March 24, asking me to deliver an address before a state society in a city of 50,000, says: "The people here don't seem to realize that a dentist is anything more than a man with a pair of forceps who can yank out a tooth for a quarter."

The mental atmosphere of the colleges is such that the student very soon imbibes the fixed idea that repair of decayed or dead teeth and restoration of lost ones is all that is expected of him when he leaves college. An-

atomy, physiology, chemistry and pathology are so taught as to impress the student with the notion that these subjects have little to do with dentistry, and hence a feeling results that to obtain the degree of D.D.S., the student need have but the dimmest idea of these sciences. The result is that the graduate of dental surgery is not competent to associate systemic diseases with their effects on the teeth, nor is he capable of appreciating systemic lesions due to overtreatment of pathologic conditions of the teeth.

The jaws and teeth, as part of the human body, are influenced by the local and systemic conditions of the human organism. Narrowing our specialty to the treatment of the human tooth and ignoring the influences of the systemic diseases of the body and the local diseases which surround the jaws and teeth has resulted in great mental limitations to the dentist. Only a medical education can remove these mental limitations. Dentists have virtually come to a standstill as far as restoration to health is concerned; nay more, owing to ignorance, not being satisfied with assisting Nature to restore diseased teeth to health, they are in many ways encouraging disease and destruction of the very tissues which they, as specialists, are supposed to protect.

Embryonic evolution teaches that the jaws and teeth are transitory structures degenerating from year to year. They were foreordained to destruction from the very beginning. The teeth, unlike other structures of the body, obtain their size and growth before they erupt. Therefore nourishment and repair are out of the question. If decay of the teeth—which is a natural process—will not remove them, a simple process, interstitial gingivitis, and finally a still simpler process, osteomalacia or senile absorption, will accomplish the result. In the lower vertebrates, such as the whale, shark, snakes, etc., continuous succession of teeth is produced throughout life. Osteomalacia or senile absorption, therefore, is the outcome of the law of atavism. Nature is trying to remove the second set. The changes in the shapes of the alveolar processes tend to lessen the blood-supply of the teeth. A society fad—etiquette in mastication—whereby the lips are closed and the motion of the jaws is barely perceptible in chewing is not conducive to strength and vitality, but atrophy or arrest of development is sure to follow. Is there not a limit to certain operations that are so enthusiastically advocated by dentists? In early races, as indicated by their skulls, and in modern nearly pure races, decay of the teeth, when observed, always commences in the fissures of the crown and at the necks of the teeth below the enamel. These are the defective places in otherwise strong, healthy teeth. In the teeth of to-day, owing to degeneration in shape, size and structure, and owing to modern methods of life, decay takes place at any locality, owing to imperfectly developed tooth structure. Decay is more frequent and more rapid to-day than formerly, and is increasing with great rapidity. It is more rapid in some nationalities than in others.

One is also impressed by the rapidity of decay of the teeth when comparing those in ancient and modern skulls, of nearly pure races, with the teeth of the present generation. With the concentration of all the knowledge, energy and skill that has accumulated in the dental profession, the result of its narrow teaching in the past sixty years, dentists have not been able to prevent the ravages of decay. Nor they will be if they practice present methods for a millenium.

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Fillings are inserted no better by dentists to-day than they were forty or fifty years ago. All that any one can or ever will be able to do is to insert a moisture-tight filling, excepting, of course, amalgam. A patient comes; cavities in the teeth are filled; the patient is dismissed with a request to return in six months or a year; he returns, as requested, with more cavities and decay around those recently filled, but the dentist is not disappointed.

With the existing limited knowledge, the central idea seems to be to stop the cavity in the tooth so that it will not decay again. This being the case the entire energy and brain of the profession—so-called—is exerted in finding some means to carry out this idea. The filling must be made more than moisture-tight. To do this it must be malleted in with as much force as patient and tooth can stand, regardless of pericementitis, interstitial gingivitis, necrosis of the jaw, and sensitiveness and death of the pulp from thermal changes. It is perfectly absurd to submit the patient to such agony. The cavity must be measured. If it be the size of a pin-head, the entire approximal surface of solid tooth-substance must be cut away, thus subjecting the patient to hours of torture—to say nothing of the expense and of the furnishing of a larger surface for the destruction of the pulp by thermal agencies. By filling the teeth the cause is not removed. Under present methods dental technique will never prevent decay.

Aprpos to what has already been said may be quoted a paper read before the British Medical Society, at the meeting in Portsmouth, Aug. 1-4, 1899, by Dr. James Cantlie,¹ on "Early Decay of the Teeth in Britain." He says: "That the teeth of our children are in a bad way is an acknowledged fact, proved over and over again. . . . The result of all such inquiry has been the publication of statistics proving an abnormal amount of disease. The natural importance of this can hardly be overestimated. We can not expect to rear a healthy race on carious teeth. . . ."

"The cause of this premature and abnormal decay is, however, scarcely dealt with. . . . The dental art has attained so high a position in this country and in America, so far as the mechanics of the art goes, that there is but little more to be done. . . . But I would like to induce our dental brothers to look a little farther afield and to tell us how to raise the child, so that the teeth while yet uncrupted and within the dental sacs may be allowed to grow to the greatest perfection."

"The National School of Dental Techniques" is the last straw on the camel's breaking back. It is the essence of narrowness. It will soon wear out its usefulness and become a thing of the past. What is needed to-day is a broad education in pathology that will find the cause and remove it. Dr. Arch. C. Hart, of San Francisco, as represented in his paper on "Evolution of the Decay," has worked along the right lines. He deserves credit for courage in presenting the subject in a new aspect.

Modern methods of practice, such as gold crowns, bridge-work—producing irritation of the gums—cutting away the teeth—allowing the roots to come close together (Bonwill), thus removing support and nourishment from the teeth—are fruitful sources of interstitial gingivitis.

The application of bridge-work when one or two roots are required to support two or more crowns is certainly pernicious practice. Especially is this true in those

cases in which the alveolar process has once become attacked with syphilis or scurvy or poisons, such as mercury, lead, etc., and in those cases in which auto-intoxication produces interstitial gingivitis. The alveolar processes which have become involved are more susceptible to irritation and finally to loss of structure. From what has been learned in the past four years of the alveolar process and its absorption, implantation and transplantation of the teeth after the jaws have obtained their growth can never be considered a successful operation.

Correcting irregularities of the teeth by the use of springs, ligatures and elastics, after the alveolar process has obtained its growth, requires great skill and judgment to prevent destruction of the alveolar process. Many mouths have been injured by the too rapid movement of the teeth by these instruments. The pernicious habit of "beautifying" the teeth by the use of silk threads, so strongly recommended, has been an object-lesson to many practitioners in the neighborhoods where such operations have been performed. There are many other mechanical operations in which the enthusiast over-reaches the mark, the discussion of which is not apropos at this time. Since dental technique has reached such a high state of perfection in our dental schools, it is high time that the faculties should turn their attention to the scientific side of dental teaching. No wonder that our British and European confrères have such a poor opinion of our dental schools.

Viewing the subject from a university standpoint, dental college teaching is in a rut, and a deep and narrow one at that. A large percentage of the colleges ought not to exist. While the motive of many of the teachers is honorable, a large proportion of them have not the proper education to teach. Presidents and boards of regents of the universities having dental departments should reorganize these schools and place dental teaching on as broad a foundation as other departments of science. The preliminary qualifications, entrance examinations and length of course of study should be the same as in other departments. Then and not until then will dentistry hold the position in the community which it deserves.

IS A MEDICAL EDUCATION A NECESSARY QUALIFICATION FOR DENTAL PRACTICE.*

BY ALICE M. STEEVES, D.D.S.

CHICAGO.

In this age of strenuous activity and rapid advancement, when personal gain often seems to be the sole object of professional work, the necessity for a medical education in dental practice may be denied by the narrow-minded in either profession.

The development of specialties in recent years has created a spirit of commercialism in which completeness of education is neglected, and only those studies acquired that can be quickly turned to money. In no specialty has this tendency been more marked than in dentistry.

If concentration of energy and study makes the successful specialist on all medical lines, may not the dentist claim an added opportunity for even greater ability because of the mechanical skill required in his work.

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The way upward in dentistry, not unlike all other professional paths of to-day, through cheap competition and unethical practice, is hard enough at best and requires the use of every possible resource.

Dental science originated in the medical profession and, although not permitted to become a part of the mother profession in the beginning, it is recognized to-day as a specialty of medicine, and justly so, for there is no more reason for making a distinct profession of dentistry than of surgery, neurology or ophthalmology.

On the one hand, it is claimed that dental success consists merely in the production of a skillful result from a mechanical standpoint, while on the other we hold that a dental education has the broadest possible significance and includes a knowledge of the structure and function of organs, not only of the mouth but of the whole organism, and of the principles of disease as well.

The dentist should receive the same preliminary education as the medical specialist, because in so far as dentistry is more than a mechanical art, it depends on the same sources and requires the same studies as all other departments of medicine and surgery. The principles of disease are the same, whether they occur in the internal organs, the extremities or the teeth. A knowledge of these elementary principles in one set of organs requires the same studies as that of any other group of organs in the body. The necessity for more complete pathologic training becomes apparent whenever the dentist attempts to treat diseased conditions of the mouth.

It is not enough to remove or advise the removal of the cause of the disease, unless we can make a logical diagnosis as to the cause and be able to predict the probable outcome of its operation. The surgical principles do not differ from those in other surgical practice. The laws of aseptic and antiseptic treatment are just as applicable to dentistry as to amputations, because the inflammation which produces an alveolar abscess is the same process as that which follows any septic infection.

The dependence of one set of conditions on other conditions at distant parts of the body must be recognized. One of the simplest, yet greatest, examples is the perfect assimilation of food, possible only through normal conditions in the mouth.

There is a common interest between the dentist and other medical specialists. The dentist must be familiar with the structure and function of organs other than those of the mouth, while the medical man should be able to recognize the presence of diseased conditions in the mouth and their relation to morbid changes elsewhere.

Medical and dental students should be educated in the same schools, because the fundamental studies which each must pursue are the same, and should be required to take different clinical and laboratory instruction in their separate specialties, only in the advanced courses.

By this combination we would secure the advantages of larger institutions, more fully equipped laboratories, better clinical facilities, and instructions by the best specialists in each department, while the broader scientific atmosphere would create a healthful competition between the students of both branches. If the position of the dental specialist shall equal in dignity and importance the foremost in medicine, it will be necessary to educate and train the dentist more thoroughly in the fundamental principles of medical and surgical science.

The advantages of united work in this ASSOCIATION

are many, and he who will grow must avail himself of these meetings. The obstetrician's paper will help us to care for the mother during the period of gestation, that of the neurologist will aid in the management of neurasthenic and nervous patients, which is so often a difficult problem, while the surgeon's paper will assist us because we are surgeons.

I have given but few of the many reasons why the physician and the dentist belong to the same great profession, must work with the same methods, study the same principles; and the dental student may well spend one-half or three-fifths of his time in securing a thorough ground-work in the laws of the medical profession.

SOME THOUGHTS ON TEACHING MATERIA MEDICA AND THERAPEUTICS, EMPHATICALLY SIZING OBJECT TEACHING.*

BY A. H. PECK, M.D., D.D.S.

CHICAGO.

This subject is, I presume, rated by the majority of teachers in dentistry, and certainly by the vast majority of students of dentistry, as the driest and most uninteresting of the entire college curriculum. Why this is so, I can not tell. I can only leave those who are especially interested in this particular work to draw the inference. As for me, I would not exchange my position as teacher of materia medica and therapeutics for that of any other in the list of instructors. This work is anything but dry and uninteresting, as I find it. I see in this field such opportunities for original research, for broadening of one's mind, for extension of one's knowledge, for general rounding of one's mental capabilities and character—teacher or student—as are found in very few, if any, of the other departments of college work. Surely, the individual who is unable, in the light of such possibilities, to present his work to the students in such a way as to command at the very outset, and to hold throughout, their respect and interest, is certainly not the kind of individual referred to by the gentleman who said, "Poets are born, not made;" for this saying applies just as truthfully to the teacher as it does to the poet.

One of the first and most important questions to be considered in a paper of this character is: Just how far should we, as teachers of dental students, carry our pupils in this great field? Are we justified in being content to teach them just enough to enable them to treat locally, reasonably well and with a respectable degree of success, the various pathologic conditions about the mouth? Or, should it be our aim to so instruct them that they will at once be able to recognize and intelligently prescribe for the various systemic disorders that are constantly aggravating the local pathologic manifestations, many of which are only indexes of the systemic disorders. My answer is most emphatically in favor of the latter course. Please do not understand from this declaration that I would have the dental student subjected to as thorough and complete a course in materia medica as is required of the medical student. However, I am strongly inclined to the belief that this phase of the question should be qualified only by the unfortunate condition invariably imposed upon us, namely, lack of time. Surely, no one will deny that

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three years, of six, seven or even eight months each, is insufficient time for the students to become thoroughly learned in all the branches now included in our curriculum; consequently the work in some of the departments must be cut down as much as possible, and perhaps, chief among these is *materia medica* and therapeutics.

Nothing grieves me more than to hear, as we frequently do, from the older members of the profession, the leaders, those to whom we are accustomed to look for guidance and inspiration, this sentiment, that it is a mere waste of time to teach the dental students more *materia medica* than is necessary to enable him to treat, reasonably well, the local manifestations of trouble about the mouth.

What would you think of a man enjoying a lucrative practice in a large city like Chicago, or elsewhere for that matter, merely treating with local remedies the local manifestations in the mouth in a case of syphilis, and never even thinking that this disease calls for systemic treatment, to say nothing about possessing the knowledge to prescribe for it. Such a case, under these conditions, was referred to me only a short time ago.

The very logic of medicine lies in one's ability to recognize the primary action of drugs on the various organs, and, through the great systems of the body, the secondary action on other organs, in this manner having an indirect but important bearing on the local pathologic manifestations. Thus one is enabled to note the parallelisms existing between the action of drugs and the pathologic conditions in disease—a very fascinating study indeed.

Let it be understood, then, that we favor the following as the order of their importance: 1. The therapeutics of these drugs with which the student will come in contact daily in his practice, such as the antiseptics, disinfectants, germicides, escharotics, counterirritants, and styptics. 2. A thorough knowledge of at least the standard remedies that may be indicated for the alleviation of all the systemic disorders that may in any way aggravate or affect the local diseases under treatment. 3. A thorough knowledge of the circulatory stimulants and depressants; the respiratory stimulants and depressants; the nerve stimulants and depressants; the hemostatics, diluents and antiphlogistics. 4. A knowledge of the most important of those agents which in any way assist the digestive, assimilative and eliminative organs—the last comprising the sudorifics, diuretics, and cathartics. Local and systemic antidotal treatment is of the utmost importance. The intelligent prescribing of these medicines must never be neglected.

Two important questions now present themselves: How much regarding these various agents shall we teach, and how best may we teach it? In answer to the first question, I would say that we can not teach too much about them. Our students should be well grounded in the pharmacology, source, constituents, physical characteristics and properties and physiologic action—in its broadest application—their dosage and indications and most of all, their therapeutic value, of the various agents. An individual consideration of these agents or groups of agents, however desirable, is out of the question in the time allotted to this paper.

In answer to the second question, How best may we teach this? I will reply that no one rule or set of rules can be followed successfully by all. As indicated above,

teachers, as well as poets, are born, not made, and each one will find it necessary to follow the guidance of his own personal capabilities and characteristics. In my individual work I find the recitation plan of inestimable value, the source of the drugs, their physical characteristics and properties, their chemistry and dosage being taught almost exclusively after this plan. The physiologic and therapeutic action of the agents is taught by lectures and by demonstration. However, oftentimes I find the recitation method peculiarly adapted to this division of the work. We should strive to make our teaching in these two phases of our work just as interesting to our students and as thorough as possible. It is of the utmost importance that we be able to select the proper drug for a certain form of disease. Blundering in this respect is inexcusable, and often results in the most serious consequences. To understand clearly just how far these agents are affecting the various organs through which they are passing on their disease-healing mission, is most important and necessary to an intelligent use of them.

Soon after assuming the duties of this chair in college work, I became especially impressed with the many shortcomings of our various text-books. Indeed, any one who has taken the trouble to look into this question will agree with me, that one has only to consult another author than the one that does not suit him, to find teaching to suit his own particular fancy; so at variance are the statements of the many different authors pertaining to these various questions in *materia medica* and therapeutics.

Their lack of harmony as to the relative potency of the various antiseptics and germicides and their almost total lack of consideration as to what special agent, under certain conditions of irritation, inflammation, sepsis, or otherwise, would be most desirable especially impressed me. I consider it of the utmost importance that our students, and we practitioners, shall be possessed of knowledge that is accurate, regarding especially the essential oils and other agents we are daily using. We should know their relative value or potency as antiseptics, disinfectants and germicides. When we select an agent to place, perchance, in the root-canal of a tooth, it is important that we be familiar with its relative ability to perform that work. Not only this, but I also consider it equally important that we should know the action of these drugs on the soft tissue with which they come in contact. The antiseptics and germicides are poisonous to the vegetable cell. They are used in our work to inhibit the development and to destroy the germs of disease. Many of them are, as well, poisonous to the animal cell. No one will question the great value of being able to select an agent for a certain case that will destroy the germs present—render the parts antiseptic—and, at the same time, will remain harmless in contact with the soft tissue. Frequently it is desirable that an antiseptic or a germicide be used that is also stimulating to the diseased tissues, causing them to yield more readily to the healing influence of the drug. Again, it may be desirable to use one of these agents that imparts a depressing effect upon the soft parts. How are we to make these selections with judgment and certainty without an accurate knowledge of their action when confined in contact with soft tissue?

That I could have something definite to work upon; that I could feel when I went before my class and made

certain statements in this connection that I would verify those statements by actual demonstration, I have adopted the following plan of teaching these phases of the subject: During each term a thorough and complete series of tests is made in the bacteriologic laboratory and before the class, to determine the exact relative value of these agents as antiseptics and germicides. Also an exhaustive series of experiments has been conducted on soft tissue, animal and human, in both a pathologic and normal state, to determine which are irritating, stimulating or depressing, that we may make our selections for special use with wisdom and certainty.

I believe the same individual who teaches therapeutics should teach special pathology. The two fields are so closely co-related it is impossible for a teacher to give a comprehensive course of instruction in the one without trespassing more or less on the other. Since special pathology has been assigned me in connection with therapeutics I find I am able to present the work in a much more interesting manner than I otherwise could do. The students unquestionably gain a clearer and more satisfactory understanding of the various diseased conditions, their pathology and therapeutics, than was formerly possible.

Throughout this brief paper I have hinted at the value of object teaching; I wish now to emphasize this method as strongly as may be. No one can deny that more thorough and satisfactory work can be done by object teaching and actual demonstration, where the nature of the work admits it, than is possible through the medium of lectures. Suppose it is our purpose to teach the class the effect of a certain drug on the various organisms, and for the purposes of illustration we select a cardiac and respiratory stimulant. We go before the class and in language that is simple, plain and can not be misunderstood tell the manner in which the drug affects the circulatory system and the organs of respiration; that it acts directly on the nerve-centers in the medulla and, through the medium of the vasomotor system of nerves, stimulates the muscles of the heart to greater activity, thus increasing the force and frequency of the pulse; and that it acts, through the medium of the circulation of the blood, on the respiratory organs, stimulating them to greater activity, thus deepening and lengthening the inhalations. Again, a suitable animal is provided, placed upon the table in an appropriate manner, is anesthetized that it shall not suffer pain, then with the knife and proper apparatus these internal organs under consideration are exposed to view; the students see them in operation performing their natural functions. Now the stimulating agents are administered and the students see their effect upon these organs. In turn they are taken to the laboratory and required to make the demonstration themselves. Do I hear any one ask which method of teaching will make the profounder impression on the students' minds? Personally, I can see no comparison. The simple pleasing word-picture as presented by the "successful" lecturer makes but a passing impression on the mind of the average student. This can not be called knowledge, only transient information. The actual demonstration which he has made and observed makes a deep and lasting impression on his mind and imparts to him knowledge that is permanent.

We do not think of instructing students in anatomy by only lecturing to them on the subject. The institution

of learning that to-day would advocate this would be laughed to scorn. No, we take the students to the dissecting-room and there teach the subject by actual demonstration. What would the teaching of chemistry amount to without the laboratory? And the same question may be asked in regard to the teaching of metallurgy. It is unnecessary for me to follow this line of illustration farther.

It seems to me that object teaching in all branches and departments of our college curriculum which admit of it is the only true effective method to be employed. We must work in this manner of teaching more and more if we desire to make the best return for the favor and patronage of our students. I confidently hope and expect in the near future to see a general move along this line in college work.

PATHOLOGY OF ACQUIRED HEART DISEASE IN CHILDREN.*

BY J. DUTTON STEELE, M.D.

INSTRUCTOR IN CLINICAL MEDICINE, UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA.

When asked to write upon this subject for the Symposium of the Pediatric Society I realized how hard it is to make such a paper more than a mere catalogue of lesions. To avoid this it has seemed better and more profitable to consider the subject in a comparative light, and to take the pathologic changes in the adult as a standard by which to develop the difference in the pathology of the child heart, together with some inquiry as to the causes of these disturbances. With such an object in view it seems best to take up first the conditions of nutrition and disease particularly liable to affect the heart in childhood.

NUTRITION OF THE HEART IN CHILDHOOD.

It is a general law that the tissues respond more quickly and more readily to stimulation and grow more vigorously in early life than after puberty. A corollary to this is that the tissues of the child are more yielding and more likely to give way under a sudden distending force than the more closely knitted tissues of older people. Hence it follows that, when additional demands are made on the heart muscle of the child, hypertrophy will take place more rapidly than in adult life and, under similar conditions, dilatation will be also more common. It is furthermore evident that almost every enlargement of the heart will be an eccentric one, that there will be no compensatory hypertrophy without considerable dilatation, and that unless the general bodily nutrition is very much impaired, simple dilatation will not be long existent before hypertrophy sets in.

Again, the general nutrition of the organism is apt to be much better in children than it is in adults, and the local nutrition of the heart correspondingly better. The degenerative processes so common in middle life—by which is meant not only the physiologic hardening of the tissues, but also the effects of exposure, hard work, alcohol, tobacco, and such other conditions as cause arterial capillary fibrosis—are practically absent in childhood. Hence we can eliminate from our consideration of the pathology of the child heart the permanent increase in resistance due to thickened arteries, the slow fibrosis and puckering of the various valve leaflets, especially those of the aortic orifice, and the narrowing

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of the coronary arteries with its subsequent reaction on the nutrition of the myocardium. From this it follows that in childhood peripheral resistance, with a single exception that will be named hereafter, is never increased. When these facts are considered in connection with the tendency to general good nutrition in childhood, one can easily understand why compensation is quick and thorough in the child heart, and why hypertrophy occurs regularly and quickly under conditions in which it is only occasionally seen in adult life.

EFFECT OF ACUTE RHEUMATISM ON THE HEART IN CHILDREN.

Lesions of the heart more often follow rheumatic affections in children than in adults. Indeed, these lesions must be considered not as a complication but as one of the manifestations of the rheumatic state. In children the joint lesions are at the minimum, and myocarditis, pericarditis, endocarditis, subcutaneous nodules and chorea—assuming that to be a rheumatic affection—are at the maximum. Pleurisy, tonsillitis and vasomotor and hemorrhagic phenomena as manifested by erythema and purpura are also comparatively rare after puberty. The rheumatic series may show itself, not by simultaneous outbreaks of several of these symptoms, but by the occurrence of each in succession, and, to cite Still in "Allbutt's System of Medicine," the history of a rheumatic outbreak in a child may be the history of the whole period of childhood. The heart inflammation is probably not so often a complication as in adults, but a primary manifestation of a rheumatic condition.

Again, the rheumatic disease of the heart appears to be very virulent in childhood. Lees, in his paper before the British Medical Association, in 1898, said that in 160 fatal cases of this nature, 35 of 115 died in the first attack, and 86 of 100 showed fresh rheumatism during the attack. The fatal result as a rule was not due to endocarditis, but to a much more serious condition, viz.: dilatation of the heart, especially when joined with an extensive pericarditis. Beside Lees, Cheadle and Sansom say in recent articles that dilatation of the heart is a frequent occurrence in the rheumatic affections of children. Lees shows very convincingly that by far the commonest lesion in the cases coming to autopsy is an acute myocarditis of the acute infectious form of the type, also seen in scarlet fever and diphtheria. In 115 cases this condition was present in more than one-third, macroscopically, and Lees concludes, and it would seem rightly, that microscopic examination would have very greatly increased the proportion. The condition was of far greater import, in his opinion, than any other lesions. He ascribed its existence to the direct action of the rheumatic poison, be it infectious or not, upon the heart muscle. He is supported in this view by Cheadle and Sansom. The resemblance between microscopic findings in several of the cases reported by these authors to those of the heart muscle in scarlet fever and diphtheria, as studied by the Germans, is most striking and suggestive.

The next most frequent lesion is a pericarditis, which was present in all but 9 of the 115 cases. In 77 the pericardium was adherent and the changes in the myocardium and pericardium combined, as they appear to be coexistent in the very great majority of patients, present conditions most favorable to the development of dilatation, and may be considered the most serious of the factors causing the heart failure.

Endocarditis must be considered of least importance

in determining the immediate effect on the heart. As has been said, the lesions seldom occur alone, but each plays its part in a pancarditis.

The more modern methods of investigation have enabled us to realize fully the rôle played by the myocardium in rheumatic conditions, and the absence of such investigation explains the emphasis laid on the more evident disease of the endocardium by the older writers, and the discrepancy between their figures and those of Cheadle and Sansom.

The percentage of cases of rheumatism that are followed by endocarditis is two or three times as large in children as in adults. Roger, Picot and Claisses place it at from 75 to 78 per cent. of all cases. The report of the Collective Investigation Committee of the British Medical Association places it at 72 per cent. In adults Von Dusch puts the proportion at from 10 to 22 per cent., and the Collective Investigation Committee higher, i. e., 40 to 56 per cent.

The age at which these instances of rheumatic endocarditis occurred in the cases reported by Sansom, Steffen and von Dusch is as follows: Under 5, 48; 5 to 10, 135; 10 to 12, 81. The ages of the cases of the Collective Investigation Committee are as follows: Under 5, 5; under 10, 27; under 20, 196. That is to say, the number of such cases in the second five years of life is four to five times as great as for the first five years. An explanation for this may be found in the fact that rheumatism is apparently infrequent under 5. Vesnier places the percentage under 5, in 8631 cases, at 3.5 per cent.

PEURPERAL INFECTION IN THE NEW-BORN.

In diseases of the heart occurring in the first few days of life, the cause seems to lie in the great susceptibility of new-born children to pyogenic infection. I have endeavored to call attention to this in a previous paper.

Three cases of myocarditis, reported by von Dusch, occurred during an epidemic of puerperal infection. The ages were from 4 to 16 days. Wagner describes a similar one of myocarditis. Steffen reports an endocarditis at 12 days and one at 5 weeks. Joseph Sailer reports one of endocarditis at 2 weeks, and von Dusch at least one at 3 days. In my own case of empyema, aged 10 days, there was a parenchymatous myocarditis. The mother was infected during labor, and the child probably was infected through the milk. Viti reported a somewhat similar case, aged 67 hours, which had a pericarditis. Runge, in a child 10 days of age, reports a pericarditis. In none of these in which the history is given was the mother infected until after the birth of the child, and hence they can not be considered to be intrauterine infections.

ACUTE INFECTIOUS DISEASES.

In the acute infectious diseases attention is directed to the fact that myocarditis is of much greater importance than inflammation of the serous membranes of the heart. It occurs alone oftener here than in any other condition. While a pancarditis is not very unusual, the prevalence of the myocardial changes, especially in their relation to the clinical symptoms, is most interesting.

DIPHTHERIA.

The fact that diphtheria causes acute changes in the heart muscle has been known since the introduction of modern methods of study, and as time goes on the existence and significance of such changes are more and more

marked. It is quite unnecessary to go extensively into the literature. Our knowledge of the condition has advanced steadily and the list of names of investigators includes Birch-Hirschfeld, Leyden, Romberg, Fenyeffy, Rabot and Philippe. The most recent work has been done by Hallwachs, who concludes, after a study of fourteen cases, that the symptoms of heart trouble after diphtheria always depend on anatomic changes in the heart muscle due to infectious myocarditis. This results from the direct action of the diphtheria toxin. The extent of the lesion depends not on the continuance of the poison but on the virulence of the original dose. But the sudden stoppage of the heart in diphtheria after convalescence is well established is probably not due to the toxin, but to some other and unknown factor acting on the already weakened myocardium. This unknown agent is probably of nervous origin, and is the same as that which causes other paralyses.

According to the investigations of Romberg and Pässler, the sudden collapse that sometimes occurs in the first week is due to central paralysis of the vasomotors, and sudden death in the later period of the disease, to myocarditis. It is probable that the toxin in each period attacks a wholly different part of the circulatory apparatus.

Myocarditis begins in the second week as a rule, and is seldom seen before. It may be very intense and lead to death in several weeks or several days. The affection of the serous membranes in diphtheria usually takes the form of a pancarditis, to use von Jürgensen's term, with the participation of the myocardium in the processes.

SCARLET FEVER.

The work of Romberg has apparently settled the fact that the poison of scarlet fever, whatever it may be, alone and not mixed with pyogenic micro-organisms, may cause disease of the heart. He is supported in this opinion by von Jürgensen. His tables comprise the analysis of ten cases which were subjected to a very thorough microscopic examination. His figures show that the myocardium is oftener and more severely affected than any other portion of the heart. The tissue next most susceptible is the pericardium, and the endocardium is affected least often.

Pericarditis and endocarditis may follow scarlet fever, but are not as common as the inflammations of the myocardium. Oftener perhaps the three occur together as a pancarditis, in which any of the three tissues may be the place of the greatest involvement. It is very often impossible to distinguish a septic endocarditis from one due to the poison of scarlatina alone, and it is probable that in many cases the trouble is caused by a combination of the two agencies, and that the scarlatinal process has made the endocardium a point of lesser resistance for the entrance of the pyogenic cocci. Endocarditis of the walls of the ventricle is more common than valvulitis.

A very important, if more remote, effect of scarlet fever on the heart is the changes that occur in that organ as the result of scarlatinal nephritis. Many writers have noted that hypertrophy is a common sequence of such forms of nephritis. Friedlander, probably the most recent and authoritative writer on the subject, concludes: 1. That in children dilatation and hypertrophy of the heart are almost never absent in cases of well-established scarlatinal nephritis. 2. That the changes may affect both sides of the heart, but are more marked and more common on the left. The average in-

crease in weight is 40 per cent, but it may be far greater than this. The increase in the capacity of the heart is in almost all cases very considerable.

In acute nephritides from other causes heart changes are not present as often as in scarlet fever. Riegel puts the cause for this on an increased arterial tension in scarlet fever, and says it is found only in cases that show such high tension. Von Dusch says it is probable that the increased tension acts on the heart weakened by a myocarditis, and that this lesion has as much to do with the dilatation as increase in tension. Strangely enough neither of them states why the tension should be so much more increased in scarlatinal nephritis than in the nephritis of other infectious diseases.

Steffen, Cheadle and Silberman have reported similar observations with about the same conclusions. In one of Steffen's there was much dilatation of the right ventricle, and he points out that dilatation occurs more rapidly in cases in which renal dropsy is present.

MEASLES.

According to the principal authors measles has little or no effect on the heart of children. Occasionally there seems to be an exception, but it is probable that in these cases the disease is due to a mixed infection and not to the measles process alone. In an epidemic in Würzburg, in 1883, the heart was very often involved, but in this instance the course of the disease was said to be very peculiar and atypical, in this way supporting the above supposition.

RHACHITIS.

According to the researches of Beneke, Steffen, von Dusch and Vogel the malformation of the chests in rachitic children combined with the changes arising in the lungs from interference with their action, may produce hypertrophy of the heart. Beneke reports a series of cases in which there was absolutely no other explanation for the enlargement. He concludes that in rachitic children the heart is at least of good size and is very often hypertrophied.

THE REMOTE EFFECTS OF CONGENITAL LESIONS.

When it is considered how congenital anomalies may throw extra work on the various chambers of the heart, it is easy to understand how the heart may increase in volume and weight from these causes alone, and hence a short notice of them comes properly within the scope of this paper.

Intraventricular openings almost invariably cause hypertrophy and dilatation, and the right side is most affected. The reason for this, it is easy to see, is that the difference in the strength between the right and the left side causes the flow through the openings to be from the left to the right, and hence the right chambers have a greater amount of blood to handle than is normal.

Again, the congenital anomalies of the vessels may have a decided effect on the size and volume of the heart. This is rare, but Bednar¹ has observed considerable cardiac enlargement in a case that would at the present time have been termed one of status lymphaticus. There was hypertrophy of the thymus, lymphatic glands, liver and spleen. Von Dusch, commenting on this case, expressed the opinion that there must have been congenital narrowing of the vessels. Mayr, in 1862, described similar cases. Henoch reports two of enlargement of the thymus with dilatation and hypertrophy of the right ventricle. Beneke also has observed two

1. Krankheiten der Neugeborenen und Säuglinge. 1853.

fatal cases. The authors who have written on status lymphaticus in the last few years make no mention of heart changes, and a study of their cases reveals none. It is probable that von Dusch is right in supposing that such cases, in which enlargement of the heart was reported, were connected with congenital narrowing of the aorta.

Hypertrophy of the left heart may follow narrowing of the aorta in the region of the ductus botalli, as in a series of cases reported by Gerhardt, or the general narrowing of the aorta and blood-vessels described by Virchow in connection with chlorosis. Such changes are usually associated with hypoplasia of the heart, but, according to Von Dusch, cardiac enlargement sometimes occurs. Gerhardt has observed enlargement of the heart in epileptic children. This is probably caused by peripheral spasm.

The strain put on the heart by these congenital anomalies may make it a point of lesser resistance for the attack of the various infectious processes. Thus in six cases of rheumatic myocarditis and endocarditis reported by von Dusch, there were openings between the ventricles. In some reported by Buhl, Rokitsansky and Redenbacher, of acute endocarditis following rheumatism, there were similar malformations. In hearts of adults statistics have shown that an acute endocarditis is generally found on a valve which is the seat of an old inflammatory lesion. In children this naturally can not so often be the case, as the opportunities for previous attacks must be less. It would seem as if the point of lesser resistance, which is furnished in an adult by an old endocarditis, may in the child be a congenital anomaly.

LESIONS OF THE CARDIAC TISSUES.

I have yet to take up the lesions of the various tissues of the heart, and to summarize briefly under each the facts that have already been given.

MYOCARDIUM.

The inflammations of this structure, that are of most importance in childhood, are: 1. Acute infectious, involving both the interstitial tissue and the parenchyma; 2, acute interstitial—suppurative; 3, chronic interstitial.

The causes of the acute infectious form have been sufficiently considered. The lesions are various, and the process may not be a very diffuse one, but may consist of irregularly distributed areas. It is generally, however, diffuse. The muscle fibers are strikingly degenerated. Transverse striations are indistinct or absent. The fibers may be split longitudinally or show vacuoles. Fatty degeneration can often be demonstrated, in frozen sections, by osmic acid. Nuclei are multiplied and sometimes fragmented. After the process has been in progress for some few days round-cell infiltration appears in the connective tissue between the muscle bundles. The process, according to some authorities, may often go on to abscess formation. The remote effect of such myocarditis depends on the virulence of the poison. It may revolve and leave barely a trace, or, if the destruction has been great and the patient has survived, there may be a diffuse fibrosis.

The acute interstitial form leads to abscess that may rupture into the pericardium, or endocardium, or may cause perforation of the heart walls or septum. This last lesion may closely resemble a congenital perforation. Cases have been collected by Steffen, René Blache and others. The most frequent appear to be infective

embolism from pyogenic infections of various parts of the body, rheumatism, typhoid and pleuritis. In these infectious conditions it seems to me that a mixed infection must have played the principal part.

The lesions of the chronic interstitial form consist of general fibrous thickening and fibrosis. The cause is almost invariably syphilis, but it may follow healing of abscesses and may spread inward from a thickened pericardium. Syphilis, however, as has been said, is the most frequent cause. Steffen has collected five cases, all of the same type, i. e., with general fibrosis and small miliary gummata.

Adler, in his paper before the Association of American Physicians, in 1898, contributed to our knowledge of the subject the results of his examination of the hearts of four very young children with undoubted evidences of syphilis. Without marked macroscopic changes in the hearts themselves, microscopically he found endarteritis of the smaller arteries, increase in connective tissue and degeneration of the myocardium. It would seem, from his paper, that a more thorough examination might show the condition to be much more frequent than we have heretofore suspected. A chronic interstitial change in the heart muscle of a child is, however, a very rare condition. The reason lies in the absence of degenerative changes.

HYPERTROPHY AND DILATATION.

Quick response to stimuli, ability of the general nutrition to recover itself, and the absence of degenerative changes in the coronary arteries render the heart of childhood much more liable to hypertrophy than that of the adult. These circumstances make compensation much more thorough and the number of cases of so-called idiopathic hypertrophy much larger.

The two principal causes of dilatation have been discussed under the head of rheumatism and myocarditis. Owing to the yielding nature of the child's tissue, dilatation always participates in any enlargement of the heart, and the volume of the chambers is invariably considerably increased; at the same time the walls are thickened. From what has been said it will be seen that simple dilatation without hypertrophy is of the greatest rarity, and only occurs—as has been noted by von Dusch—in conditions such as pertussis, where a great strain is thrown on the heart weakened by some infectious process. Hypertrophy comes from an increased demand on the work of the heart muscle.

Hypertrophy of the left ventricle is, in children, relatively less common than in adults, while enlargement of the right ventricle is more common. The reason of this is that the causes that produce hypertrophy of the left ventricle in adults are not present in children. The first of these is aortic stenosis, which is rare in childhood. Atheroma and aneurysm are almost unheard of at this age, and contracted kidneys, while occasionally reported, do not occur often enough to be taken into consideration.

To recapitulate the causes leading to hypertrophy and dilatation: 1. Conditions inducing hypertrophy are: *a*, valvular lesions; *b*, adherent pericardium; *c*, congenital narrowing of the aorta—left heart; *d*, congenital openings between the sides—right heart; *e*, rachitis—right heart; *f*, scarlatinal nephritis—left heart. 2. Causes leading particularly to dilatation are: *a*, acute myocarditis alone or in combination with pericarditis; *b*, chlorosis and other anemias; *c*, severe forms of pertussis.

Failure of compensation after it has once been well established is rare in children. The local anemia which is often seen in the adult heart is prevented in childhood by the absence of degeneration in the coronary arteries. General malnutrition, however, may accomplish the same result in childhood as coronary atheroma does in later life. The diseases leading to this condition are probably most often typhoid or chlorosis.

ENDOCARDITIS.

Acquired endocarditis is usually left-sided, and almost always in the mitral valve or its chordæ tendinæ. Congenital abnormal openings between the two sides of the heart; congenital stenosis of the pulmonary valves and malformations of them and of the aortic valves, appear to be predisposing causes. So also congenital narrowing of the great vessels, causing hypertrophy of the left ventricle, appears to render the heart more susceptible to change. These predisposing causes are naturally more important in children than previous lesions of the valve.

The condition must not be confused with the nodules in the valve-leaflets in new-born children, first described by Cruveilhier in 1849, and a few years later by Albin. These nodules are the size of barleycorns. They occur in the auriculoventricular valves of both sides of the heart. They are at first mucoid and later become fibrous. Albin has described twenty to thirty in one case. According to Bernays, these nodules are the remains of the primary simple valves of fetal life. They may show small hemorrhages which may become so considerable as to transform the nodule into a hematoma.

To recapitulate the causes of acute endocarditis, we have, in the order of their frequency: infectious fevers, especially scarlet fever, diphtheria, and typhoid, septic and pyemic conditions, tuberculosis and pneumonia.

It seems sufficient to classify endocarditis into the simple and the severe forms, the latter including the so-called ulcerative or malignant cases. The lesions are an inflammatory exudation in the connective-tissue layers, with coagulation necrosis of the covering layer of the endocardium. On these fibrin from the blood is deposited in layers forming vegetations. The vegetations come upon the walls of the chambers of the heart, as well as upon the valves. They can be reabsorbed or lead to thickening and shriveling with stenosis and insufficiency. The process—if severe—may spread to the neighboring myocardium and may even lead to abscess formation there. In 155 cases collected by von Dusch, the distribution of the endocarditis was as follows: the mitral alone was affected in 117 cases; the mitral in combination in 27; aortic alone in 12, aortic in combination in 13; tricuspid alone in 1, in combination 9; pulmonary alone in 1, in combination in 5.

Emboli may be swept away from the soft vegetations, and give rise to infarction. Such embolism is frequent in the arteries of the brain, especially in the arteria fossæ sylvii sinistra. In fourteen cases of embolism which Steffen has collected from the literature, there were nine of the brain-artery. Most of these were in the artery of the fossa of Sylvius.

Chronic endocarditis is usually the result of the acute form. It is characterized by absence of the tendency to calcification, although cases of such degeneration have been observed. Insufficiency of the mitral valve is by far the most common of all the chronic lesions in children. As has been said, aortic disease is very rare. In adults,

Willigk gives the ratio of disease of the mitral to the aortic as 32 to 22, and other observers give still higher proportions. Henoch gives the ratio in children as 11 to 2. The cause of this, as has been shown, lies in the greater rarity of chronic arteritis in childhood.

N. E. Corner Fortieth and Locust Streets.

SYMPTOMATOLOGY OF VALVULAR HEART DISEASE IN CHILDREN.*

BY FREDERICK A. PACKARD, M.D.

PHILADELPHIA.

When the subject of the symptomatology of heart disease in children was assigned to me in the program of the meeting I considered that there was not much to be said regarding it. I find that there is in reality less to be said than I had calculated, as an analysis of case histories has convinced me more even than was the case before, that heart disease, especially in children, has no symptomatology, or rather that there can be said to be no group of symptoms pointing to the heart when so large a proportion of children show signs of heart lesions without the existence of any symptoms indicating their existence.

Consideration of the only method of even suspecting the presence or absence of heart disease in children has been allotted to another member of the society; I refer to physical diagnosis. By careful physical examination alone can we be certain or even reasonably safe in presuming that there is absence of heart lesion.

The very absence of symptoms makes the study of the symptomatology of heart lesions in children interesting if we endeavor to trace its cause. The condition of the circulatory system—heart and blood-vessels—in childhood is essentially different from that of the same organs in later life. In early life the more severe as well as the less important infections have had less time and opportunity for working their immediate and remote effects; intoxications—used as in contrast to the infections—by excesses in food and drink, and the use of possibly harmful substances, such as tobacco, have had no chance to impair the cardiac or vascular walls or to disarrange the nervous mechanism of the circulation; disorders of metabolism have had less opportunity to exert their effects, and finally general wear and tear have not had their influence. It would seem also in childhood that the greater plasticity of the tissues, which we may consider as present at least up to the age of puberty, may have much to do with the ability of the organism to adapt itself to abnormalities of the circulatory apparatus, and therefore show less evidence of their presence. Added to this it is fair to presume that in the formative period of childhood there is greater ability of the tissues to develop beyond the necessities of normal growth on the occurrence of need for such development.

Another explanation of the absence of symptoms in the heart disease of childhood is the fact that the child is in some respects more of a free agent than is the adult. A child made uncomfortable by effort remains quiet; the adult continues to perform the duties of life in spite of discomfort. A child made dyspneic by exercise ceases playing; the adult must continue to work. It is, therefore, easily seen that the child may present no symptoms directly pointing to the heart. It is because of this freedom from necessity for effort that many a child is

*Read in a Symposium on Heart Disease in Children, before the Philadelphia Pediatric Society, April 10, 1900.

brought for treatment because of indolence, listlessness or apathy, rather than for distinctively circulatory symptoms, physical examination showing the existence of cardiac disease.

One difficulty in dealing with the symptomatology of heart disease in children is, as in the adult, the varying symptomatology at different stages of the trouble. In children, however, this is probably less the case than in adults, owing to the remarkable adaptability of the heart in compensating defects and in holding its power until the strain of puberty of itself or combined with the necessity for work takes the place of simple opportunity for play. Consequently failing compensation is less often seen in children than in those of older years.

Another difficulty encountered is that of feeling convinced in a given case that myocardial or pericardial changes—and especially the latter—are not markedly influencing the clinical picture. Inasmuch as the present evening has been devoted to the consideration of valvular disease alone, the symptoms presumably due to valvular lesions uncomplicated by pericardial involvement alone will be considered.

Still another difficulty that I have encountered in assuming the consideration of the subject of the symptomatology is the indefinite limitation of my subject and that of physical diagnosis. I have taken the liberty of somewhat encroaching on the field allotted to another in that I have considered such phenomena as anemia, dyspnea, epistaxis and edema among the symptoms. It may be well in the first place to glance briefly at a few of the statements made by well-recognized authorities on the subject.

Gerhardt¹ says that the symptoms of endocarditis are shortness of breath, anemia, sometimes pain in the region of the heart, and palpitation, the latter symptoms only being present in older children. He also says that in general the symptoms of valvular failure do not differ from those of the adult, dyspnea, cyanosis and dropsy, enlargement of the heart and diminution of urine.

Octavius Sturges, in his well-known Lumleian Lectures on Heart Inflammation in Children², says practically nothing regarding the symptoms of chronic endocarditis although his lectures are most complete and exhaustive regarding all other phases of the condition. The reason for this is doubtless the slight importance attached by the author to this division of the subject. On the other hand, in dealing with the symptoms observed at the outset of heart inflammation—including endo-, peri- and myocarditis—in children he mentions restlessness, increased pallor, anxious expression, dyspnea, delirium and sometimes obstinate vomiting, frequent heart pain and tenderness over the region of the heart.

W. B. Cheadle³ says: "simple endocarditis, acute or subacute uncomplicated by pericarditis or myocarditis, may run its course without giving rise to any cardiac symptoms," and adds that there may be no pain or dyspnea and even no murmur. Wasting and anæmia are mentioned as symptoms. He questions whether the uneasiness, distressed expression, discomfort in the precordial region, palpitation, quickened or excitable pulse and rise of temperature seen in more active inflammation or in the case of fresh valvulitis attacking previously diseased valves are not due to involvement of the pericardium or myocardium.

A. E. Sansom⁴ says, in discussing chronic endocarditis—valvular disease: "As a general rule the signs in in-

fant and very young children are chiefly referable to inanition—emaciation, anemia, deformity of the thorax." Cough is mentioned as a prominent symptom. Again, "in children after the age of 4 years, symptoms more directly indicating disorder of circulation become manifest. Bleeding of the nose may be cited as one of these." He then speaks of the symptoms of failing compensation which resemble those seen in adults. Of dropsy, he says that it is "by no means uncommon, but it rarely follows the gradually ascending course usual in the adult. The œdema is either more general or more variable in the site of its manifestation." Under the heading of aortic valvular diseases he speaks of, and mentions, a case showing entire absence of symptoms.

Holt,⁵ in speaking of acute simple endocarditis, says that it has no distinctive symptoms and that occurring in the course of acute articular rheumatism there may be an increase of the temperature and the severity of the general symptoms, but rarely anything more definite. Of chronic valvular disease (p. 581), he says that the only subjective symptom of much diagnostic value is shortness of breath on exertion. Symptoms mentioned as inconstant but occasionally present are precordial pain, attacks of palpitation, headache, epistaxis, anemia and cough. Later, he says: "It is rare to see all the symptoms of cardiac failure in children under 10 years, but about the time of puberty they are not uncommon."

Barthez and Sanne⁶ say, in discussing acute endocarditis: "Almost always a secondary disease, endocarditis, as is the case with pericarditis, will almost pass unnoticed if one does not take care to examine into the conditions where one can recognize its presence, that is to say if one does not practice auscultation." They lay stress on the absence of any addition of symptoms to those of the primary disease. Of chronic endocarditis they say that symptoms are sometimes altogether absent, but that sometimes there is palpitation and sometimes the symptoms seen in the adult. They examined 73 cases of chronic endocarditis, which they divided into three categories as regards severity of symptoms. Their first category included those without symptoms (latent). This included 21 cases (28 per cent.). Among their 73 cases there were 44 with mitral insufficiency, of which 13 presented no symptoms; 8 cases of mitral insufficiency with aortic insufficiency furnished 1 latent case; 5 cases of mitral insufficiency with stenosis gave 2 latent; 5 of mitral insufficiency with aortic stenosis gave 1 latent; 5 with aortic stenosis furnished 3 latent cases; 3 with aortic insufficiency gave 1 latent. In their second category they placed cases with palpitation, shortness of breath but no edema, enlargement of the liver, etc. This class included also 21 cases—28 per cent. The 44 mitral cases furnished 12 of this number, the 8 of mitral insufficiency and aortic insufficiency furnished 3; the 5 with mitral insufficiency and aortic stenosis a like number, while the 5 of mitral insufficiency and aortic insufficiency and narrowing gave 1 case. Their third class included those with marked symptoms, in which were placed 31 of the 73 cases—about 42.5 per cent. The 44 mitral insufficiency gave 19, the 8 with mitral insufficiency and aortic insufficiency 4, the 5 with mitral insufficiency and aortic stenosis 3, the 5 with aortic narrowing 1, and the 3 with aortic stenosis and insufficiency gave 1 case.

E. Weil,⁷ in speaking of acute endocarditis, emphasizes the absence of symptoms and states that embolism may be the first phenomenon to call attention to the

heart. In chronic endocarditis edema may be but little marked. This was the case in only 1 of 9 grave cases observed by him, while in 12 terminated by death from asystole, edema was absent in 5, but little marked in 2, appearing only eight days before death in 2, and with classic evolution in only 3. Of 56 cases analyzed by him, 11—20 per cent.—being fatal, 8 had serious functional trouble, 12 had slight functional trouble, while 24—45 per cent.—were latent. Of acute endocarditis complicating rheumatism, he says: "It comes on insidiously in the course of acute rheumatism without exercising any well-marked influence either upon the temperature or upon the course of the arthropathies. Functional troubles (some palpitation, a little dyspnea, acceleration of the pulse) are rare." "When they acquire a certain intensity one ought to look for a complication—pericarditis, pleurisy, pulmonary congestion, parenchymatous myocarditis."

I have quoted these authors because they will express the views of all who mention the subject of symptomatology of heart disease as it is seen in children. While there is much in the literature regarding the physical diagnosis of heart disease in children, I have found but few who particularly consider the symptomatology. I should however mention, in addition to those from whom I have quoted, Charles West, W. H. Day, Bouchut and von Dusch.

In order to form some idea of the frequency with which symptoms pointing to disease of the heart were present, and their relative frequency, I have examined the histories of 78 cases, including both private ones and those admitted to the Children's Hospital. I had at first hoped to be able to arrive at some conclusions regarding the frequency of entirely "latent" cases, but found that this could not be accurately accomplished, owing to the varying care with which the histories were taken. I have, therefore, had to content myself with an analysis of the cases regarding the relative frequency of occurrence of various symptoms.

Excluding all not bearing internal evidence of care in examination as to the past history, I had remaining for analysis 56 cases. Of these 56, 29 had had shortness of breath, 10 palpitation, 9 edema of the legs, 7 precordial pain, 6 epistaxis, 5 had complained of headache, a like number had been anemic, 4 had complained of abdominal pain, the same number had some cyanosis, and 4 had had blood spitting. Only 3 had mentioned the presence of cough on lying down, or of vertigo, while other symptoms mentioned in only one or two cases were anorexia, persistent cough, night cough, fainting spells, weak spells, listlessness, edema of the face, gastrointestinal disturbance, loss of flesh, vomiting, cold hands and feet, and pain between the shoulders. In some respects the results arrived at somewhat surprised me. I was under the impression that a relatively larger number of heart cases gave a history of epistaxis and of cough on lying down; while the number of cases of edema rather surprised me, as I have frequently remarked to the hospital internes on the rarity of this symptom.

A few of these symptoms might be mentioned more particularly. Of the patients with dyspnea, the youngest was 3 years of age, most of them—seventeen—being over 8 years of age. The reason for this is probably the greater incentive to boisterous play when the child reaches the latter age. The younger patients are more content to keep within the limits of comfort. Pre-

cordial pain was not noted in any child below the age of 6 years, a fact probably explained by the vague location of pain in those below that age. The youngest patient in whom edema of the legs was noted was aged 6 years. Vertigo, as would be expected, was not complained of below the age of 8 years, younger patients being unable to explain their sensations with clearness sufficient to make the nature of the symptom apparent. Palpitation was noted in one aged 3 years, and in another aged 6, each of the other eight who presented this symptom being 9 years of age or older. From the notes there is nothing to show definitely that palpitation in the two little patients was subjective and not purely an objective phenomenon observed by the mother. I should judge that the latter was the case.

While my subject is merely that of the symptomatology of cardiac disease in childhood, I can not refrain from speaking of one point that I think should not be overlooked, especially in children. We speak of acute endocarditis, of chronic endocarditis and of valvular heart disease, as though they were three separate entities. This leads to possible error. Acute endocarditis is not a short-lived inflammatory process ceasing with the disappearance of the general infection giving rise to it. For a long time after the rest of the body has recovered, progressive inflammatory changes in the endocardium of the valve leaflets and chordæ tendineæ probably always continue. In that sense then we may look on "acute" endocarditis as a long-continued process, and the term "chronic endocarditis" is in reality a misnomer unless we make this reservation. Valvular heart disease is simply the result of distortion or thickening of the valvular structures by endocarditis; it occurs before endocarditis ends.

It is acknowledged by all that endocarditis can exist without evidence on physical examination. Symptoms are often absent and seldom pathognomonic. It is important, therefore, to always suspect the heart as a possible cause of symptoms otherwise unexplainable—such as anemia, vertigo, faintings, epistaxis, dyspnea—and to bear in mind that the presence of normal sounds over the cardiac areas does not rule out disease of even this important but not sole portion of the circulatory apparatus.

In belittling the importance of the subject allotted to me, I have been endeavoring to also show that, while there is no symptomatology proper of heart disease, the existence of any abnormality makes careful examination as to the functional activity and physical condition of the heart imperative.

258 South Eighteenth Street.

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DR. ALLEN A. WESLEY, late major and surgeon of the 8th Illinois volunteers (colored), in a paper which he read at the meeting of the Association of Military Surgeons, said that without any exception every member of the regiment under his charge who was given to the use of intoxicating liquors had the fever and in a more violent form than those who were total abstainers.

PROGNOSIS IN THE HEART DISEASES OF CHILDREN.*

BY ARTHUR V. MEIGS, M.D.
PHILADELPHIA.

I have examined several text-books on the diseases of children, and in all of them I found that the discussion of prognosis occupied but very little space. It would not take me ten minutes to read to you all that I found in two or three text-books, and it will not be necessary, therefore, for me to occupy very much time in discussing the subject. It has impressed me, as it must have impressed every physician who has had the opportunity to see sick children, that when they suffer from disease of the heart the prognosis should generally be more hopeful than when adults suffer with heart disease. This is partly because they are more elastic than adults, whose tissues are stiffer and may almost be said to be brittle, and most of all, perhaps, because children who have not attained their full growth have the opportunity for repair during growth. Injury, or any distortion of the heart that is caused by disease may be effaced as the organ increases in size, for the usual tendency of Nature is toward the production of an ordinary type. If due allowance is made for the fact that the likelihood of recovery is greater than in adults, and for the fact that children often outgrow disease of the heart which would be incurable in adults, the prognosis in the heart diseases of children need not be very different from the prognosis in similar disease in older persons. In illustration of the capacity of children to overcome serious organic disease of the heart, I will describe two cases that were under my care:

A woman, now 34 years old, had acute endocarditis during the course of an attack of measles with which she suffered when she was 5 years old. After recovery from the acute attack and for some years afterward, there was a blowing systolic murmur at the apex of the heart, with increase of force of the cardiac impulse. Gradually these evidences of disease of the heart have disappeared and the patient is now a healthy woman. Physical examination yields no evidence of increase in the size of the heart, nor of valvular disease. It seems beyond question that in this case there was organic disease which was outgrown.

Another woman, now 23 years old, had a violent attack of acute chorea with endo-pericarditis when she was a child of 8. There was a murmur which was so loud that it could be heard at the distance of a yard from the child's body. I have seldom seen such severe chorea as existed in this case. There was almost constant and very violent muscular twitching. The illness lasted for a long time, for the child was confined to the house from the early part of January until the month of May. After her recovery from the acute attack, there was a blowing systolic murmur at the apex of the heart with irritability of the cardiac action. These signs continued to be present for some time after the attack, but I do not remember exactly how long. The patient is now a healthy, active girl, and careful physical examination fails to reveal any definite evidence of disease. There is no cardiac murmur audible, but possibly the heart-beat is a little irritable or of slightly increased force. I have often wondered if there are pericardial adhesions. However, as the patient enjoys good health, and as there is

no positive evidence of disease of the heart, the case must be classed as one in which organic heart disease was outgrown.

The gravest prognosis should generally be given in cases in which there is conclusive evidence of the existence of great enlargement of the heart. In children, as in adults, it has been my experience that when once the heart becomes greatly enlarged, the patient very rarely recovers and generally goes from bad to worse until death occurs. The existence of valvular disease as shown by the presence of murmurs, even if these be very loud, I consider as of comparatively little importance. I have already expressed myself on more than one occasion as of the opinion that hypertrophy of the heart is not a compensatory condition, and that hypertrophied hearts are always hearts with degenerated walls. This subject is a most important one, but it is one that it would not be well for me to attempt to discuss in full just now. In my book on "The Origin of Disease," in the latter portion of the chapter on the heart, I have expressed my views on the subject.

The histories of two children who were under my care when I was one of the attending physicians to the Children's Hospital, illustrates how death generally comes if the heart is hypertrophied. These were two little girls who were in the wards a number of times in different years, suffering with heart disease and dropsy. In both the heart seemed to be greatly enlarged. They would stay in the hospital for a time and improve until they seemed to be almost well, but the evidence of the existence of cardiac enlargement always persisted. Both of them finally died after several years, the one at the age of 12 and the other at 14 years. Post-mortem examination revealed, in each case that the heart was greatly enlarged and the walls degenerated. In one of the cases the pericardial sac was entirely obliterated by adhesions, and the pericardium enormously thickened. I made careful microscopic examinations in these two cases, of other organs besides the heart, and although there had been little or no evidence during life of any disease except that of the heart, in both of them the microscope revealed the presence of disease of other organs—slight renal fibrosis and other conditions parallel with those found in adults when they die of similar disease. If in cases of heart affections the disease is confined to the heart alone and the other organs remain healthy, it is wonderful how much the heart can bear and yet the patient recover. But, on the other hand, if heart disease is but an expression that organic changes are widely spread in the other organs, then the prognosis must be bad. This is true of children as it is of adults. In the former, heart disease is less fatal than in adults, because they are, for the various reasons that have been given, able to recover from disease of such severity that it would necessarily kill older persons. If a child unfortunately acquires heart disease and survives it, he is more likely to live long than an adult would be under similar conditions, because the body of a child has more capacity to become accustomed to disease, and for this reason prognosis must be more favorable in children than in adults.

In conclusion, let me repeat that probably the most important difference between prognosis in heart disease in children and in adults is that the former have the better chance of recovery, owing to the opportunity they have to outgrow the disease.

1322 Walnut Street.

*Read in a Symposium on Heart Disease in Children, before the Philadelphia Pediatric Society, April 10, 1909.

THE PATHOLOGY OF CONGENITAL HEART DISEASE.*

BY ALFRED HAND, JR., M.D.

PATHOLOGIST TO THE CHILDREN'S HOSPITAL.

PHILADELPHIA.

Under this term may be discussed all those conditions of the heart which deviate from the normal and which date their origin between the appearance of the earliest rudiments of the heart in the embryo and the expulsion of the fetus from the uterus.

Many classifications have been suggested, but none are thoroughly satisfactory, some being too broadly comprehensive, some only a detailed enumeration of the lesions found. Thus, one classification may be based on etiology, the anomalies being due to: 1, faults of development; 2, fetal endocarditis; 3, a combination of both, either one preceding the other and predisposing to it. Other classifications may be based on the morbid anatomy, on the symptomatology or on the prognosis. For the purposes and limits of this paper, the one already given will perhaps answer best, with a brief working-out along certain lines.

Faults of Development.—A combined anatomic and chronologic division of these may be made into three classes: 1, those occurring early, from the fourth to the sixth week, showing a heart with two or three cavities, *cor biloculare* or *triloculare*, with a single or imperfectly divided arterial trunk; 2, anomalies arising between the sixth and twelfth weeks, with imperfect auricular or ventricular septa, imperfect or misplaced vessels; 3, defects occurring after the twelfth week, resulting in anomalies of the valves, persistence of fetal opening, etc.

Fetal Endocarditis.—Other changes than those already mentioned are usually the result of fetal endocarditis. This arises often as the result of some infectious process in the mother, especially rheumatism, but any infectious fever may cause it; syphilis in the mother is said to play an important part. It may also occur without evidence of illness on the part of the mother. Whether it is necessary, in order to produce the endocarditis, for the germs of disease themselves to pass through the placenta from the maternal to the fetal circulation, an event which certainly happens in some processes, or whether the products of bacterial activity, the toxins circulating in the maternal organism, may by a process akin to dialysis enter the fetal blood, can not be stated in every case. Probability in favor of the latter view is strengthened by the form of endocarditis which is invariably the sclerotic or chronic and never the warty or verrucose. The right heart is far more frequently the seat of the inflammation than the left. The usual reason adduced to explain this is the greater amount of work done, as, in extrauterine life, the left side is more frequently affected. It has been suggested, however, by Rosenbach, that the richness of the blood in oxygen is the determining factor. Another reason given is that the right heart is more often the seat of congenital anomalies of the valves, and these are predisposed to inflammation, just as in extrauterine life diseased valves are a weak spot and prone to recurrent inflammation. Heredity is of great importance according to some authorities, in favoring both anomalies of development and fetal endocarditis, as shown by Mousous' classic cases.

With reference to the anatomic lesions, the following table from Holt's work is interesting, the order given being that of the frequency with which the lesions were present in 242 cases: defect in the ventricular septum; defect in the auricular septum or patent foramen ovale; pulmonary stenosis or atresia; patent ductus arteriosus; abnormalities in the origin of the great vessels; pulmonary insufficiency. The most frequently associated lesions were: pulmonary stenosis with defect of the ventricular septum; pulmonary stenosis with defect of the auricular septum; defects in both septa; pulmonary stenosis with defects in both septa.

1801 Pine Street.

THE DIAGNOSIS OF HEART DISEASE IN CHILDREN.*

BY J. P. CROZER GRIFFITH, M.D.

PHILADELPHIA.

This paper has been prepared on such short notice as to give me no opportunity to consult medical journals and text-book literature. What I have to say is, therefore, purely the result of my own experience with affections of the heart in children.

The first question which naturally arises in diagnosis is, is heart disease present, and if so, is it congenital or postnatal?

Let us take up first the study of congenital heart disease. The principal diagnostic symptoms of this condition are: cyanosis, clubbing of the fingers, thrill, characteristic murmurs, the absence of any great enlargement of the heart.

Cyanosis is peculiarly marked in congenital heart disease; in fact, I do not know of any other condition in which it is so intense. Even in severe forms of postnatal heart disease, with entire lack of compensation and decided blueness of the lips, I never have seen the blue-red tongue, the purplish cheeks, and the general blue suffusion of the body present in the congenital cases. This form of cyanosis, then, is alone an important diagnostic symptom.

Clubbing of the fingers, when present, is a very characteristic symptom. It occurs, it is true, in chronic disease of the lungs, but even the worst cases in this condition show clubbing no greater than, if as great as, that seen in congenital heart disease. Combined, therefore, with cyanosis, clubbing of the fingers is of great diagnostic importance.

The thrill of congenital heart disease is very characteristic. It is very intense, rough, and widely diffused. One may strongly suspect the existence of a congenital affection of the heart from the character of the thrill alone. Yet it is by no means always present.

The typical murmurs of congenital heart disease are loud, rough, and of great intensity. The intensity, in fact, is out of all proportion to the other physical signs connected with the heart. The situation of the murmurs, too, is peculiar. They are not commonly heard with greatest loudness at the apex, but rather over the base of the heart, the sternum and the aortic and pulmonary cartilages. It must be remembered, however, that even in young children there may be loud basic murmurs dependent solely on the existence of great anemia. We must be careful, therefore, not to make the diagnosis from the character of the murmurs alone. I

*Read in a Symposium on Heart Disease in Children, before the Philadelphia Pediatric Society, April 10, 1900.

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shall not go into any extended discussion of the diagnosis of the nature of the individual valvular affections, from the character and position of the murmurs, further than to say that those present in pulmonary stenosis are heard loudest at the pulmonary cartilage, while those due to a perforate septum ventriculorum have their greatest intensity over the middle of the sternum. We must remember, too, that the presence of cyanosis in conjunction with a murmur points strongly toward the existence of stenosis at the pulmonary orifice, while the existence of cyanosis without any murmurs awakens a suspicion that there is complete closure of the pulmonary orifice or an anomalous origin of the great vessels.

The fact that there is commonly no great enlargement of the heart in congenital heart disease is peculiar. At most there occurs some hypertrophy of the right side. The condition is in striking contrast to the very great enlargement which is so commonly seen in cardiac affections developing after birth.

The second question is, is there a postnatal heart disease? We must consider *a*, the value of the symptoms apart from the physical signs, and then *b*, the diagnostic value of the physical signs themselves.

a. It must be stated at the very outset that the symptoms of heart disease in childhood are quite commonly insignificant or absent altogether. Children have a peculiar power to acquire perfect compensation of a valvular defect. Consequently, heart disease in children is frequently discovered purely by accident, there often being no subjective symptoms. When such symptoms do exist, chief among them is to be mentioned shortness of breath. Very often the presence of this can be elicited only by careful questioning of the child or of the parents. Sometimes we learn that the little boy can not keep up with his companions in active games, or we find him listless and disposed to sit around and play at quieter games with his girl companions. In my experience, the existence of slight shortness of breath is quite commonly the only symptom. In more advanced cases, we may have the ordinary intense dyspnea characteristic of heart disease at any age. In estimating the value of shortness of breath as a diagnostic symptom, we must remember that anemic children may readily exhibit this symptom to a decided degree.

Edema is a suspicious symptom. It quite commonly begins in the feet and it develops also in the abdomen. It is very important, however, when making a diagnosis, to remember that children become edematous quite easily under certain conditions. We have, for instance, the edema of post-scarlatinal nephritis, which, not at all infrequently, appears first in the feet and not first in the face, as we usually expect it to do. Then there is the edema of the feet which so often develops in marantic infants. Next, the edema dependent on grave anemia is not uncommon. Again, we must remember that ascites in children is not uncommonly due to a tubercular peritonitis, and not to a heart affection. I have at the present time under my observation one or two cases in which the diagnosis between a heart disease and a tubercular peritonitis is by no means certain. Finally, I have repeatedly seen in children a curious tendency to the development of marked and widespread edema without the existence of any discoverable cause whatever.

Faintness is a symptom occasionally seen in children with postnatal heart disease, but in my experience, it is not at all common. I recollect very well one child whose first symptom was a tendency to faint after he had

climbed the stairs. Only careful study showed that the disease in this little boy was in reality a cardiac affection.

Precordial pain is in my experience not common in children. I have seen it marked only in advanced cases with extreme lack of compensation. In these I have sometimes found the pain very severe.

Palpitation is a symptom which is of very little diagnostic value in childhood, not so much that it is not present, as because children do not recognize the palpitation or do not know how to describe it. I have seldom found this symptom present.

Cough is in childhood a symptom of no great diagnostic value in cardiac affections. I have found it only where other much more prominent symptoms of the disease were present. In these cases it was an evidence of intense passive congestion of the lungs.

The presence of a decided degree of anemia is sometimes a diagnostic symptom of considerable importance. Many children who have heart disease for some time have a distinctly delicate and anemic appearance which seems to be the direct result of the cardiac affection.

I have found hemoptysis uncommon except in bad cases. The tendency to it, which is not at all uncommon in mitral stenosis in adult life, has seemed to me to be decidedly rare in childhood. I have come across it but very seldom.

b. Next, we have the consideration of the diagnostic value of the physical signs connected with the examination of the heart itself. The first question which arises naturally is, does the existence of murmurs prove the presence of heart disease? This is an old question to which the well-known answer is "no." The fact that anemia may be attended by very well marked murmurs in childhood as well as in adult life is well understood and has been already referred to. We have also the existence of what may be termed accidental murmurs, the origin of which we do not understand, but which can not be associated with any certain disease of the valves of the heart. Again there is the murmur which not infrequently develops during and disappears after fever. There are also certain organic murmurs produced outside of the heart, which simulate very closely the endocardial murmurs which are the subject of the present discussion. I refer to the murmur of pericarditis and the cardiopulmonary murmur which has often been described.

On the other hand, heart disease may exist, as we very well know, without the presence of any murmurs whatever, or the murmurs may perhaps come and go for reasons which we do not well understand.

In connection with the study of the heart murmurs, we have two other matters to be carefully studied also: the pulmonary second sound and the size of the heart.

With regard to the pulmonary second sound, we know that its accentuation is a common sign of disease of the mitral valve. In childhood, however, we must carefully remember that the second sound is physiologically accentuated; that is to say, in early and later childhood we expect to find the pulmonary second sound normally as loud as, or even louder than, the aortic second sound. No one can with certainty make a diagnosis of heart disease in childhood without bearing this fact in mind.

Then, with regard to the size of the heart, hypertrophy and dilatation as results of valvular affections become extremely marked in childhood, more so than in adult life. There are certain factors, however, which render the diagnostic value of this sign sometimes uncertain. For

instance, the presence of a nephritis will naturally produce enlargement of the left side of the heart. On the other hand, an asthma with the consequent emphysema will cause the lungs to overlie the heart and make its size appear less than it really is. Then, too, we must remember that in childhood, before the age of puberty, the right side of the heart reaches somewhat farther toward the right than it does in adult life, and that the apex-beat is quite commonly in the fourth interspace instead of the fifth. If these facts be not borne in mind, one might readily make the diagnosis of hypertrophy of the right ventricle when no such hypertrophy was really present.

If, while bearing in mind the various diagnostic symptoms mentioned and the questions which arise in connection with them as already pointed out, we have reason to believe that postnatal heart disease exists, the next matter to be decided is, what variety is it? I can not here enter on this subject further than to say that in mitral insufficiency we expect to have enlargement of both ventricles, but particularly of the right, with very great accentuation of the pulmonary second sound. If one fails to find the accentuation of this second sound, in accordance with the age of the child, the diagnosis often remains somewhat uncertain.

In the case of mitral stenosis, the right side of the heart becomes enlarged, but usually not the left, and the pulmonary second sound is very greatly accentuated. Quite commonly in this affection we find a very marked thrill, which is diastolic in time. The murmur, too, is diastolic, thus distinguishing mitral stenosis from mitral insufficiency, which is systolic in time. With both these lesions, when compensation fails, one naturally gets the symptoms of pulmonary congestion. Other forms of heart disease are less common in childhood, and comments on their symptoms and physical signs must be omitted.

In general, it may be said that in diagnosis of postnatal cardiac affections in childhood we should observe the following points: avoid making a diagnosis from the presence or nature of murmurs alone; remember the altered position of the right side of the heart and of the apex-beat in childhood; remember that the presence of an accentuated pulmonary second sound is normal, not pathologic; remember that compensation is acquired very easily in childhood, and that the absence of symptoms does not prove the absence of cardiac disease; remember that the most suggestive symptom is dyspnea, and that edema must be studied most carefully before it becomes of value as a diagnostic symptom.

123 South Eighteenth Street.

REPORT OF A CASE OF PRIMARY CARCINOMA OF LIVER.

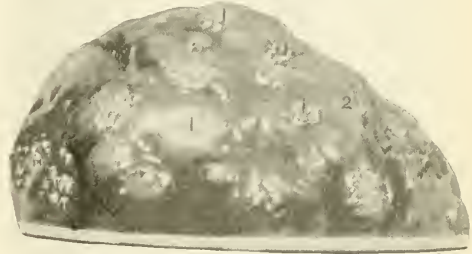
BY R. C. HARRIS, M.D.

ST. LOUIS.

Robert B., aged 57, a farmer, and native of Switzerland, entered the St. Louis City Hospital March 3, 1899, giving the following history: He had always enjoyed good health, suffering only with the minor ailments of childhood, and with an attack of double pleurisy at the age of 20. His family history was negative. He was accustomed to drinking on an average, five glasses of beer daily, and a small one of whisky early in the morning. He had smoked a pipe incessantly from 12 years of age. He denied having had syphilis, and has never been injured. The malady that ultimately caused his death began about two years ago, at which time, while laboring in the field he was suddenly seized with an excru-

ciating pain in the pit of the stomach, the right side of the chest and the right shoulder, which compelled him to stop his work and rest. After a few moments the pain lessened, but a dull, dragging sensation came on. A physician who was summoned pronounced it a case of gall-stone colic, blistered over the site of pain, also gave cathartics and hypnotics. The patient made a slow recovery, the pain entirely leaving him, but the dull dragging sensation, "the feeling of weight," as he expressed it, mentioned above persisted in the region of the gall-bladder. Soon he noticed that if he attempted to walk fast, or exerted himself to the slightest degree, he would grow tired, dizzy and dyspneic. His ankles began to swell, the swelling extending gradually up the limbs, finally invading the abdominal cavity. His physician withdrew, by paracentesis, about a gallon of bloody ascitic fluid, giving the patient considerable relief.

From this time on he enjoyed fair health, suffering only with the dragging sensation mentioned above, until Feb. 1, 1899, when he began to suffer with a reiteration of the first attack. On entering the hospital, the following were the conditions: The patient was exceedingly well nourished, weighing about 225 pounds, not the slightest trace of jaundice or emaciation being present. The pupils were extremely dilated, but reacted to light and distance normally. The temporal arteries were tortuous and sclerotic, the tongue coated and flabby, and there were visible systolic pulsations in the jugulars. Examination of the chest revealed harshened respiratory murmur of both sides, also a few piping rales over the base of both lungs posteriorly. The apex-beat was about an inch to the left of the nipple and in the fourth interspace. A



1. Cancer Nodules. 2. Thickened Peritoneum.

soft systolic murmur was heard over the mitral area, not transmitted in any direction: a similar one over the tricuspid area, this being plainly audible all over the sternum and right upper chest.

Further examination showed the abdomen to be large, rounded, and capped by a prominent caput Madusa. Several small petechial spots were seen about the neighborhood of the umbilicus. The lower portion of the abdomen was occupied by fluid, determined by succussion, percussion and aspiration. The upper part was occupied by a hard mass, which did not move with respiration. This "mass" extended down to about 1½ inches below the umbilicus; its lower border was rounded and smooth, except in one spot directly over the gall-bladder, where a single hard nodule was found, and which was exceedingly painful to the patient when pressed upon. This was about the size of a small walnut. A peculiar fremitus was elicited by palpation over this area, not unlike the peculiar fremitus of hydatids, but thought in this case to be a localized perihepatitis. Percussion showed the growth to extend upward as far as the fifth rib on the right side; its lower border became imperceptibly lost on the left side under the free margins of the ribs. I succeeded, by the use of the trocar, in withdrawing about a gallon of a sero-sanguinous fluid, which microscopically showed the presence of leucocytes, pigment and blood, the latter being demonstrable by the Teichman hemin crystals.

Uranalysis showed: specific gravity, 1010; straw-colored; acid reaction; slight trace of albumin by heat, nitric acid

trichloroacetic acid test; no sugar by any of the ordinary tests, indican present in small quantity, by Jaffe's chlorin test; no bile either by Gmelin's or Pettenkofer's tests; microscopically, the hyalin and granular casts were seen. Blood examination showed a marked leucocytosis. No examination of stomach contents was made, owing to the enfeebled condition of the patient, also to the fear of rupturing, with the stomach-tube, a varix that might have been present at the cardiac end of the stomach, and be the cause of a fatal hemorrhage.

Palliative treatment with stimulants was resorted to, but the patient continued to sink rapidly and died of edema of the lungs, at 11:45 p. m., the day following his admittance.

Necropsy, four hours after death, gave the following: The mouth and esophagus were normal, the lining membrane of a faint reddish tint; the thyroid gland was normal, likewise the bronchial and cervical glands; the pleural cavities contained a small amount of fluid—not hemorrhagic; both lungs were firmly connected to the walls of the chest by firm, old adhesions and both were edematous below, emphysematous above, partially condensed from hypostasis, and loaded with pigment. The pericardium and heart were unaltered, with the exception of the mitral valve, which was slightly thickened. Several ounces of a bloody ascitic fluid were found in the peritoneal cavity. The diaphragm was pushed up as high as the fourth rib on the right side, the fifth on the left, and the upper surface of the liver was firmly adherent to the peritoneum of the epigastrium, and opposed to the anterior parietal wall of the abdomen, over a space measuring nine inches. The liver was greatly altered by numerous cancerous nodules, the left lobe being especially studded, the nodules varying in size from a cherry to a walnut, and the surfaces were covered by numerous ramifications of blood-vessels, many presenting cicatrix-like depressions, or umbilication in the center. They were of a yellowish-white color, reticulated, few being soft. The vessels of the capsule of the liver were intensely injected. The gall-bladder was contracted, but otherwise normal, also its ducts, the common and the hepatic. The portal vein contained no coagula. The hepatic artery was much dilated. On section of the organ, several similar nodules came into view, nearly all being umbilicated. The spleen was slightly enlarged, otherwise normal. The stomach and intestines were apparently normal, also the pancreas, mesentery and retroperitoneal glands. The kidneys showed all the signs of chronic interstitial nephritis, and the bladder showed the result of a chronic cystitis. The prostate gland was hypertrophied, otherwise normal.

Microscopic examination of the cut specimen showed the growth to be an adenocarcinoma.

Speaking in general, in cases like the above, I might say that of the many gross lesions that invade the cholopoeitic system, that of primary carcinoma seems to be the least mentioned in medical literature. This may be owing to the fact that many cases pass through their course with few, if any, typical symptoms. Primary carcinoma of the liver is indeed rare, almost all those of this system mentioned in literature being of the secondary or metastatic type, and are very common. They form about three-fourths of all malignant growths in the liver, and of these two-thirds are secondary to carcinoma of the portal area, and one-third to primary ones elsewhere. (Tyson.) According to Osler, they rank third in order of frequency in the internal organs, following closely on the cancerous affections of the uterus and stomach. Frerichs, in his work on "Diseases of the Liver," gives statistics showing that of all the malignant growths of this organ, one-fourth are primary. Primary cancer may occur in one of three types, first, the massive type in which the growth is usually single, large and occupies the site at, or about, the gall-ducts; it is generally of a grayish-white color, and may reach 8 to 10 cm. in diameter. The second type, known as the nodular, receives its name from the many

nodules that occur on and throughout the liver substance. These nodules vary greatly in size and may range from that of an apple to a pea.

These growths are usually opaque, and varying from a white to a dirty yellowish-brown color, due to bile pigments, hemorrhages and decompositions within the malignant area. As a rule the superficial nodules project above the surface of the organ, and may in the emaciated subject be felt through the thin abdominal walls. A close examination of many of these nodules will reveal the presence of umbilication, due to the fatty metamorphosis of the central cells, with subsequent liquefaction and absorption, leaving only a residue of connective tissue and partially obliterated blood-vessels. In the third type, we have a rare form, a form in which the organ is but slightly enlarged; this variety is usually associated with the cirrhotic liver, presents a yellowish-green color, and has been termed the cirrhotic carcinoma. All varieties of carcinoma, either primary or secondary, are liable to undergo degeneration; especially is it so with the secondary forms, the change being as mentioned above. Large hemorrhages may occur, due to a rhexis of the blood-vessels in and about the cancerous area. Histologically, these varieties may be either of the epitheliomatous alveolar or trabecular types, being composed of polyhedral, cuboidal, cylindrical or giant cells.

All of the primary forms start in the liver cells and may be called true epitheliomata. In some forms of the primary type, especially the nodular, cystic formations may be seen. (A case by Dr. Brunton, St. Bartholomew's Hospital Reports, Vol. xii.) In the trabecular forms, we find some resemblance to the adenomata in general, hence some writers have termed this the adenocarcinoma. In the primary forms, the peritoneum covering the liver, diaphragm, duodenum, stomach, spleen and pancreas is liable to become involved by continuity. The lymphatics may suffer, and through the lymphatic vessels, the disease may be propagated to deep-seated glands in other portions of the body.

A hepatic carcinoma is generally of a lardaceous consistency; in rarer cases the mass is hard and cartilaginous or sometimes may be brain-like and almost fluctuating. Its surface, on section, usually presents a dull white color, interspersed with a greater or less number of red spots or streaks, according to the degree of vascularity of the mass. Surrounding the mass, there is seldom any distinct capsule or membrane; ordinarily the new growth passes, in an imperceptible manner, into the surrounding liver tissue. Most of the morbid changes originate from the interlobular connective tissue. *Pari passu* with the deposition of the cancerous matter important vascular changes take place. As the carcinomatous material is gradually deposited, new branches of the hepatic artery are forming, with a relative diminution in the branches of the portal system. Coursing throughout these cancerous nodules many branches of the hepatic artery are seen, some of which may attain a very large size and may be the cause of a fatal hemorrhage later on in the morbid process. Changes also take place in the lymphatic ducts, which may become swollen, thickened and beaded, due to infiltration of the vessel walls with cancerous material.

Primary cancer of the liver rarely extends widely throughout the system. It occupies an inferior position in this respect to cancer of the mamma and uterus. The further extension of the disease is affected first by continuity of the peritoneal envelope with the investing

membrane of the duodenum, etc. In many cases the mode of extension is assisted by the newly-formed adhesions. The lymphatic vessels and veins form another source of propagation of this malady. By way of the former the disease extends to the lymphatic glands in the fissure of the organs to the celiac glands or to the anterior mediastinum or to the thoracic duct, and may finally invade the deep cervical glands.

As to the etiology of this affection, very little is known. Age probably heads the list, cancers belonging pre-eminently to the latter decades of life, coming on during the age of physiologic decline. Sex in all probability exerts little or no influence as a predisposing element. In males, according to the majority of writers, they seem to predominate. Some consider them more frequent in females, owing to the fact that gall-stones are much more frequent in those of this sex, and to the importance which they play as a causative factor in production of malignant growths. (Stengel.) Trauma, nervous influences, heredity, etc., can only act as secondary factors.

As to the clinical history of cancer of the liver, this varies greatly, because the local symptoms, which in themselves are diagnostic, are at one time prominently developed from the onset, but at another remain either undefined or latent. Cases are met with, although they are few, where all signs of hepatic disease are wanting, where complaints of an undescribable or undefined character, as indigestion, constipation, etc., together with disordered innervation, are at first the sole symptoms, and where the increasing cachexia, ultimately terminating in death, is the only symptom of an important lesion.

In conclusion I will state that this case is interesting to the profession for one of three reasons: 1. Because it was a disease undoubtedly primary to the liver; we were not able to find the smallest macroscopic nodule that would be suggestive of a primary or malignant focus elsewhere. 2. Because all symptoms diagnostic of malignancy were entirely absent, especially the ever-present cachexia and jaundice, showing how utterly impossible it is in many of the cases to make a correct ante-mortem diagnosis. 3. Because the disease extended over a period of about two years, the average duration of these affections lasting from six months to a year.

1303 North Garrison Street.

VENOCAVERNOUS ANGIOMA.*

BY ANDREW L. FULTON, M.D.

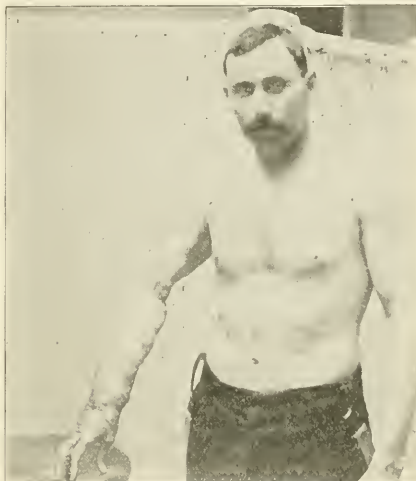
Professor of Operative and Clinical Surgery at the Kansas City Medical College, Professor of the Principles and Practice of Surgery and Clinical Surgery at the Women's Medical College, and Surgeon to the German Hospital.
KANSAS CITY, MO.

The following extraordinary case I shall call *venocavernous angioma*, for want of a better name and for descriptive purposes. The patient was first seen by me about March 1, and continued under my observation until the operation was performed, the data being as follows:

Mr. H., 48 years of age, born and raised in Virginia, gave a family history that was negative. Within a few months after his birth it was noticed that his right arm was not like his left, in appearance, but little was thought of it until he was about 4 years of age, when there was marked discoloration along the course of its superficial

veins. This discoloration, of bluish appearance, continued to increase very slowly, although it gave him little or no trouble for several years. He was subjected to all kinds of labor incidental to farming, which he continued to perform with increasing difficulty until he was about 22 years of age, when he could no longer allow his arm to be lowered for any considerable time, on account of the severe pain. For several years prior to this, however, he had performed very little manual labor with his right arm. Subsequently he engaged in various occupations that did not require the use of the arm to any great extent, but it was never free from pain unless elevated. During the last fifteen years or more he has been obliged to carry his hand above his head nearly all of the time. In walking along the streets he could be seen with his arm apparently resting on his head, as if his hat was about to blow off.

On or about Oct. 1, 1899, while passing through the doorway of his barn, a violent hemorrhage occurred,



Venocavernous Angioma.

threatening his life, and he presumed that he had struck his arm against some protruding obstacle as he passed in, but was not certain; it is possible, therefore, that there was a rupture of the exceedingly thin integument at the point of hemorrhage, independent of traumatism. Dr. W. F. Kuhn was called in and arrested the hemorrhage by the use of pressure forceps, when the wound promptly healed and the patient went about his business as usual.

I was called in consultation with Dr. Kuhn about six weeks before the amputation referred to later. At that time the cavernous tumors extended from the tips of the fingers to a point beyond the shoulder-joint. The index finger was particularly enlarged by venous caverns. On lowering the arm the blood would rush to the tips of the fingers, by gravitation, and on raising it again the same flow could be seen falling toward the shoulder-joint, and he said he could feel it as far as the chest wall. The returning blood seemed to be governed almost by gravitation. The skin covering most of the arm was exceedingly dark and apparently not thicker than tissue paper, when the arm was lowered. I advised an attempt at

*Read before the Jackson County Medical Society, May 10, 1900.

girdling about the middle of the forearm, at first with a view of ligating the veins in two places and dividing between them. If this had succeeded in the forearm I expected to have proceeded in like manner in the middle of the arm, and this operation failing I had determined to amputate at the shoulder-joint. The case did not present the usual neoplasm that we find in cavernous angiomas, but simply sacs of venous blood extending from the tips of the fingers to some distance beyond the shoulder-joint.

The patient entered the German Hospital on April 17. The next morning, after the usual preparations for amputation, and just before placing him on the operating-table Dr. Franklin E. Murphy photographed the arm as shown in the illustration. The pressure and pain were so great that the patient could scarcely hold his arm by his side long enough for the preparing for and taking of the picture. I believe that if at any time his arm had been held in this position for two hours or less, even had he been able to endure the pain, the skin would have ruptured. After obtaining the photograph, Dr. W. F. Kuhn administering the anesthetic, I operated, assisted by Dr. George Hamel and Dr. Murphy. Barely nicking the skin of the forearm, I opened up a large sac and enormous quantities of venous blood poured out. I soon discovered that there were no veins to be found anywhere, and therefore abandoned this operation and proceeded to amputate immediately below the shoulder-joint, as rapidly as possible. I realized four dangers in this case: 1, the danger from immediate hemorrhage; 2, the entrance of air through these venous channels; 3, embolism within the first two or three days, and 4, thrombosis within two weeks or more. The first danger was anticipated and guarded against and possibly the second was overestimated. The other dangers in the case were remote and we could have had no control over them. There was some little difficulty in stopping the blood that gushed from the axillary region outward; this venous hemorrhage occurring in large quantities from many sources, and probably preventing air entering the sinuses. As high up as I could feel, nearly to the subclavian vein, there was one sinus, so large that I could thrust two fingers into the cavity, which was what under normal conditions would be the *venae comites*. As rapidly as possible we grasped the tissues surrounding the blood-channels, tied them en masse, and ligated the axillary artery low in its course.

On examining the arm after amputation, we found all the adipose tissue absorbed and a great deal of the muscular tissue destroyed, also the humerus, the only bone we examined, was extensively eroded in several places from pressure absorption. Doubtless the bones of the forearm and hand were similarly involved, but we could not ascertain their condition without destroying the pathologic specimen as prepared. The caverns that served as blood-channels were partitioned off more or less by septa resembling cobwebs; these septa were composed of connective tissue, trabeculae. There was not a vein to be found anywhere in the arm. The caverns involved the skin, which was the only external covering, and this was in many places as thin as tissue paper, while internally the cavernous spaces seemed to be supported by the deep fascia alone. The only reinforcing supports that these channels seemed to have were the web-like septa, or trabeculae referred to above.

On examining the authorities in my library I fail to find anything like a counterpart to the case, particularly

as relates to the extensive involvement, superficial and deep. A remarkable feature was the furious flow of venous blood outward from the axilla, and it must have come from the veins of the head and neck as well as those of the shoulder and trunk of the right side. I have little doubt that the subclavian vein and the smaller veins emptying into it and the axillary vein are mere caverns like those already described.

The patient has made an uninterrupted and rapid recovery without any suffering.

429 Deardorff Building.

MYOMECTOMY DURING THE SIXTH MONTH OF PREGNANCY. RECOVERY.

BY EUGENE R. LEWIS, A.M., M.D.

KANSAS CITY, MO.

As a member of the committee on the progress of surgery in the Missouri State Medical Society, I have asked the chairman to allow me to present this paper, which contains the report of a successful myomectomy made during the sixth month of gestation. No successful case of the kind is on record, so far as my knowledge goes, and I have been diligent in my efforts to find one recorded. Since the books at my command did not contain the information I desired on this subject, I addressed letters to a number of the prominent surgeons and physicians of our state and country. I quote from the letters of Prof. Howard A. Kelly, of Johns Hopkins University, Prof. Nicholas Senn, of Rush Medical College, and Prof. E. E. Montgomery, of Jefferson Medical College. Professor Kelly says: "I know of no case of intramural fibroid, *i. e.*, one with a thick capsule of uterine muscle over it, which has been removed in pregnancy without provoking abortion," etc. Professor Senn says: "I have done many enucleations but without similar results; the case deserves a permanent place in literature. My enucleations were made on the non-impregnated uterus." Professor Montgomery says: "It has not been my privilege to operate upon a fibroid, intramural variety during pregnancy, etc." It is possible I may yet find that I have not made the first successful myomectomy upon the pregnant uterus, but so far, I am proud to be able to claim priority for my native state in this direction. The patient, Mrs. Pauline A., 27 years of age, primipara, was brought to my office in November, 1899, by Dr. S. D. Smith, of Cowgill, Mo. I had several examine her with me, and Dr. Smith had others do this, for her condition seemed to be rapidly growing worse and worse, and her distress called for action. Myomectomy as described by Howard A. Kelly was performed on the patient Nov. 27, 1899, at the hospital, before the class of the Women's Medical College, assisted by Drs. T. B. Thrush, B. L. Sultzbacher, Nannie P. Lewis and others. The uterus was in the sixth month of gestation, and the tumor, as large as a large orange, was situated superior and anterior to the tube on the right side. An incision in the *linea alba*, nine to eleven inches in length, was made to allow the extrusion of the entire gravid uterus and its appendages. The tumor did not involve the Fallopian tube, but projected out from the uterus like a large knot on a log. The serious complications liable to arise from an effort to remove the solid fibroid tumor were not underestimated, but were well considered. The rapidly failing health of the patient, the great distention of the abdomen, in

fact the congeries of conditions present in the case were rather dazzling, but the relief of the patient was imperative, something had to be done and as instantaneously as possible. A mistake in diagnosis led to the operation, as the tumor was supposed to be occupying the tube, and not connected at once to the uterus proper. The child could be plainly felt in motion beneath the thin walls beyond the growth. Realizing the situation, the question was hurriedly raised as to a complete hysterectomy, but as the operations of that character within our knowledge and experience had all proved fatal at this advanced stage of pregnancy, it was interdicted; so but one of two things remained for us to do instantly, either return the entire mass and try to close the abdomen, or try to remove the growth from the wall of the uterus and return what was left. I at once made an incision over the dense growth, about five or six inches in length, in the uterine muscle wall, and quite rapidly hulled out the tumor, leaving free hemorrhage to contend with at a limited area of the surface exposed. Very deep sutures were used to control the bleeding, and the opening in the uterus was closed with interrupted sutures; over the outside of this closed incision I laid a strip of iodoform gauze, one end of which I left exposed on closing the abdominal incision. The fourth day, I removed this gauze and on the twenty-eighth she was allowed to go to her home at Cowgill, Mo., forty-five or fifty miles distant. She was confined at full term, March 11, 1900, just 3½ months after the operation. Dr. Geo. B. Cowley, who attended her, wrote that mother and child were doing well and that delivery was made without forceps, as I had advised, for fear of a rupture of the organ in a prolonged labor.

One point I wish to call attention to as regards the relation of the placenta to the tumor, viz., the placenta seemed to have its attachment immediately beneath the growth, for on all other parts of the uterus it seemed as thin and yielding as a bladder. In fact, the thinness of the walls of the organ was a great surprise to me, and the psychologic effect made on me during the process of manipulation is permanent. There were no points in connection with the convalescence worthy of special mention. The patient's condition seemed to improve continuously after the shock of the operation had passed off. She took chloroform poorly, which was an additional source of uneasiness, but she rallied from it during the first thirty-six hours, after which all was well, and an uninterrupted recovery followed. A little over a week since—May 7—a letter from the patient's physician, Dr. Cowley, says: "I saw the baby yesterday—about two months old—mother and child well."

Tenth and Walnut Streets.

Therapeutics.

Treatment of Rheumatic Diseases of the Heart.

In the treatment of acute rheumatism in the adult, Sansom administers sodium salicylate in 20-gr. doses, with 5-gr. doses of ammonium carbonate, or 20-minim doses of aromatic spirit of ammonia in an ounce of camphor-water, every two hours until six doses are taken, or until the temperature has fallen and the pain is eased. Subsequently, the administrations are reduced to every six or eight hours. With this mixture may be combined alkaline carbonates, especially sodium carbonate, in 20-gr. doses. Any recurring wave or storm of the disease is treated in the same way as the earlier symptoms, and the treatment is kept up from three to six weeks. In some cases

sodium dithiosalicylate may be employed in 3-gr. doses every eight hours in cachet or chloroform-water, with extract of licorice. In the treatment of rheumatic pericarditis, an ice-bag may additionally be suspended over the heart for a long period. Failing cardiac power is best treated by the frequent administration of ammonia and similar diffusible stimulants in small doses, with camphor-water, or the hypodermic injection of from 1/50 to 1/30 gr. of strychnin. The application of a continuous galvanic current in the areas of the vagi has seemed to be valuable in the treatment of the rheumatic heart and its more severe manifestations.—*The Lancet*, March 31, 1900, p. 923.

Treatment of Tuberculosis with Sodium Cinnamate.

C. A. Ewald reports that he has not been able to secure as favorable results with cinnamic acid in the treatment of tuberculosis as he had been led to expect by Lanterer. But at the same time they were sufficiently encouraging to warrant further tests of the "hetol." He is inclined to attribute Lanterer's success to his general hygienic treatment, observing that more cases of phthisis recover by the natural factors, the innate healing powers of the organism, than is generally accepted.

Hemoptysis.

Dr. M. E. Chartier, of St. Louis, writing in the *St. Louis Clinique*, says that he generally prescribes:

R. Tinct. of iodine.....3i
Camphor pulv.
Essential oil of tar, aa.....ʒiiss
Hoffman's anodyne.....ʒss

M. Sig. Five to 20 inhalations at a time, to be repeated from two to four times daily.

Thyroid Extract as an Emmenagogue.

At a recent meeting of the Liverpool Medical Institution, Glynn related that in many cases in young girls, in whom there was temporary amenorrhea or a delay in menstruation in consequence of slight developmental changes, the administration of thyroid extract in doses of 1/2 gr. once a day, generally given at bedtime, proved sufficient to re-establish or to institute the function of menstruation.—*British Med. Jour.*, No. 2050, p. 905.

Purifying the Air in a Room.

In order to purify the atmosphere of the room inhabited by a phthisical patient the following may be plentifully and frequently sprayed:

R. Guaiacol 10
Acidi carbolici 6
Eucalyptol 8
Mentholi 4
Thymoli 2
Ol. caryophyl. 2
Alcoholis (95 per cent.) 170

Mix and dissolve.—*Louisville Mon. Jour. of Med. and Surg.*

Therapeutics of Adonidin.

Stern finds adonidin (*Merck's Archives*, May) of great value in "smoker's heart," where the beat suddenly becomes much stronger, indicating the increased cardiac activity from toxicosis. For the amelioration of this disorder he gives the glucosid in this form:

R. Adonidin 005
Ammonium carbonate..... 1
Camphor 03

M. et fiat. powd. xxx. Sig. One three times daily.

Adonidin is not a mere succedaneum of digitalis, for while the physiologic action of the drugs is identical to a certain degree, its prompt and energetic action makes it perfectly safe to use it in such pathologic conditions as fatty degeneration, pericarditis, simple hypertrophy, compensatory and certain atheromatous conditions, where digitalis, if given at all, should be used with the utmost caution. In rapidity of action, adonidin almost equals nitroglycerin, while in certainty of action it not only equals it, but surpasses spartein sulphate, caffeine and digitalis. Its diuretic action is limited, being about that of digitalis, and its greatest diuretic force is ex-

hibited in conditions accompanied by dropsy and low arterial tension. Its action on the body is twofold; in a healthy individual it causes slight increase in temperature, while in a pyretic patient it lowers it, but there is no instance on record where it produced a fatal effect in man. The dose varies from .002 gram to .005 gram, taken three to four times a day. These smaller doses usually relieve the heart symptoms, and the largest—.01 gm.—acts on the edematous condition and produces diuresis.

Sodium Chlorate in Gastric Affections.

Gastric affections treated with sodium chlorate, in daily doses of from 5 to 8 gm.—75 to 120 gr.—are said to be usually much benefited. Soupault reports that every variety of dyspepsia is clearly improved by it, and in cancer the pains, nausea and vomiting decrease or entirely disappear; the patient eats much more and with less disgust, the hematemeses cease and the general condition improves. In gastric tumor, however no benefit was obtained. In chronic gastritis, no matter what the cause or anatomical form, the results were also appreciably good. The action of sodium chlorate is particularly excellent in hypersthenic dyspepsia, or hyperchlorhydria and in the conditions resulting—gastronecrosis and gastric ulcer—exercising a lasting result. In the paroxysmic attacks so frequent in sufferers from hyperchlorhydria and ulcers the effects are particularly brilliant. In asthenic dyspepsia, however, the effect is doubtful or altogether insufficient. In the doses named no ill effects were ever observed even though the remedy was given for several months.—*Merck's Arch.*

Alopecia.

B. Resorcini	ʒiii
Acidi salicylici	gr. xxx
Castor-oil	ʒiʒi
Rectified spirit	ʒiʒi
Ol of bergamot	ʒiʒi
M. Sig. Rub well into the scalp every night.	
When greater stimulation is desired one may use:	
B. Mercuric chlorid	gr. xii
Betanaphthol	gr. xl
Castor-oil	ʒiʒi
Rectified spirit	ʒiʒi
Bay rum, ʒā	ʒiʒi

—*Schamberg: Polylinic.*

Medicolegal.

A "Man" in Legal Definition.—Under the Wisconsin statute, which provides that "any man who commits fornication with a sane female of previous chaste character, under the age of eighteen years, shall be punished," etc., the Supreme Court of Wisconsin holds, in the case of *State vs. Seiler*, that the word "man" means a male person who has arrived at the age of puberty, or is capable of committing rape, and is not limited to a male person over the age of 21 years.

One Thousand Dollars for Mistake in Message.—A drummer, whose wife had been quite sick but was somewhat better, after having arranged for a telegram to be sent to him at a certain place to advise him of her condition, left home to follow his business. The message, "She is much better," was sent to him, but when delivered read, "She is no better." This he understood meant that she had relapsed and was much worse. It caused him great mental anguish, and to return home at once. Under these circumstances, a verdict for \$1000 damages, the Court of Civil Appeals of Texas does not consider, case of *Western Union Telegraph Company vs. Patton*, sufficient to justify it in holding that the jury that returned the verdict was influenced by improper motives.

Overcoming Presumption of Insanity.—When insanity has been adjudged or once proved to have existed, it is presumed to continue. But this is not a conclusive presumption. The presumption arising from an adjudication of insanity may be overcome by proof other than an adjudication of restoration and consequently a recovery and sanity may be shown after an adjudication of insanity where no adjudication of restoration to reason has been made. So holds the Supreme Court of

Kansas, in the case of *Lower vs. Schumacher*, where it further maintains that, this being true, a contract or conveyance made by one adjudged a lunatic, but who is in fact sane when it is made, is valid, although no adjudication has been made that he has been restored to his right mind.

Physician Entitled to Have Office Heated.—A physician, with an office in his residence, contracted for a furnace to be put in to heat his house. The stipulation was that it would heat the lower rooms at 70 degrees Fahrenheit in zero weather, and the second floor 65 degrees. However, under the best of usage and attention, the furnace furnished not only lacked the capacity to produce heat sufficient to make the house comfortable, but left the temperature in the office so low that it was impossible for the physician to treat his patients in that part of the house, and the office was of but little use to him during the winter season. The evidence showed that the rental value of this office was \$10. Under such circumstances, and as it holds that it was within the scope of the agreement that the office was to be heated by the furnace, the appellate division, fourth department, of the Supreme Court of New York holds, *Russell vs. Corning Manufacturing Company*, that the damages arising from this failure were fairly chargeable to the furnisher of the furnace.

Cards as Evidence Against Abortions.—In *Commonwealth vs. Barrows*, a prosecution for abortion, exception was taken to the admission in evidence of certain cards found in the defendant's trunk, in the room occupied by him; also, to allowing the district attorney to argue to the jury that the defendant, by the cards, advertised his business as that of an abortionist. But the Supreme Judicial Court of Massachusetts overrules the exceptions with the statement that it has no doubt that the cards were admissible in evidence, and that the district attorney was properly allowed to argue to the jury what their meaning was. It says that in such cases cards and circulars of a defendant have been held to be admissible in evidence if they tend to show that the defendant holds himself out as a person whose business it is to procure abortions. It is not to be expected that cards and circulars of this kind will state the fact in precise terms, or that their meaning will not be more or less disguised.

Garbage Gathering.—The Supreme Court of Michigan holds, in *City of Grand Rapids vs. De Vries*, that the gathering of garbage is not a trade or occupation in any proper sense, and such employment does not come under the doctrine in reference to monopolies, or in reference to legislation in restraint of trade. It is a matter in which the public agencies are authorized to pursue the best means to protect the public health. Wherefore it holds that the business of handling and carting garbage through the public streets of a city is a business which the municipality may regulate for the benefit of the public health. No person has the right to carry garbage or other refuse matter through the streets of a city in open vessels. It is not a creation of a monopoly when the city from year to year licenses one or more persons to cart such garbage from and out of the city, specifying how it shall be done.

Dying Declarations in Abortion Cases.—The Supreme Court of New Jersey holds, in the case of *State vs. Meyer*, that, upon an indictment framed under the provisions of section 119 of the crimes act of 1898, which charges the defendant with using an instrument upon the person of a pregnant woman, with intent to cause her miscarriage, and that the defendant's act caused the death of the woman, evidence of the dying declarations of the deceased is inadmissible. The reason given is that death is, in New Jersey, no longer in any case an essential element of the crime denounced, but is to be considered solely with respect to the punishment to be inflicted after conviction, which the court holds renders inadmissible the dying declarations.

Calling One of Two Physicians as Witness.—Although it has been held in New York state that, where two physicians together made an examination, and one was called to testify, the other should also be allowed to give his evidence, the appellate division, first department, of the Supreme Court of New York holds, that where two physicians have been employed

in succession, but not at the same time, and never attended or examined the patient together, his calling one of them as a witness, as for example the last employed, is not a waiver of his privileges as to the other, especially if such other really never examined his injuries at all—only gave him medicine. It also holds, in *Tracey vs. Metropolitan Street Railway Company*, that where a physician who had been called in by the plaintiff was put upon the witness stand by the defendant, the plaintiff had a right to demand that it should be shown at the outset who had called in this physician, in order to raise the question whether he was disqualified for testifying against the plaintiff, and to determine the attitude he occupied.

Cards as Evidence.—An indictment charged the commencing at a certain time of the practice of medicine and surgery in the state of New Jersey, without license, by then and there prescribing for a certain named person a certain medicine, etc. A business card of the defendant, containing his name, with the title "Dr." prefixed, and advertising himself as pharmacist and chemist, and with having a free dispensary at his place of business, where registered physicians were in attendance daily to give medical and surgical advice free of charge, after being identified by him, on cross-examination, as having been put into circulation by him within two years previous to the date of the offense charged, was admitted in evidence over his objection. This, the Court of Errors and Appeals of New Jersey holds, *Mayer vs. State*, was not error. It holds that the card was admissible as a declaration of the defendant tending to prove that he had been engaged in carrying on the prohibited business, which was corroborative of the proof offered in support of the offense charged. Besides, the statute on which such indictment was based declared, among other things, that the use by a person of the title "Dr.," "Doctor," etc., or the exposure of a sign, circular, advertisement, or any other device or information indicating thereby the occupation of the person, should be considered prima facie evidence. Wherefore, the court holds that it was not erroneous for the trial judge to charge the jury to the effect that the card which the defendant gave to the prosecuting witness, along with the bottle of medicine, on which his name appeared as Dr. (naming him), was, under the act, prima facie evidence to the jury that he was practicing medicine, or holding himself out as practicing medicine, at that time.

Dental Law Sustained.—Section 5 of chapter 378, Maryland acts of 1896, reads: "Any person twenty-one years of age, who has graduated at, and holds a diploma from, a university or college authorized to grant diplomas in dental surgery by the laws of any one of the United States, and who is desirous of practicing dentistry in this state, may be examined by said board (state dental board of examiners) with reference to qualifications, and after passing an examination satisfactory to the board, his or her name, residence or place of business, shall be registered in a book kept for that purpose, and a certificate shall be issued to such person. Any graduate of a regular college of dentistry, may, at the discretion of the examining board, be registered without being subjected to an examination." This was attacked, in the case of *State vs. Knowles*, as containing the vulnerable points in the state dental law, rendering it invalid. It was argued that as the word "may" occurs twice in the section, and that as there could be no question that in the latter sentence it was employed in the usual and natural sense, the same sense must necessarily and unalterably be impressed upon its employment in the first sentence. Such being the case, the contention was that the board might, if it chose, refuse to examine one holding a diploma from a college or university authorized to grant diplomas in dental surgery, and could thus arbitrarily deny the right to practice dentistry in that state, to any one holding such diploma, however skilled in his profession, or however qualified to pass an examination. But the Court of Appeals of Maryland says that the law does not permit itself to be frightened out of its propriety by the hobgoblin of inconsistency, and that it itself has no hesitation in holding that the only discretion conferred is to waive an examination when the applicant is a graduate of a regular college of dentistry, and that in all other cases covered by the act examinations must

be granted when application is made in accordance with reasonable rules as to time and place. In other words, it construes the first "may" as shall" or "must," while it says that the latter "may" is required to be used in the permissive sense because it is expressly coupled with "discretion." Furthermore, it thinks the act does mean to distinguish, for the purpose of examinations, between "a college or university authorized to grant diplomas in dental surgery" and "a regular college of dentistry." In the former, it says, by way of justification, dentistry may be but an adjunct to the course, and there is no assurance of thoroughness of instruction and practical application, as must be presumed in a regular dental college, where the whole time of the students and instructors is given to the theory and practice of dental science. The principle underlying this discrimination has been recognized in numerous cases where the authority to determine what colleges are "reputable and in good standing" has been held not to be an arbitrary or unreasonable authority. With reference to the criticism that the language "may be examined with reference to qualifications" was so vague and indeterminate as to be fatal to the validity of the law, the court answers that it might well have been more specific, but that it is impossible to suppose that it refers to any other qualifications than those appropriate to and requisite for the practice of dentistry. And so the court holds the law constitutional, stating, too, that the same reasons which apply to the profession of medicine apply with equal force to the profession of dentistry, which is but a special branch of the medical profession.

Proof of Sickness and Insanity.—According to the Supreme Court of Alabama, it is competent for a non-expert witness to testify that a person is "sick," "diseased," or "has a fever"—these being statements of such facts as are perceptible to the senses, and not mere expressions of opinion. But it is not competent, the court says, in the case of *Dominick vs. Randolph*, for such witness to testify, if the evidence sought calls for an opinion instead of a statement of fact, until the witness shall have placed himself within the rule as to expert testimony. To state that a person is sick or diseased is a statement of a fact which does not necessarily involve professional knowledge or skill, but to state the particular kind of disease necessarily involves some degree of professional knowledge and skill, and consequently the expression of an opinion. To state that one has a fever is a statement of fact perceptible to the senses of the ordinary man, which it does not necessarily require the knowledge or skill of an expert to determine; but to say whether the patient is suffering with malarial or yellow fever would require the knowledge and skill of an expert, and necessarily the expression of an opinion. Moreover, the court draws the line in this case at allowing non-experts to testify as to a person having suffered with a stroke of paralysis. Indeed, it suggests that the propriety of excluding such testimony was well illustrated right in this case, where it thinks it quite probable that what the only expert witnesses offered described as rheumatism the non-expert witnesses supposed to be paralysis. Where insanity is a fact in issue, it holds that the testimony of non-experts may be admitted, where it is shown that the witness has had long and intimate acquaintance with the person in question—this long and intimate acquaintance in contradistinction to a casual acquaintance and occasional conversations and interviews—to enable the formation of a correct judgment as to the mental condition of such person. A mere speaking acquaintance, with occasional conversations, the most of them of very recent date, it insists, does not qualify a non-expert to testify upon the question of sanity or insanity. To test the sincerity of a non-expert witness who has brought himself within the rule qualifying him to testify with reference thereto and has testified to the insanity of the person in question, the court holds that he may be asked, upon cross-examination, whether such person was capable of making a deed at a certain time, although this calls for an opinion or conclusion. But the fact that a man made an improvident bargain; that he is generally unthrifty in his business or unsuccessful in one or more enterprises, the court does not consider of itself proves him to be a non compos mentis.

Societies.

COMING MEETINGS.

Oregon State Medical Society, Portland, June 20-27.
Second District Branch of the New York State Medical Association, Schenectady, N. Y., June 28.

RHODE ISLAND MEDICAL SOCIETY.—The eighty-ninth annual meeting of this Society was held in Providence, June 7. Five new members were added.

ELKHART COUNTY MEDICAL SOCIETY.—This Society met in Elkhart, Ind., June 6. H. O. Stalter was elected president, and John C. Fleming, vice-president.

SALINE COUNTY MEDICAL SOCIETY.—At the recent meeting of this Society, held in Marshall, Mo., June 13, the following officers were elected: president, G. A. Richart, Blackburn; vice-presidents, B. C. Bradshan, Arrow Rock, and W. G. Fisher, Marshall; secretary, D. F. Bell, Marshall.

NEW MEXICO MEDICAL SOCIETY.—At the annual meeting of this Society, held in Santa Fe, June 7, the following officers were elected: president, J. H. Sloan, Santa Fe; first vice-president, J. W. Hope, Albuquerque; second vice-president, George C. Bryan, Alamo Gordo; third vice-president, J. A. Rolls, Watrous; secretary, J. Frank McConnell, Las Cruces; treasurer, G. W. Harrison, Albuquerque. Alamo Gordo was selected as the place of the next annual meeting.

NEW JERSEY STATE MEDICAL SOCIETY.—This Society held its 134th annual meeting in Atlantic City, June 5. The following officers were elected: president, William Pierson, Orange; first vice-president, J. D. McGill, Jersey City; second vice-president, E. L. B. Godfrey, Camden; third vice-president, Henry Mitchell, Asbury Park; secretary, William J. Chandler, South Orange; treasurer, Archibald Mercer, Newark. The next meeting will be held in Allenhurst.

MASSACHUSETTS MEDICAL SOCIETY.—The 119th annual meeting of this Society was held in Boston, June 13. The board of councilors elected the following officers for 1900-1902: president, Frank W. Draper, Boston; vice-president, W. W. Eaton, Danvers; treasurer, E. M. Buckingham, Boston; corresponding secretary, C. W. Swan, Brookline; recording secretary, F. W. Goss, Roxbury; librarian, Edwin H. Brigham, Brookline. The annual Shattuck lecture was delivered by Dr. William H. Welch, of Johns Hopkins.

Associated Health Authorities and Sanitarians of Pennsylvania.

Seventh annual meeting, Mechanicsburg, May 28.

SCHOOL HYGIENE.

PROF. J. A. BEITZEL, principal of the public schools, spoke on this subject, saying that only recently has it dawned on the people that the trend of the educational forces is too exclusively in the direction of a single order of culture. Every energy has been bent toward the intellectual part, without thought as to the physical. A sound mind in a sound body has not inspired the administration of public school affairs. Laws of health are violated in improper buildings, improper heating, lighting, ventilation, and want of sanitary surroundings, and by taxing the eyes and the mental powers. He alluded to the great care of the ancients in regard to the body of the growing citizen, and said that school hygiene must ever be considered if we want healthy as well as cultured children. There must be proper sites for the building, good drainage, avoidance of bad air, the cesspool should not receive the school drainage; proper ventilation and heating should be secured for the health for the pupils, and overcrowding in the rooms should not be tolerated. All these cause tired nerves, headaches and mental exhaustion. Five hundred children assembled in one room for two hours produce carbonic acid gas equal to the solid charcoal or carbon in twenty pounds of coal. These would give off in that time, vapor equal to four gallons of water, this being laden with impurities from ill-ordered mouths, decaying teeth and the

natural waste from the mucous linings of the air-passages. In addition, the skin is continually throwing off waste products even in the case of the cleanliest. Imagine the condition of a child who has not had a bath perhaps for six months; think of the exhalations from such bodies, from the dirty clothing, and the usual wraps in the cloak-room. What a soil for the development and propagation of scarlet fever, diphtheria, etc! Again, we have overheated school-rooms and the children are allowed to rush out into the cold corridors or yards, so it is not strange that quinsy, croup, bronchitis, etc., are prevalent.

To know what is the proper air-space for each occupant is vastly important and we have differences of opinion on this point. Dr. Chapin insists on 12 to 20 square feet of floor space and 200 or 250 cubic feet of air-space according to age and development: Dr. Newsholme maintains that 2000 cubic feet of pure air are required per hour for each pupil; the English educational department gives only 80 cubic feet as the minimum space, and 8 square feet of floor space; the New York Board of Education prescribes 70 cubic feet of air-space for the lower classes, and 80 for the higher. With all these views, however, one thing is obvious: we must remove the foul and furnish an abundant supply of fresh air and a liberal air-space, or we do not provide for the health of the children. The air must be changed without drafts, and superheated air must be guarded against, for not only is the air thus made less valuable, but it is too dry, and will abstract moisture from the skin and lungs, causing a feverish state. Proper lighting of the school-room is necessary, or the eyes will be injured, and here we need the sanitary expert and the architect. All teachers know the depressing effect of cloudy, sunless days, and a dull, dark room. The direction in which light enters the room is of supreme importance: when full in the face, it is fatal to eyesight; while light from behind throws the shadow of the body on the book, and from both sides throws a double set of shadows, but from the left and from overhead windows, it falls directly on the desk. Some claim that from each desk there should be visible a strip of sky at least 30 cm. wide, measured from the top of the window. It has been observed that there is a progressive tendency to myopia in school children, due to the nature of their work and the defective illumination, and that near-sightedness increases from the lower to the higher grades. The inference, from a number of observations, is that the children of those nationalities most commonly engaged in study and eye work have the greater proportion of myopic change, while those accustomed to outdoor life and resting their eyes largely on remote objects are generally free from this affection. Better lighted buildings show a less proportion of myopia, and observation shows that the ratio of children wearing spectacles is progressive, indicating that eye-strain is due to insufficient or excessive light, glaring and conflicting lights, that from the wrong direction, too long use of the eyes without change of focus to distant objects, too small type in print, reading from the blackboard at too great a distance, and bad position of the body assumed in the execution of the slant system of penmanship, causing spinal curvature as well as defective vision. Other phases of school hygiene of importance are improper seating, overcrowding, overwork, lack of exercise, too long sessions, nervous disorders, epidemics, and infection from books.

HYGIENE IN THE RURAL SCHOOLS.

DR. BENJAMIN LEE, secretary of the State Board of Health, said that fortunately for the health of school children, school directors have not hesitated to interpret the phrase "general supervision," in the law which assigns their powers and duties, in a very generous and liberal fashion. They have determined the number of schoolhouses, their size, comfort, ventilation, etc. While it will be recognized that every one of the above features of educational supervision has its bearing on school sanitation, yet in none does the protection of health appear as the direct object. But in section 110, this motive is recognized: "suspension is the separation of the pupil for a limited time from the school, it may be either for bad conduct or for sanitary measures." This may be done without calling the board to meet, and the teacher is thus made a medical inspector for

the school. In some instances, we find a compulsory vaccination regulation, as in Philadelphia; but systematic medical inspection should be the rule. Decisions have been made by certain judges deciding positively as to the equity of this proceeding.

He referred to an act to provide for the restriction of communicable diseases, since issued as the Pennsylvania Sanitary Code. Schools were recognized as the great centers of infection for the propagation of disease, and this act is to raise every barrier against the spread of infectious diseases in every way. It applies to all schools, public, private, parochial, and Sunday. Decisions have been made that now settle the law. The legislature's last attempt was to encourage school boards to assume responsibility for the sanitary care of the children, by an act to empower the school directors of the several townships to exercise the powers of a health board for the township.

THE RURAL DIRECTOR AS A HEALTH OFFICER.

C. HERBERT OBBREITER, Lancaster, gave some information in regard to his township, which is a small one with a population partly rural and partly urban. The school board organized as a board of health in the simplest way, as diphtheria was prevalent in the district and a few cases came within jurisdiction; no additional officers were elected; they required teachers as well as physicians to report cases of which they might learn, and by requiring the local director to placard houses which were infected, these remained quarantined until danger was passed. A fine of \$10 was announced for breaking quarantine. This slightly increased the duties of the director, making him a sanitary officer, but made no new demands on the district's funds. The city board furnished formaldehyde for fumigation, at cost; antitoxin was needed by one poor family, and this was furnished from the school funds, and the action was not questioned by the auditors. All children from infected houses were dismissed, and all articles handled by these patients in school cremated. No opposition was encountered, but commendation was given, for the people recognized that it was their protection that was being considered. He thinks the legislature did well in reposing this trust in the school directors, as no class of men are less influenced by improper motives, or are more earnest in the discharge of duty. This act confers unconditional power and leaves no choice to reject it entirely. Its greatest defect is the absence of a penal clause; all know fines are often futile, and this is the weakest point. Only one remedy is suggested—that is, making the appointee a special sanitary officer.

The rural director in his new capacity is invested with the widest power, undefined by any court, and he may abate a nuisance, even invade private property to do this, without contravening the owners' constitutional rights in so doing. The act is simply a necessary exercise of police power, and he may isolate, and control the liberty of afflicted persons, virtually excluding them from all communication with their fellow beings. As a health officer he can not be sued in tort, and he is not liable for mere errors of judgment, so long as he acts within his jurisdiction.

MEDICAL INSPECTION IN SCHOOLS.

MISS DORA KEEN, secretary of the Public Education Association, said that classes should not have more than a maximum enrollment of forty-five to a teacher, as more cause impure air, crowding of desks and lack of individual attention by the teacher. She remarked also that standing movements are invaluable in the training of a child, and that these should be a part of the daily program, and the play instinct should be utilized in games. Medical inspection has done very much to reduce the number of detentions by sickness. Daily visits should be made, as very many are found suffering with nose, throat, or ear affections, sore eyes and defective vision. In one instance the parents were asked to meet the inspector and nearly five hundred came,

BENEFITS OF SANITARY WORK.

Dr. A. C. ABBOTT, president of the State Board of Health and bacteriologist of the city of Philadelphia, made the annual address and spoke of the benefits obtained from sanitary work:

he considered in detail filtration of bad water and bacteriologic examinations for the profession.

MILK-SUPPLY.

M. C. LAPPERT, Phoenixville, read a paper on "What Can be Done for the Protection of the Public From the Danger of the Dairy?" He spoke of the influence of milk as an article of diet on the health and mortality of children and infants. He said that lack of proper supervision and inspection by the state is responsible to a great extent for unsanitary methods in the dairy and the sale of milk from unhealthy or diseased cows; and that while we have a dairy and food commissioner, no provision is made by law for dairy inspection. The State Live Stock Sanitary Board is doing efficient work for the eradication of tuberculosis among cattle and other contagious disease also, but its work, owing to the vastness of the field, is necessarily limited to the inspection of animals on application of owners of dairy herds, and they have nothing to do with dairy inspection proper. The legislature should enlarge the duties of the dairy and food commissioner, by making systematic inspection of dairies and dairy herds obligatory throughout the state, and providing the necessary means and assistance by trained veterinarians. The legislature should further enact a general law, making a standard for all milk and providing for the prevention of adulteration and sale of impure milk, and investing local boards of health with full powers to inspect milk as well as dairies, and require certificates of inspection in the case of all milk sold within their jurisdiction.

NEED OF HEALTH SUPERVISION IN TOWNSHIPS.

Dr. ROBERT MAISON, county medical inspector, discussed the various steps taken by the State Board of Health and its friends to give local health protection throughout the state. The efforts resulted in establishing boards of health in cities of the third class and boroughs, and finally school boards in townships are authorized to assume the functions of a health board. He claimed that borough health boards in the smaller villages are not efficient, because of local antagonism, the dearth of proper material for membership, the personal element injected into every effort to abate nuisances, the lack of interest among the members themselves, the deficiency in hygienic knowledge and the constant changes in the personnel of the boards. He argued from this that to establish boards in townships would be inadvisable from the same reasons that now render those of the boroughs of little value, and that the sparsity of population would make township boards of much less use. He spoke of a borough where 4 per cent. of the population suffered from diphtheria last winter, and the local board was afraid to abate nuisances caused by a manufacturing firm giving employment to the majority of the inhabitants, for fear of reprisals. He advocates legislation providing for a county health officer with deputies in each township, in order that all cases of contagious disease may be promptly quarantined and epidemics thus avoided. He said that such a bill would pass if the members of the legislature were allowed to suggest the appointees for the deputy health officers, because no bill, however meritorious, can be passed unless the members of the legislature receive some pecuniary or political benefit through it.

DANGER THAT ARISES FROM THE LACK OF RURAL SANITATION.

Dr. H. B. BASHORE, West Fairview, said that in many cases the large cities are well protected from preventable diseases, while little is done for the rural districts, yet it is a pressing need for the welfare of the cities as much as for the districts themselves. The fact is being rapidly realized that it is more healthy in the average large city than in the country, because in the latter place, for many years fifth has accumulated, and wells have been fouled; this in turn causes pollution of the water-supplies of the cities. Typhoid fever is carried from such a place, which has been fouled by the admission of the germ from the cesspool, to the well. This in turn is carried to the larger supply, and it is difficult to make the people understand that a well which has given water for so many years without bad results has now become dangerous. Again, the milk-supply to

the city may come from a place where the old well is used to furnish water to the cows, and thus the milk be dangerous. Workmen engaged in building roads, etc., accumulate filth in their camps, ride in the crowded cars, and carry scarlet fever from their own families to others. Diphtheria is continually carried in this way, by women going out shopping from homes where it prevails. No public funeral is allowed in certain cases, yet the friends meet at the house and go from it, with garments loaded with germs, to use the cars, both steam and trolley, and thus spread the disease. Swamps are a means for the production of disease, but no one realizes this danger; and while rural hygiene is thus neglected, in spite of the great work in cities, we must expect that disease will prevail. We must demand health officers for the country.

EPIDEMIC CEREBROSPINAL MENINGITIS.

DR. D. R. McCORMICK, Lancaster, read a paper on this subject, in which he said that the first case reported this year was on March 15, the last on June 21; total 118; mortality, 67 per cent. During that time 103 premises were infected, 12 of which had more than one case. Lancaster has a population of 45,000; no cases occurred among the 700 Russian Jews; 1500 negroes, or 100 Italians. Though unsanitary conditions were found in four-fifths of the infected homes, few could be called very bad, though poor ventilation, slight defects in plumbing, drainage, filthy gutters, and proximity to dumps were common. Personal habits were good and there was no overcrowding. It attacked all classes, but few were among the very wealthy or very poor, and no section of the city was exempt. Occupation was not a factor, nor was age. The attack began in the spring, after a severe winter, yet it reached its height in April, during a period of dry warm weather. Contrary to expectations, it declined rapidly in May, and by June had almost disappeared. Its malignancy was shown, not only by the mortality, but by the rapidity of the occurrence of death. After the invasion 60 deaths occurred within five days, and 46 in less than forty-eight hours. No infection was shown nor any connection between cases, the first two being two miles apart. How it was introduced has not been discovered. Sanitarily, Lancaster is elevated, well-sewered, well-drained, has no tenements, but a small foreign population, is free from overcrowding, nuisances are rare and sanitary laws enforced. Aside from its water-supply, the city should not have proved a good field for conditions usually believed to be factors in this disease. Until March no special attention was paid to the disease, save to advise that caution be used by undertakers and families. Near the end of that month, the sudden death of a young man was reported, death occurring in twelve hours after the onset. Inspection was made, a private funeral ordered, and the body interred within thirty-six hours. At a special meeting of the Board, the citizens were urged to a strict enforcement of sanitary discipline, and not much more notice was taken. However, after a correspondence with other boards they unanimously declared the disease contagious, placarded the houses, and enforced all rules as to private funerals, etc. The replies from health boards and others showed a marked diversity as to whether or not the disease was contagious or infectious, etc. A careful study of the epidemic shows no apparent source of contagion; as only isolated cases occurred, the disease was not confined to any locality, contact did not cause the disease, and it appeared simultaneously in various places widely separated. Its contagious nature was shown in the fact that there were twelve places where more than one case occurred; that persons in attendance in three cases took the disease; that cold and exposure did not prove in any case a factor, and that in one instance the disease appeared to have been carried by another person who remained immune.

THEORY AND PRACTICE OF VACCINATION AND PRODUCTION OF BOVINE VIRUS.

DR. W. F. ELGIN, Glenolden, explained the nature of immunity, whether natural or artificial; how vaccination prevents smallpox, and antitoxin, diphtheria. He also explained that this latter is not a poison, how it is produced and how it acts to make the person immune to the disease. He alluded to

the various forms of disease germs and the plan by which they are rendered innocuous. He gave in detail the value of vaccination, as shown by statistics of the German army, etc., and the earnest belief of all civilized people in the certainty of thus stamping out the smallpox, by constant vaccination, of infants, revaccination at puberty, and during an epidemic; and the necessity of never giving a certificate that a person has been vaccinated unless from some positive data, the scar not always being reliable, as in so many instances this may not be from a true vaccination. He especially alluded to the great care to be taken in performing this little operation, the cleansing of the point of insertion, the use of clean sterilized instruments, and too much effort to make a big vaccination, for three small even points protect as well as several, and produce less annoyance by the sore produced. He showed how the glycerinated virus has been successful in a large number of cases over the old method of using scabs, points, etc.

Fourth District Branch, New York State Medical Association.

Sixteenth Annual Meeting, Buffalo, May 8, 1900.

(Concluded from p. 1498.)

PRESENT STATUS OF JONNESCO'S OPERATION.

DR. M. HARTWIG read a paper on this subject. It will appear in THE JOURNAL.

CHRONIC INTESTINAL ADHESIONS.

DR. CHARLES E. CONGDON read a paper on this subject, and reported four cases, some of which had required two or three abdominal sections to relieve the persistently recurrent adhesions of the bowel.

DR. FREDERICK HOLME WIGGIN, New York City, said that when he began to do abdominal surgery one of the first patients, who recovered from the immediate operation, died a year later from intestinal obstruction. At post-mortem the condition found to be present was so much worse than when he operated that he was convinced that the surgical technique in vogue at that time must be faulty. He noticed before long that where he opened the abdominal cavity and found a certain quantity of fluid there had been no adhesions. It was not long before he realized that intestinal obstruction following these abdominal operations was one of the greatest dangers with which to contend. Knowing that Halsted had found that saline solution did not irritate the contents of the peritoneal cavity, as was the case with ordinary water, he tried the plan of leaving some of the solution in the abdominal cavity, thus imitating Nature's method. He adopted this technique in 1891 or 1892, and soon noted with pleasure that these troublesome cases of intestinal adhesions were becoming less and less frequent until now he has no trouble with them. The accepted technique is to wash out the abdominal contents with the saline solution, being careful not to wipe off the parts, as this tends to form adhesions. He is in the habit of placing most of the stitches in the peritoneum, but not tightening them at this stage. As soon as the water comes away clear, he leaves the cavity full of saline solution, and closes the wound. By experimentation on dogs, he has found that the abdominal viscera can be subjected to considerable traumatism without giving rise to intestinal adhesions, provided this technique is observed.

DR. E. D. FERGUSON, Troy, said that so far as he knew he had not a single case of intestinal adhesions following the opening of the abdomen, though possibly others might have encountered it after the patient left his hands. This immunity from intestinal adhesions had not been the result of any special technique; however, there should be as little active inflammation in the abdominal cavity as possible at the time of the operation. There are three elements necessary to success: 1. the thoroughness with which the adhesions are separated; 2. the thoroughness with which all denudations, from stripping of the peritoneum, are repaired, and 3. the putting into the abdominal cavity of a certain quantity of saline solution, that quantity to be gauged by its capacity. He recalled a case, seen in consultation, in which the second or third operation for intestinal adhesions was to be done. The operator was

about to dust the parts with aristol, at the close of this operation, as he had done in the previous ones. At this point, he advised him to desist, and to substitute for the aristol the filling of the peritoneal cavity with saline solution. He did so, and the woman made an excellent recovery, and has been troubled no more by intestinal adhesions.

DR. M. W. TOWNSEND, Bergen, said that he does three things in order to prevent adhesions, viz., 1, leaves no raw peritoneal surfaces; 2, leaves the abdominal cavity full of saline solution; 3, opens the bowels on the third day with a cathartic, and keeps up the catharsis. He is most careful also to avoid the administration of morphia.

DR. A. L. BENEDICT, Buffalo, spoke of the intestinal adhesions from a medical standpoint, and referred to a case in which there was only a history of pain, constipation and a previous operation, so that the diagnosis of intestinal adhesions rested only on these three points. In this instance, the diagnosis was confirmed by autopsy, but not infrequently these cases are wrongly diagnosed as appendicitis.

DR. E. J. MEYER spoke of cases of fulminating appendicitis in which it is necessary to insert drainage-tubes. He sees no way of preventing the formation of adhesions in cases of extensive peritonitis where drainage is required. Here one can not make use of the very valuable suggestion to fill the cavity with saline solution.

DR. M. HARTWIG said that in 1877 he met with a very severe case of intestinal adhesions, all of the coils of the bowel being matted together. He separated what adhesions he could and made an artificial anus. The result not being very satisfactory, he took the patient to a no less eminent surgeon than Volkmann, who, after keeping the case under observation for a few days, declared that nothing more could be done. This he mentioned to show the great strides which surgery has made.

DR. CHAS. E. CONGDON, in closing, said that for a long time he made it a practice to fill the abdominal cavity with saline solution with the object of preventing these intestinal adhesions, but that he failed in accomplishing this purpose. In his later and more successful cases, he has used as little fluid as possible, and employed aristol, which has seemed to prevent the formation of these dreaded adhesions. He cited a case of severe gangrenous appendicitis which he operated on, and in which at the operation, done subsequently for another purpose, he found absolutely no intestinal adhesions.

HEPATIC SCLEROSIS IN NON-ALCOHOLICS.

DR. A. L. BENEDICT, Buffalo, read a paper on this subject. He said that the view is now generally accepted that there is a connective hypertrophy and a contraction of the liver. A study of the histories of 250 cases reveals the fact that 37 out of this number showed unmistakable and often extreme atrophic sclerosis. In only 4 cases has the diagnosis been made of hypertrophy, and only 1 of these has been a markedly alcoholic one. Those who lay great stress on alcoholism usually base their opinion on the statistics collected from hospitals where very many of the patients are alcoholics. Of the 54 cases of hepatic sclerosis reported in this paper, the number of total abstainers was 9, and of hard drinkers, 4, while the remainder were practically total abstainers. He believes that the poison, which irritated the liver, is often not alcohol, but acids and their organic compounds, produced by micro-organisms, the yeasts or bacteria, in the stomach or intestine. One experimenter had produced similar lesions in animals by the injection of indol, phenol, and similar substances, and C. A. Herter's experiments point in the same direction. It should be remembered also that hepatic sclerosis in the human being is a very slow process. He is at present engaged in a study of the length of time requisite for the development of such pathologic changes, and hopes in the course of ten or fifteen years to present some scientific conclusions based on an extended study of this subject.

INJURIES OF TENDONS AND THEIR TREATMENT.

DR. WILLIAM M. BEMUS, Jamestown, considered this subject. The first case reported was one in which a young man while skating had had the left skate suddenly checked in its progress. This resulted in throwing the body forward, and putting the ankle suddenly in a forced extension, and in throwing the tendon out of its bed behind the malleolus. A

second case of this kind was also narrated, in which dislocation of the tendon had been produced by sudden forced extension of the ankle. Manipulation seldom fails to reduce the dislocation, and it should then be fastened in place by a pad and roller bandage. The accident is usually accompanied by pain, tenderness, disturbance of function and local redness. The diagnosis may be uncertain if the tendon is deep-seated or covered by fat, or is obscured by much swelling.

ECTOPIC PREGNANCY WITH SUPPERTONEAL RUPTURE.

DR. C. C. FREDERICK, Buffalo, reported three cases, in which there had been repeated hemorrhages, with consequent increase of growth of the hematoma until large tumors had developed. The first patient was a woman who had been ailing for about a year with abdominal pain, coming on in paroxysms. On abdominal section he found a tumor composed of concentric layers of blood clots, and finally a lithopedion, or fetus of about four months' development. Beneath the amniotic sac was a freshly formed clot. He drained the sac through Douglas' pouch and the patient made a good recovery. The second was a woman having a tumor as large as a pregnancy of seven months. She had suffered constantly. On opening the abdomen he found a similar mass of blood clots, and a fetus of about five months' development. She made a slow but good recovery. A third case presented a tumor extending very nearly to the ensiform cartilage. In this instance he turned out an ordinary basinful of clots and a six months' fetus. As the descending portion of the colon and the cecum formed a part of the sac, he accidentally tore through the colon. He then effected an anastomosis by means of a Murphy button. She did well for four or five days, but then developed a rapid pulse and vomiting. On reopening the abdominal cavity, he found that the button was all right, but the sac had sloughed and was leaking into the peritoneal cavity. The woman hung between life and death for two days, but eventually made a complete recovery. In none of these cases was he able to elicit any history of ectopic gestation, and the tumors had been supposed to be new growths. In cases in which the placenta was well developed he effected hemostasis by the use of purse-string sutures.

DR. E. D. FERGUSON exhibited a forceps for lifting up the uterus in ventral suspension. He said that in very obese patients, or in those in whom the diaphragm is making very active movements, it is difficult to insert the sutures in the uterus, and it was to facilitate this procedure that this instrument was devised. He also presented a very large director for use in vaginal hysterectomy, by the aid of which the broad ligament can be readily brought into view and controlled.

TREATMENT OF TYPHOID FEVER.

DR. J. H. SACKKIDDER, East Randolph, presented a paper on this subject. It will appear in THE JOURNAL.

DR. WILLIAM M. BEMUS said that he employs this method of treatment in his own practice, and with considerable success. He uses high emenata of cool water in which is dissolved a little sulphocarbonate of soda or of zinc; and also gives one of these sulphocarbonates by the mouth. This treatment he regards as an ideal one for typhoid fever. Although several authors now recommend giving solid food quite early, he is personally afraid of following such advice.

COMMON BUT GENERALLY UNRECOGNIZED SYMPTOMS OF EYE-STRAIN.

DR. ELMER G. STARR, of Buffalo, read a paper on this subject, and it will appear in THE JOURNAL.

DR. A. A. HUBBELL said he agreed with most of the statements made by Dr. Starr, but while admitting that nervousness, irritability, headache, vertigo and indigestion often originate in eye-strain, he would remind those present that these symptoms may arise from other causes.

DR. F. W. ABBOTT, Buffalo, said that if there is a marked refractive error, by correcting this, relief will be secured. It is, however, in cases of slight refractive error, where it is necessary to strain the accommodative apparatus continually in order to secure good vision, that eye-strain is apt to develop.

PAROVARIAN CYST.

DR. HERMAN E. HAYD exhibited a large parovarian cyst that he had removed four days previously from a woman, forty-five

years of age, who had presented all the useful evidences of ascites. Owing to her good nutrition he felt sure that there could be no tuberculosis, and no cardiac or renal trouble, and he therefore made a diagnosis of parovarian or ovarian cyst. The tumor weighed about sixty pounds, and contained about twenty-eight quarts of fluid. On the other side was a small but perfect parovarian cyst.

HEMORRHAGE AFTER CONFINEMENT, AND ITS TREATMENT.

DR. HERMAN E. HAYD, Buffalo, read a paper on this subject. It will be printed in *THE JOURNAL*.

RUPTURE OF SYMPHYSIS PUBIS DURING PARTURITION.

DR. GEORGE A. HIMMELSACH read a paper on this topic. He said that this accident is a rare occurrence, and is said to be dependent on a previous softening of the joint; and also that it is probable that rupture of this joint occurs much more frequently in forceps deliveries than is generally supposed. Rupture of the right sacroiliac articulation also occurs, but it is rare for both sacroiliac articulations to rupture at the same time. In his own case, there has been no accompanying crack or snap, or the occurrence of sudden pain to indicate that it has taken place. Under such circumstances the occurrence of this lesion is made apparent when the patient gets out of bed, because of her peculiar gait. Union of the joint sometimes takes place in ten or fifteen days, but often several weeks are required. When this accident is known to have occurred, it is important to redouble antiseptic and aseptic precautions, as Dührssen has reported thirty-three cases in which there has been suppuration of the joint. The best treatment consists in the application of a broad binder, extending from below the breasts to one-third down the thigh. In his own case it was nearly two months before the patient could walk, and then she could do so only with difficulty. When seen five months later her gait was even, but she still complained of pain in the region of the symphysis and of the right sacroiliac synchondrosis.

CASE OF PERFORATING GASTRIC ULCER.

DR. ALLEN A. JONES reported this case. His paper will appear in *THE JOURNAL*.

DR. DE LANCEY ROCHESTER expressed surprise that this ulcer existed without the presence of blood in the stomach washings, or in the vomited matter, and with the normal amount of free hydrochloric acid. He said that the case was interesting, and most unusual.

DR. WILLIAM H. THORNTON said that having been called to a severe case of hematemesis from gastric ulcer directly after a medical meeting in which a case had been reported of hemorrhage from the bladder checked by an injection of a solution of antipyrin, it occurred to him that it would be desirable to try the method for the control of gastric hemorrhage. He accordingly gave a dose of ten grains, and repeated it immediately after an attack of vomiting. The result in this case, and in several others, was very satisfactory.

THE NEW CHARTER OF THE STATE MEDICAL ASSOCIATION.

DR. E. D. FERBUSEN, president of the New York State Medical Association, called the attention of the Branch to the fact that the State Association has been recently granted a charter, under which it will probably be found expedient to organize subordinate county associations. He said that the State Association is the only bond between the medical profession of the State of New York and the AMERICAN MEDICAL ASSOCIATION. The lines have been drawing more and more closely for a number of years past, and delectation, and registration in, the AMERICAN MEDICAL ASSOCIATION are now accorded only to those who are in direct affiliation with that association.

DR. FREDERICK HOLME WIGGINS, New York City, having been called on by the President for remarks and suggestions concerning the work of the State Association, spoke of the charter and the matter of reorganization. He said that while the tendency of modern times is for every line of business to organize, the medical profession has afforded a notable exception to this rule regarding co-operation. He first became impressed with the evil of this lack of co-operation by the attitude of the Legislature toward the medical profession in the matter of the abuse of medical charity. While a resident of Connecticut he was a member of the Connecticut Medical Society, and has been impressed with the superiority of their or-

ganization. Membership in the county organization brought membership in the State Society, and one set of dues was paid. The county associations sent delegates in proportion of one to ten to the State Society, and it is probable that this will be the plan of organization in the reconstituted New York State Medical Association.

In regard to the publication of the Medical Directory, he explained that it should be controlled by the medical profession in order to keep out objectionable advertisements, because it is important to every physician to have full information regarding himself in the directory, and to have the confidence of all it must be understood that this information is unbiased and trustworthy. In reference to the object of the Association, he said that it is the intention to make the new New York State Medical Association something more than a dignified scientific body, by taking up the matter of protecting physicians in the state against malpractice suits. It is not the purpose to form a trades' union, or to fight the public, but simply to stand together for the right.

By a unanimous vote the Fourth Branch decided to become a branch association of the newly organized State Association, and steps were taken to organize in the near future a subordinate county association in Erie County.

Cleveland Medical Society.

May 11, 1900.

First Vice-President, Dr. J. B. McGee, in the Chair. This meeting was devoted to the exhibition of pathologic specimens.

PATHOLOGIC SPECIMENS.

DR. C. A. HAMANN presented some. The first was an inferior maxilla on which, on the lingual surface, opposite the first bicuspid, there was on each side an exostosis. Being symmetric they possess possibly some morphologic significance. He was unable to say what they were. He also presented a specimen of humerus showing the supracondylar process. The brachial artery, together with the median nerve, passes under it. It is the representative of a foramen present in some of the lower animals.

He showed a biceps muscle with four heads, three of which arise from the coracoid process, and presented another biceps which was double throughout its entire extent. He also exhibited a specimen of congenital dilation of the ileum at the position of the ileocecal valve.

A rare anomaly of the aorta was presented. In this specimen the right subclavian artery arises from the arch of the aorta beyond the origin of the left and passes behind the trachea and esophagus. This anomaly is due to the persistence of the right aorta.

He showed several mounted specimens of vermiform appendices and pointed out the fact that they demonstrate that it is quite impossible to feel the normal appendix by palpation. One appendix is large, curved, and has a mesentery extending to its tip, another is concealed in the postcecal fossa, and another adherent to the cecum through its entire extent, but the adhesions were normal and not pathologic.

DR. W. T. HOWARD presented the specimen of a heart and aorta from a man who was admitted to the Lakeside Hospital complaining of shortness of breath, indigestion and edema of his extremities. The clinical diagnosis was arteriosclerosis with chronic nephritis with cardiac hypertrophy. The next day the man was found dead in bed. A large amount of blood and some clots were found in the pericardium, and 4 cm. above the aortic valve there was a rupture of the intima and media, and there was a dissecting aneurysm running the entire length of the aorta. How long this had existed could not be said, nor could the cause of death be determined.

DR. R. F. WEIR showed two specimens of pelvic tumor in which twisting of the pedicle had resulted in infarction of the tumor. He also showed specimens of papillocystomata of the ovary, which he thought were formed from the germinal epithelium.

DR. W. T. HOWARD said that in most cases of cystoma the follicle is the point of origin. He was very skeptical about the

adhesions often found about the ovary and very greatly doubted whether they did any real damage.

DR. R. F. WEIR also presented a specimen of cancer of the cervix and one of uterine fibroid associated with fibroid of the ovary. In closing, he noted that physicians have been very much impressed with the fact that in practically every instance of pelvic inflammatory disease, from whatever cause, they found in the blood large numbers of eosinophiles. Their significance has not yet been determined.

National Confederation of State Medical Examining and Licensing Boards.

Tenth annual meeting, Atlantic City, N. J., June 4, 1900.

WORK ACCOMPLISHED UNDER THE KENTUCKY LAW.

DR. J. N. McCORMICK, M.D., Bowling Green, Ky., used this as the subject of his presidential address, and said that to be really profitable, annual conferences like this should partake largely of the nature of experience meetings, where members may recount in sorrow to sympathetic ears insurmountable difficulties met or defeat suffered in their respective states, or, amid applause and congratulation, announce and explain progress in new legislation or court decisions, or growth in public sentiment in favor of scientific medicine as against the various forms of quackery and imposture. They might also be termed mile-stones on the highway of our advancement, about which representatives of all the states may gather temporarily to compare notes, and then return to the position each has really attained in the march, a few in the vanguard, with quackery under control, the majority, composing the main column, where charlatans and scientific physicians have equal legal recognition, and a considerable rear guard and straggling force, where charlatans and fads are exalted and the scientific physician is in constant danger from the undertow.

"I have been not a little amused in reading the self-complacent publications upon medical requirements issued by the Board of Regents of the State of New York, under whose benign authority quackery in all of its grosser forms flaunts itself with an effrontery seldom seen elsewhere, with the *Bulletin of the American Academy of Medicine*, which constitutes our medical aristocracy, or professional 'four hundred,' most of whose members come from states where an honest Doctor, if he behaves himself, stands nearly as well before the law as a 'Christian scientist' or an osteopath—I say I have been not a little amused to find that the latest revised, improved and duly verified editions of these publications put their own quack-ridden and fad-ridden states in classes 'A' and 'B,' chiefly 'A' or 'AA,' as to requirements, while Kentucky, within whose borders an itinerant or advertising doctor of any kind has not dared to show his face for years, is put down in class 'C,' and away down at the bottom at that.

"Our law is very like those of most of the other states, and the good results attained have come from the method, or rather the methods, of administering it. The law leaves much to the discretion of the Board, which means that it is flexible and easily adapted to varying class and individual conditions. The preamble to the law sets forth prominently that its purpose is to protect the people from ignorant and unscrupulous charlatans, and it is administered with this sole aim in view. Accepting the opinion of the American Medical College Association that it takes four years of school training to make a safe doctor out of a properly educated boy, we have adopted this standard, and all schools whose graduates are to practice in Kentucky are required to conform to it. We aided cheerfully in forcing this measure of reform upon our own schools, to their great hardship and serious financial loss, and we propose to hew to this line, let the chips and angry remonstrances come from and fall where they may.

"In addition, recognizing the diploma as being only the applicant's pedigree, we investigate the qualities and character of the individual. We want not only smart fellows who can pass a technical examination, but above this, and, as we conceive, more important than even this, our law contemplates and provides for honest men, who will deal fairly and squarely with their patients. As we understand it the State has no authority to inquire as to names or methods of practice, or

whether large or small doses, or no doses at all shall be used. But it can require, it should require, and we do require, whether a doctor calls himself an allopath, homeopath, osteopath, eclectic, or belongs to "the no-name series," not only that he be competent in his fundamental training, but that he shall be honest in his business methods.

"Nor does our supervision stop with the issuance of a license. Each applicant has sworn that he will practice honest and legitimate medicine—that he will not become an itinerant or an advertiser. Then we have a medical referee in each county as a shepherd for his flock. A deviation from honest methods is promptly reported and brings a letter of kindly admonition from the central office, which nearly always has the desired effect. All this is done quietly, kindly, in the interest of the individual as well as the profession and public, and to this constant attention to personal elements and seemingly unimportant details we attribute much of the effectiveness of our law.

"As a result of our established reputation for fair dealing with all classes and systems of medicine, every doctor in the state, regular, homeopathic and eclectic, worthy of the name, as well as most of our intelligent people and leading newspapers, are friends and supporters of our law. If adverse legislation is proposed they fly to its defense they importune their representatives and make their lives a burden until they promise to stand by the right, and then they see that they never get back as members if they fail to keep their promise. In a word, our law, being founded upon the right of the state to require training and honesty in those who desire to enter this life-saving profession, and being patiently and untiringly executed with an eye to these results alone, is a practical success in which the profession feels a justifiable pride.

"Much has been said at meetings and in the journals about the importance of reciprocity between the various states in the matter of medical license. From what has already been said you can readily understand why we can not seriously consider such propositions from other states under present conditions. From Maine to California, from the lakes to the Gulf, in all the centers of population, we find the 'Copelands,' the 'K. & K.'s' *et id genus omne*, who were run out of our state after tedious litigation many years ago. We do not want them back, and, therefore, can not afford to recognize state certificates from Pennsylvania, New York, Illinois, or other states which give them the right to practice, and where they flourish like the green bay tree.

"We still look upon our work as in the experimental stage. It took four hundred years of constant struggle for our English ancestors and brethren to reach their present standards, which are yet far from ideal. For eighteen years after the enactment of our first law we made little more progress than did Sisyphus with his rock. All that we claim now is that we have laid broad foundations upon which those who come after us may safely build."

CO-OPERATION OF THE MEDICAL PROFESSION WITH THE NATIONAL CONFEDERATION OF STATE MEDICAL EXAMINING AND LICENSING BOARDS IN ESTABLISHING INTERSTATE RECIPROcity FOR THE LICENSE TO PRACTICE MEDICINE.

DR. EMIL AMBERG, Detroit, Mich., advanced the idea that if a majority of the members of the medical profession of the United States should unite in demanding reciprocity, it would be granted. In order to obtain true reciprocity it is necessary to demand greater uniformity in medical education. This can be accomplished only by reducing the number of medical schools. Private institutions of this nature are a mistake, and medical education should be under the care of the government. The lay press of the country can be depended on to second improvements in medical laws, if they are convinced of their real utility for the general public. This was the experience in Michigan when, in the absence of any law for the regulation of medical practice, the lay press took up the battle of the regular practitioners for the protection of the people from quacks. Experience teaches that it requires great efforts on the part of the medical profession to educate the lawmakers and the public, in order to convince them of the usefulness and

necessity of changes. We are just entering on the hygienic century. America will take her proper place in the great advance in medicine that is about to come only if her practitioners really possess the merit they are supposed to have.

DR. CHARLES A. GROVES, East Orange, N. J., followed with a paper entitled, "Associate Medical Examining Boards." The author spoke in favor of associate as opposed to separate examining boards, on the ground of simplicity, effectiveness, and general adaptability to the needs of the work.

DR. HENRY BEATES, JR., Philadelphia, gave a brief review of the medical curriculum of the United States with special reference to its defects, and indicated modifications, as demonstrated by the state medical examinations of Pennsylvania. What is essential is, first, an adequate curriculum, properly administered. Secondly, only such students should be permitted to matriculate as are beyond all question possessed of proper preparatory education. These essentials will exist only when the medical college reigns supreme as the legitimate center of medical culture and is equipped with properly trained professors, perfected laboratories with apparatus, and competent instructors, who are men of merit, and when the public is educated to the point of being able to recognize real worth, and refuses to any longer tolerate the gilded farce which has determined the existence of medical legislation.

RECIPROCIITY IN MEDICAL UNIFORMITY.

DR. W. A. SPURGEON, Muncie, Ind., offered a resolution providing for a committee to suggest ways and means for the establishment of interstate reciprocity in licensure for the practice of medicine and for uniformity in medical education.

In the discussion, DR. WILLIAM WARREN POTTER, Buffalo, N. Y., said that the Confederation is the only one of the many organizations, the members of which were officially recognized by state governments. It is important not to derogate from their official positions. The question of advising legislatures as to enacting reciprocity laws should come last. Uniformity in medical education is at present the one thing to be sought. When this is secured, reciprocity will naturally follow. Uniformity in medical education can be advanced by the Confederation of Examining Boards and that of the medical colleges working together. Conference is needed, not hasty action. The motto should therefore be "*festina lente*."

DR. JAMES A. EGAN, Springfield, Ill., thinks it is useless to hope for uniformity in legislation. It is impossible to convince legislatures of the crying needs of their own state. A law to regulate the practice of medicine comes back from the legislature so mutilated and amended as to be scarcely recognizable. Under the existing laws much can be done toward remedying the present situation. He stated that the Illinois State Board of Health has passed a resolution to accept the licenses of other states that comply with their regulations, and in so doing the Attorney-General says that the Board has not gone beyond its powers. Other State Boards can follow this example. The courts can be depended on to favor public utility in the interpretation of the law, and reciprocity is distinctly of this character.

DR. E. B. HARVEY, Boston, said that it is useless to hope that any committee can influence legislatures to give up their individuality. States will not accept the standards of other states. There is often no reciprocity even in the public schools of different cities of the same state. It is a chimera to look for reciprocity. Uniformity in medical legislation should be the watchword.

DR. J. N. McCORMACK, Bowling Green, Ky., said that the discussion on reciprocity reminded him of a country inn with screens to keep out flies, which really kept them in. Many states seemed willing to have reciprocity so as to get rid of their surplus medical men. Each state should keep down quackery by stringent laws. What is needed most at this time is a committee that will report and weed out "paper" colleges. Information as to the status of such colleges would be most welcome to medical examining boards and be very helpful.

The following committee on interstate reciprocity and uniform medical legislation was appointed: Dr. W. A. Spurgeon, Muncie, Ind., Chairman; Dr. Gardner T. Swarts, Providence, R. I.; Dr. Emil Amberg, Detroit, Mich., Secretary; Dr. Augustus Korndorfer, Philadelphia, and Dr. E. B. Harvey, Boston.

DR. N. R. COLEMAN, of Columbus, Ohio, discussed the matter of the steps to be taken to establish a uniform standard of preliminary requirements in accordance with the recommendations contained in the report of the committee on minimum standards, adopted June 5, 1899. The subject was further discussed by Drs. William Warren Potter, Buffalo, and Augustus Korndorfer, Philadelphia.

The officers of the National Confederation of State Medical Examining and Licensing Boards for the ensuing year are as follows: President, Dr. J. N. McCormack, Bowling Green, Ky.; vice-presidents, Dr. N. R. Coleman, Columbus, O., and Dr. James A. Egan, Springfield, Ill.; secretary-treasurer, Dr. A. Walter Suiter, Herkimer, N. Y.

Philadelphia Pathological Society.

May 10, 1900.

ALVEOLAR SARCOMA OF THE CHOROID.

DRS. WM. CAMPBELL POSEY and E. A. SHUMWAY reported a case and presented specimens from a patient aged 70 years. Three months previously the patient had received a blow in the region of the affected eye, since which there has been a history of pain, with gradual failure of eyesight until total loss of vision occurred. The conjunctiva showed bogginess, the anterior chamber was reduced in size, the lens cataractous, the fundus normal. An intraocular growth was suspected and an enucleation was done. The healing was prompt, but death occurred nine weeks later, probably from metastasis to the liver and brain. After enucleation the eyeball was placed in Müller's fluid for many months, and later was frozen in ice and salt, and finally mounted in glycerin-jelly. Another specimen was stained with Weigert's nerve-sheath stain, and with eosin and hematoxylin. On examination the retina was found detached, the subretinal space occupied by an endothelial growth. Changes were also found in the cornea, due to pressure and edema. The epithelial tissues were edematous, the iris pressed against the cornea, certain areas of which appeared atrophic. The anterior capsule of the lens contained pigment cells. The ciliary body was flattened and atrophic. The choroid showed round-celled infiltration and proliferation of endothelial cells of the blood-vessels. The tumor essentially consisted of endothelial cells separated by a connective-tissue stroma into distinct acini with pigment cells with round and irregular nuclei. Some of the cells were three times the normal size. The retina was detached and degenerated. The optic nerve did not seem to be infiltrated by the cellular growth. The growth resembled in some respects a similar specimen formerly presented before the Society by Drs. deSchweinitz and Steele. As the cells showed a proliferation of the endothelial type it could not be properly looked upon as a carcinoma.

DR. SIMON FLEXNER spoke of the areas of degeneration present, which he thought might be ascribed to a colloid or hyaline change. He had seen a similar case in which death also occurred. In this the cells were of a distinct endothelial type and there had been a hyaline or colloid change within the protoplasm of the affected cells.

CARCINOMA OF ILLIUM.

DRS. SIMON FLEXNER and A. O. J. KELLY presented a specimen of carcinoma of the ilium. The patient was a man 44 years of age, who had given a history of having had numerous bilious attacks, attended by obstinate constipation. One year previously he had taken cold, and later complained of pain in the left chest anteriorly, in the region of the ninth costal cartilage. This pain was intermittent and was accompanied by tenderness. Three months ago he began to have pain in the region of the epigastrium. On examining the chests the physical signs revealed consolidation at the right apex. The patient had continually lost flesh. Two weeks ago he became obstinately constipated, and this was later attended by visible peristalsis. The diagnosis of intestinal obstruction was made.

Dr. Flexner detailed the pathologic findings as follows: A tumor the size of a hen's egg was found at the lower end of the ilium. The region of bowel affected showed a considerable degree of hypertrophy, but the surrounding parts otherwise appeared to be perfectly healthy. The tumor growth extended to

the iliocecal valve. In the main body of the tumor an area of ulceration was found. The orifice of the cecum admitted a lead pencil. This case is one in which a carcinomatous growth was circumscribed to a small area of the bowel without involvement of the neighboring glands, and would doubtless have been amenable to operative procedures if its real nature had been known in time.

Cincinnati Academy of Medicine.

SPLENOMYEOGENOUS LEUKEMIA.

DR. MARK BROWN presented a patient with splenomyelogenous leukemia, shown last fall. (See *THE JOURNAL*, vol. xxxii, p. 794.) During the last six months the spleen has continued to increase in size until it is now about ten inches beyond the median line of the abdomen and inferiorly well below the iliac crest. He has suffered principally from a severe dragging abdominal pain. The blood shows over 4,000,000 red corpuscles and something over 200,000 white ones; while the differential count does not differ materially from that of last fall. He has been taking arsenic—Fowler's solution—in the interim, and has become very susceptible to its influence, toxic symptoms often becoming manifest after a few doses. He has had no hemorrhage from any of the mucous membranes during the entire course of his disease. Ophthalmoscopic examination was negative, right and left, aside from marked pallor of reflex.

HEREDITARY SYPHILIS.

DR. MEYER HEIDINGSFELD presented two patients—mother and daughter, the latter aged 13. The mother is afflicted with a typical serpiginous pigmented syphilitic affecting the legs, the daughter, presenting teeth, which, taken in connection with the mother's condition, caused him to regard it as unmistakable evidence of hereditary syphilis. He could obtain no history of specific disease from either the woman or her husband.

RUPTURE OF COAT OF CAROTID.

DR. H. T. GAN presented a patient, male, aged about 60 years, who had met with an accident, involving the region of the neck on the left side. He had developed, as a result, a most pronounced thrill in the region of the carotid artery, with a long buzzing murmur on auscultation. On the right side was a similar condition of affairs but less pronounced. Over the artery ring was a slight systolic murmur. The diagnosis was a rupture of the internal coat of the carotid artery; and also an arteriovenous aneurysm.

OVARIAN ABSCESS.

DR. C. D. PALMER read an account of an operation on an ovarian abscess on the right side. On examining the left appendage, he found pyosalpinx, but before complete removal could be effected, the woman's condition became such that it was necessary to discontinue the operation. She recovered, however.

TUBAL PREGNANCY.

DR. R. B. HALL reported a case of ruptured tubal pregnancy on the right side, with pyosalpinx on the left. An operation was performed and the patient recovered.

New York County Medical Association.

Special Meeting, May 11, 1900.

Dr. Parker Symes, First Vice-President, in the Chair.

This session was called to consider a communication from the New York State Medical Association inviting the county association to become a subordinate county organization of the state association, in accordance with the provisions of the newly-acquired charter of that association.

DR. FREDERICK HOLME WIGGIN moved the adoption of the following resolutions:

WHEREAS, The New York State Medical Association has made and constituted the New York County Medical Association a subordinate county association of said state association; and

WHEREAS, The New York State Medical Association has requested that our county medical association ratify such action by resolution: Be it

Resolved, That, at a duly called special meeting of the New York County Medical Association, held at the New York Academy of Medicine, No. 17 West Forty-third Street, in the County of New York, New York State, on the 11th day of May, 1900, said New York Medical Association hereby accepts and ratifies the action of the New York State Medical Association, and by virtue hereof agrees to obey the laws, rules and regulations governing such state and subordinate county associations, and to become a subordinate county association of the New York State Medical Association in all respects; and he it further

Resolved, That a certified copy of the resolutions be forwarded to the Secretary of the New York State Medical Association.

Dr. Wiggin, in speaking to the motion, said that his efforts to correct the abuse of medical charity had early acquainted him with the general lack of co-operation among the members of the medical profession and the evils arising therefrom. This led him to desire better organization, and in looking for this, he became impressed with the good features of the plan on which the Connecticut Medical Society is organized, and it is along this line that it is proposed to build up the reconstituted New York State Medical Association. The plan of organization has not been definitely settled, but among the features which, in time, it is expected will be introduced is that of affording to the members protection against unjust suits for malpractice. Another advantage of such membership is that the medical directory will be furnished free. Such a directory is useful to country physicians, as well as city practitioners, as it enables the latter to direct their patients to proper medical advisers while sojourning in the country. It should be remembered that a work of this kind can not be kept free from objectionable advertisements and other undesirable features unless published through the co-operation of the profession.

DR. E. ELIOT HARRIS explained that the proposed re-organization means greater strength and is for the best interests of the general public as well as for the medical profession. A united profession is a necessity when it comes to influencing legislation.

The question at issue was then put to vote, with the result that the Association unanimously adopted the resolution as read.

New York County Medical Association.

New York City, May 21, 1900.

Frederick Holme Wiggin, M.D., president.

SARCOMA CUTIS.

DR. WILLIAM S. GOTTHEIL presented two cases of this disease. The first was of the typical variety known as multiple pigment sarcoma of Kaposi, and had existed for about six years. It had improved somewhat under injections of arsenic. The second case was also of long duration. Both patients were men.

SYMPOSIUM ON ORGANOTHERAPY.

THERAPEUTICS OF SUPRARENAL CAPSULE.

DR. WILLIAM H. BATES opened this symposium with a consideration of this topic. He said that extensive experience has taught him that sterile solutions of this extract are harmless, and that the dose can be varied almost indefinitely without ill effect. Its chief action is as a tonic to the muscular system. In preparing it, one part of the dried extract should be boiled with ten parts of a saturated solution of boric acid, and then filtered and boiled once more in the permanent receptacle. He has obtained most excellent results with this extract in acute conjunctivitis, and even in gonorrhoeal ophthalmia. Chronic rhinitis is, at least, temporarily benefited by it, and nasal operations can be performed bloodlessly by its aid. He looks on it as almost a specific for hay-fever, and other observers have reported benefit from its use in edema of the glottis and in laryngeal phthisis.

THERAPEUTICS OF THE PITUITARY BODY.

DR. WILLIAM M. LESZYNSKY read a paper on this subject. He said that tablets containing the equivalent of eight grains of the fresh pituitary gland are on the market, but the results of the treatment of acromegaly by the use of this remedy has been so contradictory as to be valueless. In two cases of this affection, under his own observation, these pituitary tablets

were administered daily for several months, but without any appreciable effect—indeed, there is evidence that the hypophysis grew larger during this period. This alleged remedy has only been used empirically; it has proved inefficacious and there are not, in his opinion, rational grounds for its use.

THERAPEUTICS OF THE THYROID GLAND.

DR. HERMANN M. BIGGS considered this topic. He said that thyroid extract has been chiefly used in the following conditions: 1, exophthalmic goiter; 2, psoriasis, eczema, lupus and certain other diseases of the skin; 3, goiter, 4, certain forms of insanity; 5, obesity; 6, retarded development in children; 7, tetany, and 8, in a number of blood disorders, such as chlorosis, anemia, syphilis and arteriosclerosis. He has employed this extract in two cases of Graves' disease, and in both with aggravation of the symptoms. Our present knowledge does not admit of its use in skin affections except in a purely empirical manner. Its effect on lupus is similar to that of tuberculin. The thyroid extract has been administered with encouraging results in some cases of mental derangement appearing about the time of the menopause, and in some of stuporous insanity. Except in fibroid goiters, the administration of this usually causes a diminution in the size of the goiter. In certain obese individuals the rapid loss of flesh under the use of thyroid extract is quite remarkable. It is desirable to begin with small doses, and to carefully watch the effect. It has also acted well in a few children showing retarded development without cretinism, but the most brilliant results have been, of course, secured in cases of sporadic cretinism. The chemistry of the thyroid gland was still but little understood.

THERAPEUTICS OF THE THYMUS GLAND.

DR. SOLOMON SOLIS-COHEN, of Philadelphia, read a paper on this subject, to be published in THE JOURNAL.

THERAPEUTICS OF THE MAMMARY AND PAROTID GLAND.

DR. JOHN B. SHOBER, of Philadelphia, read a paper with this title. It will appear in THE JOURNAL.

DR. OLIVER T. OSBORNE, of the Yale Medical School, opened the general discussion. He expressed the belief that exophthalmic goiter is the result of hypersecretion of the thyroid gland, as the symptoms are almost identical with those of over thyroid feeding. Much stress has been laid on the size of the gland in this connection, but it is not difficult to conceive of all degrees of secretory activity, irrespective of the size of the gland. It is worthy of note that this gland usually begins to undergo atrophy at the age at which most people normally grow stout, and that women constitute about 80 per cent. of all the cases of Graves' thyroid disease and of myxedema. This preponderance among women might possibly be explained, in part, by the hypersecretion of the thyroid taking place at frequent intervals in the life of the average woman, i. e., at the menstrual periods and during pregnancy. It has been noted that the thyroid treatment of obesity was most successful in persons who became stout between 40 and 50 years of age. From our knowledge of the physiology of the thyroid gland, and of the very small quantity of thyroid secretion distributed to the system daily, it seems proper to criticise the large doses of thyroid extract that have been given. He is disposed to believe that thyroid extract would do the most good in those cases of eczema developing in old age. The thymus gland should prove useful in all cases in which nuclein is indicated. The speaker said that two or three years ago he had propounded the theory that gigantism was the result of hypersecretion of the pituitary, and that acromegaly was due to perversion of this pituitary secretion. Extracts from the infundibular portion of the pituitary body are capable of increasing the blood-pressure, while extracts from the hypophysis have an action similar to thyroid. He thinks there is a distinct controlling influence exerted on acromegaly by the administration of extract of the pituitary body. Experiments made in the laboratory at Yale demonstrated that the blood-pressure is not raised by giving suprarenal extract by the mouth or hypodermically.

DR. FRANCIS J. QUINLAN extolled the virtues of suprarenal extract, which he characterized as a remedy second only to cocaine. It is exceedingly useful in acute coryza, and in nasal surgery generally, possessing the very great advantage of being free from bad after-effects, and not giving rise to a drug habit.

Philadelphia Pathological Society.

May 25, 1900.

DR. A. A. ESHNER presented the following specimens: 1. Dilatation of the heart, valvular disease and perisplenitis. 2. Cerebral hemorrhage and ruptured aortic leaflet.

PNEUMONOMYCOSIS.

DRS. L. PEARSON and M. P. RAVENEL presented specimens from a case of pneumonomycosis due to the *Aspergillus fumigatus*. Of this disease, eighty cases have occurred in man, the lower animals and birds. The first one occurring among birds was reported in 1815; and the first in man in 1842. Virchow later took up this study, with valuable results, and Osler several years ago reported a case to this Society, in which the *Aspergillus fumigatus* had been found in the sputum of a man. In 1897, Raynaud proved that the disease was a primary one; and it has been found that birds, such as pigeons, doubtless owing to the high temperature of the blood, are easily affected by the disease. Two types of the disease are known, one resembling bronchitis, and the other tuberculosis. The case herewith reported occurred in a cow 6 years of age, and since the animal had always lived on one farm, it was doubtless a primary infection. She had been failing for two months, and it was thought that tuberculosis was present, but no reaction to tuberculin had been obtained. The cough later became troublesome, and death ensued. At the autopsy, nodular growths in the lungs had been found, in some respects resembling hemorrhages. On rubbing a small piece of one of these with glycerin, it was found to contain myriads of the mycelial threads. Pure growth had been obtained on a potato and some of it had been inoculated into a rabbit, causing death within forty-eight hours. This mould grows at a higher temperature than any other form of *aspergillus*, and since it does not develop toxins or antitoxins, doubtless causes death by acting as a mechanical irritant. The microscopic examination shows cellular infiltration with connective-tissue cells, red blood-corpuscles, and large numbers of mycelial threads extending to the walls of the bronchi, and in many instances, entirely blocking them. Peribronchitis and arteritis are present, and also large areas of emphysema.

DR. SIMON FLEXNER stated that several years ago he had examined a pseudomembrane taken from the nose of a man, and found that the appearance corresponded with the findings described by Drs. Pearson and Ravenel. He believed the condition to be due to the *Aspergillus fumigatus*.

DR. NAPOLEON BOSTON spoke of the changes in the urine produced by the presence of this mould, in that a formation resembling a pseudomembrane would at times occur, which in some respects resembled the product found on normal urine.

BACILLI OF PLAGUE.

DR. JOSEPH MCFARLAND presented cultures and tissue preparations showing plague bacilli. From certain descriptions given, the bacilli of plague described by Yersin and Kitasato differed and it was probable that the two were dissimilar organisms. The bacillus of plague is not distinctly morphologic. Usually it is a short bacillus resembling a coccus, occurring singly or sometimes arranged in chains of six or seven. They grow well on agar-agar, gelatin, bouillon and aseptic fluid. In the hanging-drop it is found that they do not change form. The reaction of the culture-media, as shown by phenolphthalein, does not change and it does not coagulate milk. No growth occurs on potato, and the best temperature for it is that of the human body. The bacillus has been found to live on dried threads for a period of twenty days. The micro-organism is fatal to rabbits, producing a peculiar condition of the thymus gland. No effect is produced on cats. The bacillus rapidly becomes attenuated on artificial culture-media regaining its virulence by being passed back through certain animals.

DR. SIMON FLEXNER spoke of the morbid anatomy which he had seen in certain cases of plague in Hongkong. One being acquainted with the disease could recognize it by these changes, especially if of the glandular variety. In these enlarged glands the occurrence of hemorrhage is noted. Even in the pneumonic type they are prone to occur.

PAPILLOMATOSIS OF THE EPITHELIOMA.

DR. A. O. J. KELLY presented a specimen of papillomatous epithelioma of the pelvis of the kidney obtained from a woman

68 years of age who had suffered with vague symptoms including attacks of hematuria. In a search through the literature on similar conditions it had been found that renal calculi had usually been present.

CIRRHOSIS OF LIVER.

DR. SIMON FLEXXNER presented microscopic sections showing the nature of the new tissue in this affection and spoke of its distribution. The work had for the most part been done by students under his direction at the University of Pennsylvania. The findings proved that the new growth corresponded histologically with the tissues occurring in the liver. Sections from cases of hypertrophic and atrophic cirrhosis of liver were shown.

Philadelphia Pediatric Society.

President, Dr. Alfred Stengel, in the chair.

MENINGOCELE OF OCCIPITAL BONE.

DR. JOSEPH SAILER—by invitation—presented a case of supposed meningocele of the occipital bone. The patient was a girl 3 years of age, who had in December last suffered from a fall down stairs. For some time she appeared to be quite drowsy, and her face became livid, then soon she was as well as ever. A month after the fall strabismus developed; nausea and vomiting occurred, and in a short time the gait became ataxic. There was a slight inco-ordination of movement, but choked disc was not present. Three weeks ago a small round tumor developed in the region of the occipital protuberance, and was smooth and fluctuated. Pulsation was also present; and on pressing down firmly, an irregular orifice was apparent in the occipital bone. On aspirating the tumor its contents was found to be blood; a fact that might lead one to believe that the tumor was some form of aneurysm.

DR. REYNOLDS WILSON stated that one thing which might aid in differentiating this tumor from one of congenital origin is the fact that its site was below the occipital protuberance, while if it were of congenital origin, the site would be slightly above.

DR. J. H. JOPSON had examined the tumor and believed that it communicated with the cranial cavity.

ACUTE ADENITIS.

DR. ALFRED HAND, JR., read a paper and reported several cases of this; and also made some remarks on the terminology and treatment. The first case was one in which a girl, 21 months old, had suffered from enlargement of the cervical glands, and irregular fever—102.8 F. to normal on the same day. There had not been any rash. On the fifth day, cylindroids were found in large number. Two other cases were reported; and in all these, the drug which seemed of greatest value was pure ichthyol, applied twice daily.

DR. J. P. CROZER GRIFFITH reported an epidemic of doubtful nature which had attacked two households. There had been swelling of the cervical glands with fever—in one instance rising to 104 F.—together with nausea and vomiting. In the case of one patient, as there was at the time an epidemic of la grippe, he was under the impression that the cause of the disease was influenza with glandular manifestations.

DR. A. G. ROUSSEL had several years ago investigated the bacteria found in the throat in these cases of glandular fever and found that the principal form was streptococci, rather than staphylococci.

DR. S. McC. HAMILL believes that the real cause of the malady is as yet quite unknown. He relates one case in which a doughy feeling had been present over the affected gland, leading one to believe that it might be diphtheria. Cultures showed both staphylococci and streptococci.

GRAVEL IN A CHILD.

DR. H. D. MARCUS reported a case of gravel in a child 3 years of age, who had been suffering since last year with increased frequency of micturition, scanty urine and gastric disturbances. Its real nature had been determined by means of the sound.

BACILLUS PYOCYANEUS.

DR. W. R. NICHOLSON reported a case of infection by this bacillus. He stated that at one time cases of hemorrhagic diathesis seen in children were supposed to be due to syphilis,

but later were believed to be due to septic infection. In some features they resemble septic infection without the splenic enlargement. The mortality is high—over 70 per cent. A case was reported in which a child, on the sixteenth day after birth, developed hemorrhages affecting the mucous membrane of the mouth, and also from the bowel. The umbilical cord had healed normally, but after the hemorrhages began quite a large extravasation of blood developed around the site of the cord attachment. Death occurred. No ulcers could be found in the intestines. The pancreas showed a considerable degree of hyperplasia with thickening of blood-vessel walls. The thymus showed slight degeneration. Cultures from the bile and tissues of the liver showed the bacillus pyocyaneus. The bacillus lactis aerogenes and staphylococcus albus were also found widely distributed.

New York Academy of Medicine.

May 17, 1900.

William H. Thompson, M.D., President.

POISONOUS SNAKES AND SNAKE POISON, WITH DEMONSTRATIONS.

DR. GUSTAV LANGMANN read a paper on this subject. He described the teeth and the poison fangs, and told of the poison glands, which are triangular and the homologues of the parotids. The secretion can be retained at will, if need be for months. Each species has a specific smell for the poison; in many, it is "mousy." Until recently it has been supposed that the effect of the poison was dependent on the virulent bacteria contained in the secretion, but cultures made in different media have given negative results. The first chemical examination of the poison was made with the viperidae, and the active principle received the name of viperine. Dr. S. Weir Mitchell, in 1883, published the results of his investigations. He found two albuminoids, one dializable and coagulable by heat; the other not. Dr. Langmann thinks it reasonable to suppose that the active principles are albuminoses. Different poisons contain different proportions of peptone and globulin; the former causes some local edema with convulsions, and finally paralysis of the respiratory centers, while the latter, on the contrary, excites local reaction with hemorrhages around the point of injection. Experience has shown that the intensity of the hemorrhages and paralyses correspond to the hydrolysis of the albuminoses. If instant death occurs, it is due to thrombosis. The first effects of the cobra bite are burning pain and edema; then appear vertigo, weakness of the limbs, paraplegia, ptosis, paralysis of the tongue and epiglottis, and inability to speak. The pulse is weak, and the respirations slow and labored. Slight convulsions occur toward the last. The effects of the rattlesnake bite show themselves in hemorrhagic disturbances and bloody effusions from all the mucous membranes, and the constitutional disturbance can be noted within thirteen minutes after the injection. After a temporary increase in the reflexes, tetanus and paresis supervene, with paraplegia. Death usually occurs in twelve hours, but if one survives the paralysis, septic fever may develop. Autopsies on those dying from snake-bites show the serous membranes echymotic throughout, especially the peritoneum. The blood is liquid and coagulates very slowly. If death occurs in a few minutes, it is from general thrombosis; if within twenty-four hours, it is from paralysis of the respiratory centers; and if after days or weeks, it is probably from sepsis. Weir Mitchell at one time gave the mortality from the bite of the cobra as 25 per cent., at another, stated that it was not more than 12; while in Australia, it is said to be about 7. The objects of the treatment of snake-bites are: 1. To prevent the absorption of the poison; 2, to destroy or neutralize its effects; 3, to accelerate its elimination; 4, to treat the symptoms. The ligature should be applied promptly and tightly. Sucking the wound with the lips or with glass-cups is of doubtful utility; and if employed, should be preceded by free scarification, as it is doubtful if the poison can be neutralized at the point of its introduction. In view of the fact that the kidneys are implicated, measures directed toward increasing the activity of these organs do not seem to be indicated. Antivenene, he considers the only reliable antidote to the effects of snake-poison; full protection being afforded if 5 to 20 c.c. are injected within 1½ hours after receiving

the bite. He believes that its action is chemical rather than physiological.

Dr. Langmann demonstrated the method of handling poisonous snakes, handling with impunity a five-foot black diamond rattler and other venomous snakes. The copperhead, he said, was by no means extinct, for three years ago sixty-nine of them had been caught on the Palisades of the Hudson River. To collect the poison, he uses a glass funnel, over which a piece of chamois is tightly stretched. The snake on being brought close to the chamois, immediately buries its fangs in it, and the poison can be seen dripping down into the funnel; to expedite its passage, he presses the poison glands with his fingers.

Ontario Medical Association.

Twentieth annual meeting, Toronto, June 6 and 7, 1900.

Acting vice-president, Dr. Adam H. Wright, was elected to the presidency, that office being vacant through the death of Dr. J. E. Graham.

MORPHIA IN PUERPERAL ECLAMPSIA.

DR. DAVID HOIG, Oshawa, contributed a paper on this subject, in which he said that his experience with morphia in this condition had always given him very gratifying results. He recited the history of eight cases, in three of which there was no history of any renal insufficiency. He always made it a practice to examine the urine from time to time, and has frequently noticed albumin present, and no convulsions. He instanced a case where twins were born, no doctor being present, and ten minutes thereafter the woman was dead, without anything, not even convulsions, to account for it.

DR. JOHN FERGUSON, Toronto, in the discussion, stated that it was now generally recognized that puerperal convulsions, even of a severe type, may occur without albumin in the urine; and that the occurrence of albumin may be for the first time known in the history of the patient—in fact, abundance of albumin, without convulsions. There may also be a successful pregnancy in an old albuminuric, in chronic disease of the kidney, without convulsions.

DR. J. L. BRAY, Chatham, speaking of the treatment, did not think that morphia alone was sufficient, as his experience with it had not been successful; free elimination and chloroform having done more for him. As yet the cause of these convulsions is not known. He has observed that when he has a case of convulsions appearing before labor, the prognosis is generally unfavorable; but when they come on after delivery, it has been favorable. He laid great stress on free elimination; for this he gives elaterium or croton-oil. In venesection he has often been unable to get the blood to flow. He instanced one case where the patient had thirty-three convulsions after delivery, with recovery.

DR. K. C. McILWRAITH, Toronto, emphasized the importance of giving at least 1/2 gr. of morphia, hypodermically, as smaller doses than that are not good.

DR. BARRICK, Toronto, stated that his experience was just opposite to that of Dr. Bray. He had found that the chances were not so good where the convulsions come on after delivery.

DR. HARRISON, Selkirk, said that, in fifty years' practice, he had seen a great many cases of eclampsia, and he concurred in the statement of Dr. Barrick. He has always regarded these cases with convulsions after delivery as dangerous. In properly selected ones he bleeds.

DR. HOIG upheld large doses of morphia. He referred to the debilitated state in which the patient is left after these attacks, and said that the long loss of albumin was responsible for many of the sudden deaths.

APPENDICITIS, ITS RECOGNITION AND OPERATIVE INTERFERENCE.

DR. LUKE TESKEY, Toronto, divided this affection into three classes: chronic catarrhal, acute circumscribed and the fulminating or gangrenous appendicitis.

Speaking of the first variety, he said that in many instances the pain is not referred to the appendiceal region at all, but to the epigastric. He laid particular stress on the loss of power in the digestive functions throughout the alimentary

tract, associated with marked loss of body weight. These sometimes cause this form of appendicitis to be mistaken for chronic tubercular affection of the abdominal viscera, and sometimes for chronic indigestion. He referred to recent cases of chronic indigestion, when an operation was performed for appendicitis, and this simple catarrhal condition was found, without any foreign body in the appendix, but with enlarged lymphatic glands in the vicinity thereof. After operation in these conditions, the recovery was most complete and perfect, so much so that within two or three months they regained their weight and usual power of digestion. Palpating the appendix gives uncertain evidence.

The second class is the form of the affection in which Nature has succeeded in organizing adhesions sufficient to incarcerate the disease to a limited area. This is perhaps the most frequent form. The symptoms were considered, and he said that this class is not difficult to recognize after it has gone on for a short time. When the disease is low down in the pelvis, it is difficult to discover it by palpation. If tumescence can not be found it will be possible to get a degree of resistance, whether low in the pelvis or up toward the liver. This degree of resistance, which is very important, will lead, together with general symptoms, to a diagnosis.

The third class—the acute, fulminating or gangrenous appendicitis—has the greatest degree of intensity of inflammation, produced by the greatest degree of infection, which has created the inflammatory act, so that gangrene is invariably formed. At times it may not be localized in the appendix but in the adjacent structures. Severe symptoms may be expected from the commencement onward. The attack is so intense that Nature makes no attempt to circumscribe. The symptoms are those of septicemia. The amount of tympanites may cause the physician to overlook the exact conditions present. Various sinuses may be formed, imperfectly draining abscesses in the abdominal cavity to various surfaces, perhaps most frequently to the intestinal.

In regard to the operative treatment in the first class, when a diagnosis is made he has no hesitation in pronouncing in favor of operation. He believes that the recoveries should be 100 per cent. In the second class of cases, if he can diagnose the condition within twenty-four hours, by carefully feeling for the resistance, it is the moment for operation. The danger in waiting any longer is that septic material will be absorbed, and trouble begin in other localities.

In the third class, the only hope for life is in an early operation.

(To be continued.)

Association News.

AMERICAN MEDICAL ASSOCIATION.

Fifty-first Annual Meeting, held at Atlantic City, N. J., June 5-8, 1900.

Official Minutes of the Sections.

SECTION ON PRACTICE OF MEDICINE.

TUESDAY, JUNE 5—AFTERNOON SESSION.

The regular work of the Section on Practice of Medicine commenced with the address of the Chairman, Dr. George Dock, Ann Arbor, Mich. Papers were read by George M. Gould, Philadelphia; C. N. B. Canac, New York City; M. Howard Fussell, Simon Flexner, J. H. Musser and J. C. Wilson, Philadelphia; and W. Black Stewart, Atlantic City.

WEDNESDAY, JUNE 6—MORNING SESSION.

Papers were read by T. J. Happel, Trenton, Tenn.; and Eugene Wasdin, Surgeon, U. S. M.-I. S. Dr. Happel's paper was entitled "Pseudo (?) or Modified (?) Smallpox," and led to a discussion which manifested some ill-feeling on the part of fellow-practitioners from his own state and Missouri.

RESOLUTION CONCERNING SMALLPOX.

The following resolution was moved by Dr. McCormack: That it is the sense of this Section that the cases detailed

by Dr. Hoppel were mild but genuine smallpox, and that his failure to enforce rigid and systematic isolation and vaccination is to be sincerely regretted, and that to the prevalence of such views, popular and professional, is due the wide and disastrous epidemic now prevailing in this country.

The resolution was declared out of order by the Chairman.

Papers were also to have been read by Robert B. Prehle, Chicago; De Lancey Rochester, Buffalo, N. Y.; H. S. Anders, Philadelphia; Julius Ullman, Buffalo, N. Y.; and C. Am Ende, New York City. Owing to the Section adjourning for the General Session, it was decided that these papers should be read subsequently if time permitted.

RESOLUTION ON DEATH OF DR. J. T. WHITTAKER.

During this session, the following resolution, presented by Dr. Osler, of Baltimore, Md., was adopted:

"That in the death of Dr. James T. Whittaker, of Cincinnati, the profession of this country has lost one of its most distinguished ornaments, and the Section of Medicine of this Association an earnest and faithful member. That the heartfelt sympathy of the members now in session be extended to Mrs. Whittaker on the occasion of her great bereavement."

The secretary was instructed to forward a copy of this resolution to Mrs. Whittaker.

A resolution was also passed that on the following days the Section should not adjourn for the meeting of the General Session.

WEDNESDAY, JUNE 6—AFTERNOON SESSION.

An interesting symposium on malaria was held. In their absence, the papers of Jesse W. Lazear, U. S. A., Havana, Cuba; and Chas. F. Craig, U. S. A., were read by the secretary. Other papers were read by W. S. Thayer, Baltimore, Md.; E. A. Woldert, Philadelphia; L. O. Howard, U. S. Dept. of Agriculture; Frank A. Jones, Memphis, Tenn.; Wm. Britt Burns, Deekerville, Ark. Dr. Prehle also read his paper, which had been left over from the previous session. Officers of the Section for the ensuing year were elected as follows: chairman, Dr. J. M. Anders, Philadelphia; secretary, Dr. Wm. Britt Burns, Deekerville, Ark.

THURSDAY, JUNE 7—MORNING SESSION.

In the "Symposium on Arthritis," papers were read by James J. Walsh, New York City; Daniel Riesman, C. W. Burr, and A. O. J. Kelley, of Philadelphia. A paper by J. C. Wilson, Philadelphia, was read by title. Papers on cardiac affections were read by N. S. Davis, Chicago; S. Solis-Cohen, Philadelphia; Louis Faugères Bishop and John J. Morrissey, of New York City.

THURSDAY, JUNE 7—AFTERNOON SESSION.

Papers on various phases of "Tuberculosis" were read. The following presented papers: W. Freudenthal, New York City; J. M. Anders, Philadelphia; Carroll E. Edson, Denver, Colo.; C. P. Ambler, Asheville, N. C.; A. F. Lemke, Chicago; and Thomas J. Mays, Philadelphia. Papers were read by title for Charles Winslow Dulles, Philadelphia, and C. H. Hughes, St. Louis, Mo.

FRIDAY, JUNE 8—MORNING SESSION.

The discussion on tuberculosis was continued from the previous day by Drs. Ambler, Mays and Lemke.

Papers on "Diabetes Mellitus" were read by James B. Herick, Chicago; Heinrich Stern, New York City; and Milton B. Hartzell, Philadelphia. Papers were also read by O. T. Osborne, New Haven, Conn.; James M. Peck, Arlington, Ky.; and Julius Ullman, Buffalo, N. Y. The papers of Felix Vitale, Coytesville, N. J., and D. D. Stewart were read by title.

FRIDAY, JUNE 8—AFTERNOON SESSION.

Papers were read by Dr. Bertram W. Sippy, Chicago; A. Marcy, Jr., Riverton, N. J.; D. Benjamin, Camden, N. J.; C. Am Ende, New York City; William Duffield, Phenix, Ari.; Robert L. Watkins, New York City, and H. S. Anders, Philadelphia. A paper by J. J. Kindred, New York City, was read by title.

SECTION ON MATERIA MEDICA, PHARMACY AND THERAPEUTICS.

TUESDAY, JUNE 5—3 P. M.

The Section met in the west room of the Casino, Steel Pier. L. L. Solomon, Louisville, Ky., was chairman; J. W. Wain-

wright, New York City, secretary; seventy-three members and guests were in attendance. Profs Joseph Remington, of Philadelphia; Elas H. Bartley, of New York City, and A. B. Lyons, of Detroit, Mich., delegates from the American Pharmaceutical Association, were introduced.

The Chairman delivered his address, which was referred to the Committee on Papers to report on the recommendations therein contained.

The following committee was subsequently announced: N. S. Davis, Jr., Chicago; H. T. Bishop and H. Stern, of New York City and O. T. Osborne and T. D. Crothers, New Haven, Conn.

The Chair also appointed Dr. J. M. Allen, Liberty, Mo., as a member of the executive committee.

A paper entitled "Treatment of Acute Alcoholism by Large Doses of Digitalis—A Clinical Study Based on Cases in the Alcoholic Wards of Bellevue Hospital," by Henry P. Loomis, New York City, was read by the secretary, and discussed by Dr. O. T. Osborne, New Haven, Conn. "Some Dangers from the Use of Narcotics on Young Persons" was the title of a communication by Dr. T. D. Crothers. This was discussed by Drs. J. M. Allen, Warren B. Hill, F. B. Greene, Frank Woodbury, Jno. T. Smith, W. W. Tompkins, A. B. Lyons, J. N. Upshur, and T. D. Crothers.

The next two communications were: "A Plea for Greater Simplicity in Therapeutics," by L. Faugères Bishop, of New York City; and "Therapeutic Progress" by J. Tracy Melvin. These were discussed by Drs. N. S. Davis, Jr., Frank Woodbury, T. B. Greenley, O. T. Osborne, C. C. Fite, W. B. Hill, A. B. Lyons, J. N. Upshur, Geo. J. Loebbocher and the chairman. Dr. N. S. Davis, Jr., read a communication entitled "Dietetic Treatment of Diabetes." Dr. Heinrich Stern read a paper on "Coma Diabeticum and its Treatment." The Milk Régime in the Diabetic State. Discussion on these was, on motion, deferred until the morning session.

On motion it was resolved to have no section banquet.

Dr. C. C. Fite read a paper by title, on "The Proprietary Medicine Question—A Postscript," which was referred to the Committee on Papers.

The Chairman announced the appointment of the following members to serve on the Nominating Committee: Drs. Warren B. Hill, F. G. Wheatley and J. C. Culbertson.

WEDNESDAY, JUNE 6—MORNING SESSION.

The discussion of the papers on diabetes was opened by Dr. Osborne, followed by Drs. Allen, D. R. Brower, Zwishohn, Greenley, Shelly, Lyons, Bartley, Anders, Tompkins and Stern.

A volunteer paper by Dr. C. R. Marshall, Dundee, Scotland, on the "Pharmacology of Nitro-sugars," was read by title by the secretary, and was referred to the publication committee.

A communication was read by Dr. J. M. Anders on the "Treatment of the Gastrointestinal Symptoms of Typhoid Fever," which was discussed by Drs. Favill, Greenley, Reilly, Tompkins, Woodbury and Anders.

Papers entitled "A Brief Note on Ointments and Some of their Medical Applications," Dr. Frank Woodbury, Philadelphia; "Present Views on Use of Unbroken Skin as an Absorbing Medium," Dr. Thomas F. Reilly, New York City; "Idiosyncrasy Against Mercury—A Case of Erythema Mercuriale," Dr. A. Bernheim, of Philadelphia, were read and discussed together. The discussion was opened by Professor Remington, of Philadelphia, and continued by Drs. Reed, Greenley, Lyons, Wheatley, Upshur, Rahter, Woodbury, Reilly, Bernheim, and the Chairman.

A paper on "The Metric System" was read by Dr. F. G. Wheatley, N. Abington, Mass., and discussed by Professor Remington and Drs. Barclay, Upshur and Wheatley.

AFTERNOON SESSION.

The first paper was read by Dr. T. B. Greenley, Meadow Lawn, Ky., entitled "Report of a Case, Illustrating Value of Rectal Injections of Salt Solution in Hemorrhage." It was discussed by Drs. Allen, Melvin and Greenley.

A paper on the "Hydriatic Treatment of Chronic Dysidrosis," by Dr. J. H. Kellogg, Battle Creek, Mich., was read by title.

Dr. E. W. Mitchell, Cincinnati, read a paper on the "Preventive Treatment of Migraine," which was discussed by Drs. H. Stern, Yarnall, Benedict, Upshur, Allen, Barclay, and Mitchell.

Dr. S. Solis-Cohen, Philadelphia, presented a communication on the "Rôle of Drugs in the Management of Consumption." It was discussed in connection with the next paper on the "Importance of Early Recognition of Tuberculosis," by A. M. Holmes, Denver, Colo. Discussion was opened, by invitation, by Prof. Wm. Thompson, New York, who was followed by Drs. J. N. Upshur, Cohen and Holmes.

J. N. Upshur, Richmond, Va., read a paper on "Heart Tonics."

Papers by F. C. Shattuck, Boston, on the "Treatment of Peptic Ulcer," and D. D. Stewart, Philadelphia, on "Some Points in the Treatment of Gastric Ulcer," were read by title.

A paper was read, by invitation, by Wm. H. Thompson, entitled "Classification of Medicines, based on the Time Required to Produce Their Effects."

A vote of thanks was tendered to the reader of the paper and discussion postponed until next morning.

The Nominating Committee reported for chairman, N. S. Davis, Jr., Chicago, and for secretary, J. N. Upshur, Richmond, Va.

On motion, the report was unanimously adopted.

THURSDAY, JUNE 7—MORNING SESSION.

The session opened at 9 o'clock, L. L. Solomon in the chair.

An election was held for officers for the ensuing year. The secretary announced the election of N. S. Davis, Jr., as chairman, and J. N. Upshur, as secretary.

The paper of J. H. Musser, Philadelphia, "On the Use of Strapping with Adhesive Plaster in Various Internal Conditions," was read by title.

J. M. Allen read a communication entitled "Therapeutics of Croupous Pneumonia." It was discussed by Drs. Hill, Marvel, Boice and Mitchell.

J. Leonard Corning, New York, by invitation, read a paper entitled "Therapeutics of Vertigo."

This paper was discussed by Drs. Benedict, Hill and Louis Lautenbach.

On motion, a vote of thanks was tendered Dr. Corning for his paper, with an invitation to affiliate himself in the future with this Section.

Louis J. Lautenbach, Philadelphia, read a paper on "Increasing the Value of Cod-Liver Oil by the Addition of Free Iodin and Free Phosphorus."

Referred by the chairman to Committee on Papers.

The paper on "Action of Chloralose as a Hypnotic" was read by title in the absence of the author, J. M. Tyson, Philadelphia.

RESOLUTION ON GALENICALS.

Dr. A. L. Benedict, Buffalo, N. Y., on behalf of the Committee on Nomenclature, appointed at the last meeting to confer with the Convention for the Revision of the Pharmacopœia, reported the following:

Resolved, That the Section on Materia Medica, Pharmacy and Therapeutics of the AMERICAN MEDICAL ASSOCIATION most respectfully requests the committee on revision of the United States Pharmacopœia to act so far as possible in the interests of standardization of galenicals. In particular, the committee is requested—with such exceptions as may be inevitable—to provide for a solid and a liquid galenical applicable to every vegetable drug, commonly administered internally. Galenicals to be an identical name, but not necessarily prepared with identical excipients, or by identical methods, to be of uniform strength as regards the average crude drug, the liquid being of 50 or 100 per cent. strength and the solids of 100 or 200 per cent., as the committee may deem advisable.

Resolved, That a copy of this resolution be sent to each member of the Committee of Revision of the United States Pharmacopœia.

This was, on motion, adopted.

THURSDAY, JUNE 7—AFTERNOON SESSION.

Dr. O. T. Osborne, New Haven, Conn., was called to the chair, in the absence of Dr. J. W. Wainwright, chairman.

The first paper read was entitled "Irrigation of the Colon, as a Therapeutic Measure," by Geo. J. Lochboehler, Washington, D. C.

The paper was discussed by Drs. Brower, Osborne, Culbertson, Bernheim and Lochboehler.

The paper on "Chills from Obscure Causes," by M. C. O'Brien, New York, was read by title.

Dr. Daniel R. Brower, of Chicago, read a "Protest Against the Use of Proprietary Remedies," which was discussed by Drs. N. S. Davis, Jr., Allen, Bernheim, Lyon, Lochboehler, Tompkins, Woodbury, Lyons and Brower.

"The Therapeutic Application of Organic Extracts" was the title of a communication by O. T. Osborne, New Haven, Conn. "The treatment of Addison's Disease, with Case" was read by John V. Shoemaker, Philadelphia.

The papers were discussed together by Drs. Bernheim, Marvel and Mitchell.

Dr. J. C. Culbertson, Cincinnati, read a paper entitled "Psychic Therapeutics."

It was discussed by Drs. Greenley, Bernheim, Wheatley, Upshur and Culbertson.

"A Symposium on New Remedies, Including Their Chemistry and Therapeutic Application," by J. W. Wainwright, New York, was read by title.

FRIDAY, JUNE 8—MORNING SESSION.

"The Pharmacologic Assay of Drugs and Its Importance in Therapeutics," by J. M. Houghton, was read by C. T. McClintock, Detroit, Mich.

It was discussed by the Chairman, Prof. Lyons, Drs. D. Woodbury and C. T. McClintock.

A paper on "The United States Pharmacopœia," was read by Jos. P. Remington, Philadelphia.

"The Pharmacopœia, the Medical Journal, and the Profession," by A. L. Benedict, Buffalo, N. Y.; and "What Drug Standardization Means for the Physicians?" by A. R. L. Dohme, Baltimore, Md., were read by title.

The committee on papers, not having presented any report, was, on motion, discharged. Drs. Allen, Dickerson and Reilly were appointed a special committee.

It recommended that paper No. 30 on the program of this Section be returned to the author with the samples and not appear in THE JOURNAL, and that the recommendations contained in the address of the chairman be carried out.

RESOLUTIONS ON PROPRIETARY PREPARATIONS.

Dr. W. L. Dickinson, St. Louis, Mo., presented the following resolution:

Resolved, That the Section on Materia Medica, Pharmacy and Therapeutics desires to express its unqualified disapproval of the use by members of this ASSOCIATION of all proprietary preparations of unethical composition, and entirely approves the course of the Trustees of THE JOURNAL in refusing to such pharmaceutical compounds the privilege of appearing in its advertising pages. This Section expresses the hope that the committee on arrangements of the next meeting will exercise sufficient vigilance over applications for space for exhibition to exclude all such unethical preparations and prevent their obtaining an apparent endorsement from the AMERICAN MEDICAL ASSOCIATION.

This was unanimously adopted.

Dr. J. M. Allen offered a resolution of thanks to the officers of the Section for the admirable program and management of the present meeting, which was seconded by Prof. Remington, and unanimously adopted.

The Section then adjourned *sine die*.

SECTION ON NERVOUS AND MENTAL DISEASES.

TUESDAY, JUNE 5—2 P. M.

Meeting was called to order by the Chairman, Dr. Hugh T. Patrick, at 2 p. m., in the Hotel Brighton Casino.

The Chairman's address was then read. It pertained largely to the practical working of the Section and presented many new ideas for improving its work. Dr. W. J. Herdman, Ann Arbor, Mich., then moved that the Chairman's address be referred to a committee of three for report as to recommendations given in the address. Carried. The Chair appointed Drs. W. J. Herdman, Daniel R. Brower and Jas. H. McBride.

Dr. Herm. H. Hoppe read a paper entitled "Report of Eight Operations for Brain Tumors and Cysts." This was discussed by Drs. Daniel R. Brower, C. H. Hughes, Wm. G. Spiller, Albert Stone, Hertzog; the discussion was closed by Dr. Hoppe.

Dr. Brower moved that five minutes be made the limit of time for discussions. Seconded by Dr. A. A. Eshner. Carried.

Dr. Wm. G. Spiller read a paper on "A Case Resembling One of Raynaud's Disease, With Microscopic Examination." Discussion followed by Drs. Douglas Graham, Eugene G. Carpenter, D. J. McCarthy, closed by W. G. Spiller.

Dr. David Inglis read a paper on "Dual Action of the Brain." This was discussed by Drs. Luther Carpenter, Samuel Wolfstein, Graham, C. C. Hersman, Hughes, E. Pearce, Robert H. Porter, and closed by Dr. Inglis.

Dr. Richard Dewey read a paper on "Therapeutics of Travel and Change of Scene in Nervous and Mental Diseases," which was followed by a discussion by E. G. Carpenter, H. A. Tomlinson and Jas. H. McBride, and discussion closed by Dr. Dewey. The Chairman then appointed on the nominating committee: Drs. F. X. Dercum, David Inglis and Richard Dewey, to report the following day. Meeting adjourned.

The Section banquet was held at the Hotel Dennis, at 7 p. m., forty members and guests being present. Dr. J. Madison Taylor acted as toast-master. The dinner proved a most enjoyable occasion, and the prearranged speeches were well presented.

WEDNESDAY, JUNE 6—AFTERNOON SESSION.

The meeting was called to order by the Chairman, at 2 p. m.

RESOLUTIONS ON CHAIRMAN'S ADDRESS.

The committee on the Chairman's address reported as follows as to recommendations made:

Resolved, That the name of the Section be changed to that of "Nervous and Mental Diseases."

Resolved, That consultations of officers of Section be held before adjournment (as provided for also in the new constitution and by-laws of the ASSOCIATION, forthcoming).

Resolved, That in the judgment of this Section there should be a chair of Neurology and Psychiatry, with powers and responsibilities equal to those of other chairs in medical colleges in good standing.

Resolved, That the address is commended for its eminently practical and suggestive character.

Dr. T. J. Happel read a paper entitled "Morphinism From the Standpoint of the General Practitioner," and Dr. T. D. Crothers one on "Medicolegal Relations of Opium Intebriety," which were discussed together by Drs. J. Keniston and W. S. Watson, the discussion being closed by Drs. Happel and Crothers.

Dr. Eugene G. Carpenter read a paper on "Cranial Injuries and Insanity, with Report of a Case." The discussion was by Drs. Huff, Dewey, G. W. McCaskey and Happel; closed by Dr. Carpenter.

Dr. W. C. Burr read a paper on "Trauma as a Cause of Nervous Diseases." Dr. Arthur Dean Bevan read one on "Traumatic Neuroses From the Standpoint of a Railway Surgeon," Dr. Jas. Hendrie Lloyd one on the "Medicolegal Relations of the Traumatic Neuroses," and Dr. Wharton Sinkler one on "Prognosis and Treatment of Traumatic Neuroses." This symposium was discussed by Drs. F. X. Dercum, Daniel R. Brower, Reginald Sayre, Chas. K. Mills, W. M. Leszynsky, Bishop, A. E. Sterne, David I. Wolfstein, Richard Dewey, W. S. Watson, Nathan Herman, G. W. McCaskey, R. H. Porter, C. C. Hersman and Hugh T. Patrick. The discussion was closed by Drs. Burr and Sinkler.

The Nominating Committee reported as nominees for the ensuing year for Chairman, Dr. H. A. Tomlinson, St. Peter, Minn., and for Secretary, Dr. F. Savary Pearce, Philadelphia. Executive Committee, by right of succession, Drs. C. H. Hughes, Fred Peterson and Hugh T. Patrick. The above officers were unanimously elected.

THURSDAY, JUNE 7—MORNING SESSION.

A special meeting was decided on "necessary for completion of program."

Several papers received by secretary read by title. Dr. Guy Hinsdale spoke on the desirability of appointing delegates to the Nominating Committee of the ASSOCIATION as "Section Delegates," rather than from the states, as at present done; and the possibility of changing By-Laws of the ASSOCIATION. Dr. G. W. McCaskey discussed some matters in our relations as a Section to the General Session.

Dr. Guy Hinsdale read a paper on "Aphasia with Letter-Blindness, without Word-Blindness; with Right Hemiplegia

and Pulmonary Tuberculosis," which was discussed by Drs. F. Savary Pearce, Jas. H. McBride and Wm. G. Spiller, the discussion being closed by Dr. Hinsdale.

Dr. Jas. H. McBride read a paper on "A Study of Cerebral Syphilis, with Report of Cases." The discussion was by Drs. D. R. Brower, H. A. Tomlinson, H. H. Levy, G. W. McCaskey, T. D. Crothers, Wm. G. Spiller and Hugh T. Patrick; closed by Dr. McBride.

Dr. C. C. Hersman presented a paper on "Post-Anesthetic Paralysis" that was discussed by Drs. F. Savary Pearce and Douglas Graham; closed by Dr. Hersman.

Dr. Daniel R. Brower read a communication on "Treatment of Neurasthenia." The discussion was by Drs. Jas. H. McBride, W. S. Watson, Richard Dewey, E. E. Mayer, C. C. Hersman, A. J. Pressey, Douglas Graham, and A. E. Sterne; closed by Dr. Brower.

THURSDAY, JUNE 7—AFTERNOON SESSION.

Dr. D. J. Wolfstein read a paper by Drs. F. W. Langdon and M. A. Brown and Wolfstein on "Combined Sclerosis of the Lichtheim-Dana Type Accompanying Pernicious Anemia."

The discussion was by Drs. W. G. Spiller and Hugh T. Patrick; closed by Dr. Wolfstein.

Dr. J. D. McCarthy presented a paper on "Migraine, with the Consideration of Heredity," that was discussed by Dr. Hugh T. Patrick.

Dr. A. A. Eshner read a paper on "Differentiation of Chorea and Disorders Simulating It;" Dr. E. E. Mayer one on "Evolutional and Involuntal Types of Nervous Disease." These were discussed by Dr. G. W. Drake.

Dr. C. K. Mills opened the symposium on "Hysteria," by a discussion of the "Diagnosis of Hysteria from Organic Disease of the Brain;" and Dr. J. K. Mitchell read a paper on "Rest Treatment for Hysterical Diseases."

In the general discussion, Drs. W. G. Spiller, Douglas Graham, Bridge, Cooper, N. Herman, J. D. McCarthy, A. E. Sterne, G. W. Drake, E. E. Mayer, D. I. Wolfstein and C. H. Hughes spoke, and Drs. Mills and Mitchell closed it.

Motion was made and carried to hold a special meeting, Friday, June 8, at 9 a. m.

FRIDAY, JUNE 8—MORNING SESSION.

The meeting was called to order at 9:15 a. m.

Dr. F. Savary Pearce read a paper on "Hereditary Sub-Normal Color Perception;" the discussion being by Drs. G. W. Drake and Robert H. Porter; closed by Dr. Pearce.

Dr. G. W. Drake read a paper on "The Simplest Explanation of the Functions of the Nervous System." Discussion was by Drs. Wolfstein and Levy; closed by Dr. Drake.

Dr. A. J. Pressey read a paper on "The Necessity of a More Universal Knowledge of the Treatment of Morphinism, with Report of Cases." This was discussed by Dra. Dunham, H. H. Levy, J. R. Campbell, F. Savary Pearce and J. D. McCarthy; the disussion being closed by Dr. Pressey.

Dr. A. E. Sterne presented a paper on "Effect of Alcohol on the Nervous System." Discussion was by Drs. A. J. Pressey, G. W. Drake and H. H. Levy; closed by Dr. Pressey.

Dr. G. W. McCaskey read a paper on "Combined Gastric and Aural Vertigo, with Report of a Case;" discussed by Drs. D. I. Wolfstein, H. H. Levy and Hugh T. Patrick; closed by Dr. McCaskey.

The chairman brought up the matter of a petition against the abolition of the Pathologic Institute of New York, as presented by a number of leaders in pathologic investigation in that state. This had been signed by many leading neurologists in Boston, New York, Philadelphia, and elsewhere.

On motion, of Dr. Patrick, the chairman and secretary were instructed to sign the above petition for the Section. Carried.

Dr. J. D. McCaskey moved that fifteen minutes be the limit of time for papers. Not seconded.

Dr. E. W. Holmes read a paper on the "Anatomy of Hanging, with Some Recent Observations on Electrocutation."

Dr. A. J. Pressey moved that a vote of thanks be accorded by the Section to the chairman and secretary for efficiency of work done for the session and the meeting.

Adjourned.

THE JOURNAL OF THE
AMERICAN MEDICAL ASSOCIATION.

61 MARKET STREET, - CHICAGO.

SATURDAY, JUNE 23, 1900.

THE SECTION OF PATHOLOGY AND BACTERIOLOGY,
AND THE PATHOLOGIC EXHIBIT.

The meeting of the "Provisional Section of Pathology" at Atlantic City convened at the invitation of the President of the ASSOCIATION. A program had been arranged, but no effort had been made to prepare an extended program, and it is quite safe to say that a much longer and more elaborate one could have been easily secured.

Through the efforts of a special committee the collection of specimens and other material on exhibition had been brought together. The ASSOCIATION unanimously voted to recognize the "Provisional Section of Pathology" as an official Section on equal footing with the other Sections. The ASSOCIATION also voted to continue the exhibition of specimens as an official and annual feature, placing the management of the exhibit in the hands of the Section of Pathology and Bacteriology, as this is the one most directly interested in the exhibit.

Thus the ASSOCIATION has assumed the sponsorship for a Section devoted to pathology and for an annual exhibition of pathologic specimens. We trust that in mapping out its field of work—which is quite unlimited—the new Section may heed the advice contained in the address of the Chairman of the Section on Medicine,¹ in which he suggests that special attention should be paid to experimental and general pathology and to the demonstration of specimens, technical methods and apparatus. It is true that much of the work in pathology should be brought out in the various clinical sections. The pathologist must keep close to the clinician. Surely the new Section, if properly conducted, need not hinder the pathologic part of the Section work. On the contrary, it may be expected to encourage such work because an opportunity is now afforded those especially interested in pathology and bacteriology to discuss questions that for the moment especially interest them. Hence the programs for the new Section should be brief and selected with exceeding care; many papers offered this one may be of more immediate good if presented in the appropriate clinical Sections.

There has been criticism of the tendency to multiply the medical Sections. The criticism is hardly applicable in this case, because it concerns a well-directed effort at the extension of the legitimate work and of the sphere of usefulness of an established national body of great strength. And it is to be hoped that, as one of the results of these new departures, the pathologists of

the country may come to take more direct interest in the ASSOCIATION and its work.

An important, ever essential part of the work of the Section of Pathology and Bacteriology will be the pathologic exhibit. Numerous suggestions lie near at hand. Anatomic specimens should be selected with reference to their value in pathology; and, as pointed out by Dr. Dock,² it might be well to limit the source of specimens each year to the section of country in which the meeting is held. Labor, expense, and risk of damage would then be diminished, and a more general interest in the work created. The practical exhibition of apparatus should be encouraged. Children and minors should be excluded from the exhibit rooms. Special collections of anatomic specimens illustrating particular fields in pathology might be brought together, and in such undertakings the subjects proposed for discussion in the clinical Sections, as for instance, in that on internal medicine, might be taken as guides to the ground to be covered each year. In general, the aim should be to unify and correlate the scientific work at the meetings. For this purpose joint sessions of two or more Sections might be found desirable. At all events the programs of such Sections as the pathologic should be short and select, so as to give the members a chance to participate in the scientific work of others. In this way economy of room might be affected also, as two Sections might use the same room alternately.

ETIOLOGY OF GENERAL PARALYSIS OF THE INSANE.

Whether or not progressive paralysis of the insane and locomotor ataxia represent different localizations of the same disease is a debatable question. They have a number of points in common, and are not rarely associated. Both are more common in males than in females, in the city than in the country and in mature life than at any other period, result from syphilis more than from any other causative condition, and are not amenable to radical treatment. Some aspects of the etiology of progressive paralysis of the insane are discussed in a recent communication by Kraft-Ebing,¹ who characterizes this affection as one of the diseases evolved by nineteenth century civilization. Almost entirely unknown one hundred years ago, the number of cases has increased at a rapid rate nearly everywhere, as shown in part by the fact that the proportion of cases admitted to hospitals for the insane is greater than ever before. Further, the disease occurs at an earlier period of life than formerly, and it is only recently that it has been observed in childhood and youth. The proportion of cases in women is larger than it has been. The increased incidence of progressive paralysis is attributable to the pernicious effect on the mind and the body brought about by the inordinate demands in earlier life of existing social conditions, the abuse of stimulants, especially alcohol, and to a dissipated mode of life.

¹ Dock: THE JOURNAL, June 9. ² Ibid.

¹ Am. Jour. of Insanity, lvi, 4, p. 645.

Ever since syphilis was first suggested as a cause of progressive paralysis, the appreciation of its importance in this connection has steadily increased. The statistics on this subject must be used with great care. They will necessarily vary considerably, according as they apply to the higher or the lower classes of society, and to urban or country populations. It has, however, been found that a history of syphilis is far more common in cases of progressive paralysis than in cases of insanity without progressive paralysis. The failure to obtain a history of syphilis is not convincing evidence of its absence, and it has been shown, in fact, that such a history can not be obtained in a not smaller proportion of actually syphilitic cases. In a number of instances of progressive paralysis in which no syphilitic history could be elicited, it was found impossible to inoculate syphilis, presumably in consequence of immunity conferred by previous infection. Further evidence of the immunity of cases of general paralysis to syphilis is afforded by the fact that they never come under observation with a primary lesion. An additional point in favor of the syphilitic origin of progressive paralysis is the fact that the relative proportion of cases in men and women coincides with the relative proportion of cases of syphilis in the two sexes in any community. A history of hereditary or rarely acquired syphilis can be elicited, also, in a large number of cases of the infantile and juvenile type of progressive paralysis.

Both syphilis and progressive paralysis are far more common in the city than in the country. Progressive paralysis is common in soldiers and rare in priests and in women of the better classes. In a word, it is rare wherever and whenever syphilis is rare, and vice versa. General paralysis is apparently uncommon in prostitutes, because such women are compelled to abandon their calling before the period at which general paralysis appears, and the disease is then charged to some other occupation. Krafft-Ebing admits that it can not be demonstrated that previous syphilitic infection is absolutely essential to the development of progressive paralysis, although he contends that the probabilities are strongly in favor of this view, particularly in view of the inoculation experiments. How the infection acts in causing the cerebral disease is not yet known, but syphilitic lesions are not found. The evidence shows that syphilis has increased greatly in recent years. This result is attributed to increased celibacy, the enormous expansion of commerce, the increasing volume of travel, the more widespread desire among women for pleasure and finery, and the starvation wages that drive the poorer girls into vice. The increase in the number of soldiers forming the standing armies of Europe and universal conscription are considered as additional and hardly less important factors.

As only a certain number of syphilitics are attacked by progressive paralysis, certain predisposing and accessory causes must be taken into consideration. These are

to be looked for in certain biologic phases of life—the critical periods—in which the trophic processes in the organism, as a result of the developmental and functional activity of previously undeveloped organs—at puberty—or their involution—at the climacteric—are subject to great fluctuations, owing to changes in the conditions attending nutrition and circulation. Syphilis probably impairs the vitality of the tissues and diminishes their power of resistance; hence it is justifiable to assume that in this way it can induce a derangement in the evolutionary processes, and render involution too rapid. The influence exerted by syphilis may be conceived as giving rise to an alteration in the vital properties of the nerve-elements, as a result of which premature involution is brought about. Progressive paralysis would thus be a manifestation of premature senility. Among the predisposing causes are hereditary taint and a neuropathic constitution, injury to the skull and the brain from rachitis, premature exhaustion of the brain from physical and mental stress, dissipation and other pernicious influences.

Progressive paralysis is not amenable to treatment, and its prophylaxis includes the suppression of prostitution and the prevention of syphilis and of alcoholic excess, and the physical and mental development of the individual.

Krafft-Ebing makes a plea that young men should receive seasonable instruction as to the dangers attending the illegitimate gratification of sexual desire. The senseless sophistry that sexual desire, justifiable of itself, but intensified by the pernicious outgrowths of civilization and nervousness, must be gratified, should be combated.

INFLUENCE OF TRAUMA ON THE DEVELOPMENT OF TUMORS.

In order to obtain some idea as to the part played by trauma in the development of tumors, v. Bunger proposed that a collective investigation be instituted to cover the years 1893-1898. In response, Wurz¹ presents a study of the cases of tumor that were treated at v. Brun's clinic during this time. The material includes 584 malignant and 129 benign, in all 713 tumors. The relation of trauma to these tumors was studied critically, such factors as chronic irritation, scars, etc., being excluded. The principal forms of trauma studied consequently are contusions and small solutions of continuity of various kinds. Of the benign tumors, osteomata afforded the most striking examples of the action of trauma, the tumor beginning to develop as soon as eight to fourteen days after the injury. An instance is cited in which adenoma of the breast began immediately after an injury. On the whole, the outcome can not be said to be very striking, inasmuch as of the 129 benign tumors there were 5 cases altogether in which trauma

1. *Beiträge f. Klin. Chir.*, 1900, xxvi, 567.

had a probable influence, 3 possibly such, and 2 doubtful.

In the case of carcinomas, he mentions 8 instances in which the neoplasm seemed to follow small injuries and slight wounds, in which healing failed to take place.

As regards sarcoma, 6 instances probably due to injury are cited; in 4 the tumor followed in four to twelve weeks after the injury and in 1, immediately after. In most of these instances, the sarcoma developed in connection with the extremities.

Otto Hahn² describes a carcinoma of the previously healthy scalp, developing in a wound produced by a fall from a wagon. There resulted a wound which extended to the bone; suppuration and non-union followed, and in seven weeks the ulcerated area assumed distinct carcinomatous appearances and microscopic examination established the carcinomatous nature of the process.

Carola Maier³ discusses the possibility of primary carcinomas in bone on the basis of an interesting instance in which the factor of a trauma also enters. There is described a primary flat-celled carcinoma in the interior of the ulna, developing after a definite trauma but without fracture or wound of the skin. Six months later an operation was made. The patient, 20 years old, has remained well for three years and there is as yet no evidence of any primary tumor elsewhere. Now, Cohnheim assumed that an embryonal matrix must exist; trauma favoring growth by producing congestion, while Ribbert and others believe that misplacement may occur in after life with or without preceding inflammatory proliferation of connective tissue. How did the epithelium in Maier's case get into the medullary spaces without fracture? Was there a fissure? Or an embryonal, misplaced matrix? At all events the rôle of trauma in the development of carcinoma and other tumors, though somewhat limited, can not be denied. Such cases as Hahn's, and also Maier's, are of great interest because of their practical importance with respect to questions of accident insurance.

DISSEMINATION OF BACTERIA FROM THE MOUTH DURING SPEAKING, COUGHING, AND OTHERWISE.

The investigations of Flüge and his pupils and of others have shown that in speaking and coughing, droplets of mucus and saliva are expelled from the mouth and carried for some distance away from their source of origin. Such droplets have been found to carry bacteria with them. It is especially in connection with the dissemination of tubercle bacilli that this demonstration becomes of significance. Recently Koeniger¹ has published the results of extensive studies of bacterial dissemination by droplets from the mouth, using the bacillus prodigiosus in his tests because of its ready recognizability from the red pigmentation of its colonies.

Persons would rinse their mouths and throats with suspensions of this bacillus and then, stepping into a specially arranged room, speak in more or less loud tones for varying periods, the disseminated bacilli falling on plates of culture-media disposed here and there throughout the room. In this way coughing, whistling and sneezing were studied as well as the special effects of repeating the various letters of the alphabet. Consonants—some more than others—were found to throw out bacteria in greater numbers than vowels. Koeniger establishes the fact that this mode of bacterial dissemination takes place over a much wider range of distance than claimed heretofore, the minute droplets or bubbles sailing far and wide through the atmosphere and alighting on all sides of the experimenters. The greatest distance to which bacteria were carried in these experiments was 12.40 meters.

The question now is: of what importance is droplet dissemination in the spread of infectious diseases? It would seem, as Koeniger states, that this depends largely on the number of pathogenic bacteria in the mouth. There can be no doubt that persons with pathogenic bacteria in their oropharyngeal cavities may become dangerous to their surroundings. We know that pneumococci and tubercle bacilli frequently occur in the secretions of the mouth; and diphtheria bacilli have been found in all parts of the mouth, not only during the active stages of the disease, but long after convalescence has set in (Neisser). Shaffer and others have demonstrated that lepers with lesions of the oral and nasal mucous membranes give off lepra bacilli in enormous numbers. Influenza, the pneumonic form of bubonic pest, whooping-cough, staphylococcus and streptococcus anginas, and infections of the respiratory tract in general are other examples in which dissemination of germs may take place. When the fluids of the mouth are densely populated with bacteria, a coughing spell, "yes even a few sharp words" would suffice to so contaminate the atmosphere of a medium-sized room that other persons would have a good chance to become infected.

As the possibility of this mode of spreading infectious diseases is so evident there are certain prophylactic measures that merit enforcement. The handkerchief should be held in front of the mouth when coughing, and this should be generally encouraged for use by the well as much as the sick. In case of tuberculosis and of plague a gauze mask for the mouth and nose has been recommended for the patient and also for the attendants. Disinfectant mouth-washes should be used, perhaps not always so much in the interests of the patient as for the welfare of those about him. Then steps should be taken to protect articles in the rooms exposed to infection by this method, which undoubtedly plays some rôle in wound infections. Sneezing disseminates microbes in the well as much as in many sick, and here the conscientious use of the handkerchief is specially

2. *Ibid.*, 591.

3. *Ibid.*, 553.

1. *Zft. f. Hyg. u. Infektionskr.*, 1900, xxxiv, 119.

indicated. Nurses and hospital attendants, by following the indications pointed out, may do much to protect themselves and others. As mentioned by Koeniger, the playing of a stream of water on an infected surface of the skin, for instance, is hardly a safe procedure in view of the foregoing statements.

BLAND AND THE "METROPOLITAN MEDICAL COLLEGE."

A Chicago paper, in reporting the trouble that the alleged "Metropolitan Medical College" is just now having with the United States government,¹ mentioned one T. A. Bland as a member of the faculty. This called forth a reply from the individual, who states that he has never been a member of said faculty. As one T. A. Bland has been an active mover against any restrictive legislation in regard to quackery—lobbying in this and other sections against medical practice acts, etc.—the error was a natural one, since such work is directly in favor of establishments like the one that has just come to grief. The question arises, however, whether this denial is as complete as it is intended to appear, and whether the same person could or would deny any similar connection with the earlier discredited "Independent Medical College," which is represented at the present by its successor and equivalent—the "Metropolitan Medical College." If we are not mistaken, it formerly sent out circulars including one T. A. Bland in its faculty. Unless this connection can also be truthfully repudiated, the present denial looks like a mere quibble, and the said person should share the disgrace now before the courts. In view of future possible lobby work and the interests of the so-called American Medical Union,² organized, as it appears, to fight legal restrictions of unqualified medical practice, this may be a matter of some importance.

THE COCAIN HABIT.

The negroes in some parts of the South are reported as being addicted to a new form of vice—that of "cocain sniffing" or the "coke habit," as it appears to have this name also. A negro, it is said, will buy 5 cents' worth of cocain, which is sold in a little paper box for such purposes, and, taking it in the old-fashioned way of snuff-takers, proceed to indulge in a "coke drunk." The effects are described as much like those of an ordinary whisky drunk; some cocain "sniffers" are quarrelsome, some hilarious, some morose, and many are happy and indifferent like the opium smokers, while the intoxication lasts. It appears even that the habit is going to succeed to the recognized legal rights of whisky, as we read that one community licenses the sale, allowing, however, druggists to sell the alkaloid on physicians' prescriptions, but imposing heavy penalties on the doctor who prescribes it for other than patients requiring it medicinally. In this there is progress in a line not altogether encouraging. It is a pity that anything further in the way of intoxications should receive legal

recognition. The world has heretofore got along without cocain exhilaration, and the necessity of it for the negroes of Kentucky, even could it be confined to them, can not be reasonably urged. The precedent is bad, and it is to be hoped the custom will not be followed elsewhere.

DESQUAMATION IN THE COURSE OF TYPHOID FEVER.

Desquamation has been rarely observed in the course of typhoid fever, and then principally in children. It occurs either at the close of the febrile period, or a little later—ten days or two weeks after defervescence. In view of the rarity of its occurrence the report of six cases in adults reported by Remlinger¹ among 706 cases, is of especial interest. Perhaps if carefully looked for, the condition would be found more frequently than the references to the subject would indicate. All of the six cases were grave; the fever was prolonged beyond the usual limits, and convalescence was long and difficult. The desquamation appeared as the temperature commenced to fall. The scales were neither furfuraceous nor membraniform, but lamellated, and in character were intermediate between those of measles and those of scarlet fever. The process appeared earliest, and was most marked, on the lateral aspect of the chest and the abdomen, and, in general, was limited to the trunk, although in one case it extended to the extremities. In three instances it was associated with falling out of the hair. The period of occurrence, and the thinness of the lamella would seem to be in accord with the view that the desquamation is the result of a sudoral eruption, but this was not observed in degree sufficient to cause desquamation, which is itself rare, while in three other cases with sudamina, desquamation was not noted. The phenomenon is considered atrophic and analogous with the falling out of the hair that at times takes place. It appears to be of favorable prognostic significance, indicating the advent of convalescence.

THE BENEFICENT SPIDER.

Since the mosquito has been found out and we know that, while masquerading as a mere nuisance, she is a deadly enemy, it is well to take stock of our insect friends that are, in a measure, our protectors from her attacks. It is well known that the dragon-fly is an enemy to mosquitoes, but we have been apt to overlook another less attractive ally. Dr. O'Connell of the British Army calls attention to the usefulness of the despised or hated spider as a protector of mankind against the disease-bearing mosquito. The general opinion held by us of these fellow creatures of ours has been a distinctively unfavorable one. The late Grant Allen, who as a popularizer of natural history, can probably be accepted as a fair exponent of the prevalent views, while claiming for them a very high place among animals with jointed bodies, is quoted as describing them as "ferocious, cruel, blood-thirsty, shining examples of abandoned and shameless wickedness." It is the spider, however, who builds for us, unasked and unthanked, a web against the malarious mosquito. If

1. THE JOURNAL, June 9, p. 1497. 2. THE JOURNAL.

Revue de Médecine, 1900, No. 5, p. 365.

only let alone, it would bar every passage. Its intellectual endowments—perhaps the highest among articulates—are such that it knows how to seize each point of advantage in its beneficent work. Morally, the spider is no worse than those human parasites, the dog and the “harmless necessary cat,” but its appearance and manners are less attractive and for this reason therefore, it loses all the credit of, and advantage from, the good it does ungrateful mankind. It was a spider that saved a Bruce, but this one good deed is all that is recorded in history to its credit. The innumerable lives it may have saved from malignant mosquitoes and infection-bearing flies should be reckoned in its account.

ACUTE ANTERIOR POLIOMYELITIS IN AN ADULT DUE TO INFECTION.

There is accumulating evidence in favor of the view that acute anterior poliomyelitis is an infectious disease, though the actual demonstration of a causative micro-organism has not yet been made. Apart from the sudden onset of the disorder, sometimes with convulsions, often with diarrhea, and its febrile course, the occasional epidemic distribution of the cases especially is indicative of a bacterial agency in the etiology. The disease is most common in children, occurs but rarely in adults and generally gives rise to flaccid, atrophic paralysis in one extremity, sometimes in both lower or both upper, and least commonly, in both the upper and the lower on the same side. A case where the disease occurred in an adult in hemiplegic distribution and was probably of infectious origin has recently been reported by Gumpertz.¹ The patient was a robust merchant, 23 years old, who, during an attack of what possibly was typhoid fever, but which may have been merely the febrile state associated with acute anterior poliomyelitis, was seized with flaccid paralysis, wasting, diminution in electric irritability and in the reflexes, but without sensory alteration, in the upper and the lower extremity upon one side of the body. It was suggested that the presence of a furuncle upon the left buttock near the vertebral column may have been responsible for the development and the localization of the spinal disorder, through embolism or metastasis.

INFECTIOUS DISEASES AND EPILEPSY.

The relationship existing between infectious diseases and those of the nervous system is a very interesting problem, and has long been an object of close scrutiny. Although it is well known that infectious diseases have figured largely in the production of many nervous affections, such as the cerebral and spinal palsies of children, it is not so well understood that the influence of infectious processes on a previous existing mental or nervous disease has also been carefully considered by able investigators. Moreover, the subject is as old as medicine. In a painstaking review of the subject, Toulouse and Marchand² state that Hippocrates knew that intermittent fever could suspend epileptic attacks for a time, and many analogous facts have been known from the

time of Portal. Seglas and Pelliasier recently wrote a thesis on the subject. Féré, the noted French epileptologist, has shown that even a boil or abscess, while in active formation, is able to modify the course of epilepsy. Some of our major affections which have suspended the epileptic paroxysms are erysipelas, typhoid fever, and pneumonia. Seglas and Pelliasier recorded seven cases of pneumonia, in six of which the epileptic attacks were suppressed entirely during the course of the pneumonia. The mechanism of the suspension of convulsive disorders during fever is still unsettled, some of the current theories are nevertheless very interesting; for instance Bourneville thinks that the fever offers a vicarious means of expenditure of energy, which under ordinary conditions is manifest in the epilepsy by means of the convulsions. Still others hold that the fever generates toxic substances in the blood, which induce the nervous system to inhibit expenditure of energy. In proof of the correctness of the latter theory it may be said that after the fever is passed the paroxysms are more frequent, thus apparently compensating for the temporary cessation of seizures during the fever. While in the sleep state, which is in many ways opposed to fever, the epileptic attacks are much more frequent, thus adding further evidence to the inhibition theory for the suspension of epileptic paroxysms in fevers. Toulouse and Marchand report one case in which diurnal attacks were changed to attacks every twelve days, by the intervention of erysipelas, while Pelliasier has collected no less than eighteen cases of similar remarkable improvement after occurrence of typhoid in epileptics. While there seems to be a diminution of epileptic attacks during the course of a complication of infectious diseases, the permanency of the benefit does not seem to be sufficiently lasting to warrant the establishment of an infectious disease as a new curative measure for epilepsy.

THE SAN FRANCISCO PLAGUE SITUATION.

Dr. Kinyoun, of the Marine-Hospital Service, in the latest report of that bureau, notices the peculiar attitude of a portion of the San Francisco press, especially the misrepresentation in regard to himself as an authority for the statement that plague infection did not exist in that city. He says that, whatever may be the case at present, plague infection existed in the Chinese quarter on May 27, and would continue until a strong, determined and concerted effort was made to eradicate it. The policy in the course taken by some of the San Francisco papers is hard to understand; it certainly has not succeeded in convincing the public elsewhere that cases of the plague have not occurred there, but it has created a grave suspicion, that in its way is even worse than would be a candid admission of the fact. In the latter case, we would feel better assured that the efforts to restrict and exterminate the disease would succeed, and the country generally would feel easier. As it is, we have the evidence of the officials entrusted with the duty of watching our coasts—the marine-hospital surgeons—as well as of the local health authorities, that plague has existed there, if it does not now exist and no newspaper authority or even judicial decision will be accepted as outweighing this testimony. We

¹ Berliner Klin. Woch., 1900, No. 16, p. 349.

² Revue de Psychiatrie, 1899, p. 138.

know, moreover, that the plague often occurs sporadically before becoming epidemic—a fact that does not increase satisfaction with the present conditions of affairs. It would be most unfortunate if, through misguided public sentiment or legal interference with quarantine, the pest should gain a foothold on the Pacific coast.

Medical News.

ILLINOIS.

Chicago.

AT THE commencement exercises of the Northwestern University, held June 14, the degree in medicine was conferred on eighty-three men and twenty-one women from the Woman's Medical School. Dr. Cyrus Northrup, president of the University of Minnesota, delivered the commencement address.

ANNUAL MEETING AND ELECTION.

The Chicago Medical Society held its forty-eighth annual meeting on June 20. Dr. Maurice H. Richardson, Professor of Surgery, Harvard Medical School, Boston, delivered the address upon the subject of "Surgery of the Gall-Bladder." After the president's address, on "Physiology and Pathology of Pregnancy and Hints on the Management of Labor," and the reports of the officers and committees, the annual election took place, with the following result: president, James H. Stowell; first vice-president, Alexander H. Ferguson; second vice-president, Adolph Gehrmann; secretary S. C. Plummer, Jr.; treasurer, Robert H. Harvey; trustees, Wm. H. Wilder, for the Ophthalmological Society; John Ridlon, for the Orthopedic Society, and E. J. Doering, for the Medicolegal Society.

WOMAN'S MEDICAL COLLEGE ALUMNAE.

The Alumnae Association of the Northwestern University Woman's Medical School elected the following officers, at a meeting held June 15: president, Marian Kelley Bowles, Joliet; first vice-president, Hezekiah Crabtree, Chicago; second vice-president, Anna White Sage, Chicago; secretary, Eliza H. Root, Chicago; treasurer, Mary C. Hollister, Chicago; executive committee, Marie J. Mergler, Elizabeth Dunn, and Ida Schell, Chicago.

DINNER FOR DR. KEEN.

A Rush Faculty dinner was given at the Chicago Club on the evening of June 20, in honor of Dr. W. W. Keen, of Philadelphia, who delivered the commencement address before the faculty and students of Rush Medical College at the annual commencement, June 21. There were present Dr. Maurice H. Richardson, of Harvard, and the following from Chicago: Drs. Frank Billings, J. B. Herrick, J. Clarence Webster, N. Senn, Christian Fenger, John E. Owens, M. L. Harris, Arthur Dean Bevan, Daniel R. Brower, F. S. Coolidge, Harold N. Moyer, E. Fletcher Ingals, James Nevins Hyde, A. J. Ochsner, L. Hektoen, George H. Simmons, and President Harper, of the University of Chicago.

RUSH MEDICAL COLLEGE COMMENCEMENT.

The commencement of Rush Medical College took place on June 21, the exercises being held in Studebaker Hall. The Doctorate Address on "The Ideal Physician," was delivered by Dr. W. W. Keen, of Philadelphia, and is printed in this issue. A class of 210 was graduated, about 25 per cent. of whom had already received degrees from literary colleges. Dr. Frank Billings, Dean of the Faculty, conferred the degrees. The honor men were the following: Fellowship in pathology, Theodore Ticken, M.D.; fellowship in chemistry, Charles S. Wood, M.D.; fellowship in materia medica and pharmacology, Charles M. Schultz, M.D.; fellowship in medicine, Alexander F. Stevenson, M.D.; fellowship in surgery, Harry W. Horn, M.D. The E. L. Holmes prize and scholarship at Wood's Hall, Mass., was awarded to Martin H. Fischer, M.D.; the Benjamin Rush medal to Oscar H. Dahms, M.D.; the J. W. Freer medal to Frank M. Wood, Jr., of the class of 1901; the L. C. P. Freer medal to Frederick Greenbaum, of the class of 1902; the Daniel Brainard medal to Don H. Palmer, of the class of 1903, Frank M. Wood, Jr., receiving honorable mention; and

the DeLaskie Miller prize to George W. McClure, M.D. The Alumni banquet was held on the same evening at the Auditorium Hotel.

NEW YORK.

DR. E. E. WEBSTER, who has been practicing in Hornellsville for several years, has returned to Woodhull and resumed practice.

DR. EDWARD F. BRUSH, Mt. Vernon, gave a dinner at his home, June 14, to the directors of the Society of Medical Jurisprudence of New York, of which he was formerly president.

A LARGE bronze memorial-tablet of Dr. Cornelius N. Hoagland has been placed in the Hoagland laboratory, by the physicians of the Long Island College Hospital.

DR. LEWIS W. ROSE, chief of the department of health and sanitarian at the state industrial school, Rochester, for six years past, has resigned on account of a rule just made, that the chief of that department shall reside in the institution and give up his whole time to the service.

NEW YORK COUNTY MEDICAL ASSOCIATION.

At the annual meeting of this Society, held June 18, the following officers were elected: president, Parker Syms; first vice-president, J. Riddle Goffe; second vice-president, Emil Mayer; recording secretary, Ogden C. Ludlow; corresponding secretary, J. W. Draper Maury; treasurer, Charles E. Denison, and member of the executive committee for three years, Frederick Holme Wiggan.

NEW JERSEY.

THE MEDICAL Board of the Atlantic City Hospital has appointed Dr. Sylvester J. Goodman, of Philadelphia, resident physician for the ensuing year.

THE THIRD annual dinner of the Practitioners' Club, of Jersey City, was held June 12. Dr. J. A. Exton was chosen president, and Dr. W. Steadman, secretary and treasurer. The executive committee will remain as before: Drs. T. R. Chambers, G. K. Dickinson and F. D. Gray.

PENNSYLVANIA.

AT THE commencement exercises of Dickinson College, Carlisle, the degree of LL.D. was conferred on Dr. L. S. Pilcher, of New York City, editor of the *Annals of Surgery*.

A SEVERE epidemic of measles is spreading over Montgomery county and the majority of children in the primary grades are being kept from school on account of sickness.

Philadelphia.

DR. JOHN MADISON TAYLOR will spend the summer in Bar Harbor, Me.

DR. J. H. BRINTON tendered the class of '50, University of Pennsylvania, a banquet on the evening of June 13, at his residence, 1423 Spruce Street.

AT THE banquet of the class of 1890, held at the University Club, June 13, the following officers were elected: President, Dr. J. H. Wallace Rhein; secretary, Dr. H. S. Anders; treasurer, Dr. W. R. B. Harland.

DURING the past week another offender of the oleomargarin law was sentenced to the penitentiary for two months and fined \$200 and costs. It is said that the State Dairy and Food Commission have a list of about one hundred persons, who will shortly be arrested for the same offense.

MORTALITY STATISTICS.

The number of deaths occurring in this city for the week ended June 16, was 455, an increase of 44 over the previous week, and an increase of 32 over the corresponding period of last year. The principal causes of death were: apoplexy, 17; cancer, 20; tuberculosis, 53; heart disease, 31; pneumonia, 23.

UNIVERSITY BANQUET.

The thirtieth annual banquet of the graduates of the University of Pennsylvania was held on the evening of June 12, and the following officers were elected: president, Dr. John Ashurst, Jr.; vice-presidents, Drs. Horace Y. Evans, James Tyson, Charles K. Mills and Samuel D. Risley; secretary and treasurer, Dr. William S. Wadsworth. Dr. Samuel D. Risley was toast-master for the evening, and the principal addresses were made by Dr. E. W. Holmes and Col. A. A. Woodhull.

SANITARY SUGGESTIONS TO MOTHERS.

Some time ago the Philadelphia Obstetrical Society recommended to mothers certain rules, governing the care and management of infants during the summer months, such as proper food, time for bathing, methods of dressing, danger in certain drugs, etc. These have been found so useful that the chief of the Bureau of Health has ordered them published for distribution.

CHANGES IN PHILADELPHIA HOSPITAL.

For some time certain changes have been imminent at this institution. As has been mentioned in a previous issue of THE JOURNAL, Superintendent Lawrence resigned and his successor, William M. Geary, has been appointed. Dr. John V. Shoemaker has been added to the medical board, and certain other vacancies have been filled. Drs. Joseph Sailer and B. Franklin Stahl have been appointed medical registrars, and Dr. W. C. Pickett, neurologic registrar. Drs. Horace E. James and Edwin H. Miller have been appointed district physicians to the third and eighteenth wards, respectively.

ANTIVACCINATION SOCIETY.

The *Philadelphia Press*, of June 12, prints the following from a public speech made by Lawyer C. Oscar Beasley, the Pennsylvania representative of the Antivaccination Society: "I wish to say to this Court that I have proof in my possession, which I intend to present to the criminal branch of the administration of justice, that the very calves which are inoculated in some of the vaccin farms, after being kept for eight days, are carted away in the night and sold in the Philadelphia markets as fresh meat." It is said that two men have for some time been making investigations of certain farms, and that suits are to be entered at an early day. It is also stated that as soon as a vaccinated child dies, the Antivaccination Society will enter suit against the attending physician, and an attack in open court will then be made on the vaccin farms. In this connection it might be interesting to note that a trial has just been concluded in which the efficacy of vaccination has been reviewed by Mr. Beasley, who in his address to the court quoted Dr. W. M. Welch as one of his authorities who denied its efficacy. This was no sooner published than Dr. Welch immediately had printed an open letter in which he denied such a charge, and said further that statistics he had published from time to time "form a long chain of evidence in support of the protective power of vaccination against smallpox, that is simply incontrovertible, and no one knows this better than Mr. Beasley himself."

MARYLAND.

DR. CHARLES A. WELLS, Hyattsville, has been unanimously endorsed by the Prince George County Convention as its candidate to represent the Fifth district in Congress. Dr. Wells, if nominated, will be a strong candidate, as he has practiced medicine in the district nearly forty years, and has many warm advocates in both political parties.

DR. LOUISE D. HOLMES, of the Woman's Medical College, Baltimore, has been elected assistant physician to the Springfield Asylum for the Insane at Sykesville. She will have charge of the large building for the female insane, to be opened July 1.

Baltimore.

IN THE Baltimore Medical College, Dr. J. M. Rowland has been appointed professor of obstetrics, vice Dr. Wilmer Brinton, resigned; and Dr. J. W. Lord, associate professor of anatomy, vice Dr. J. M. Rowland.

AS THE result of the examinations held in May, the State Board of Medical Examiners has granted licenses to seventy-five candidates to practice medicine in this state.

ARNOLD ELZEY Camp, United Confederate Veterans, elected Dr. George H. Eyster, surgeon, and Dr. W. R. McKuen, assistant surgeon.

MEDICAL DEPARTMENT OF JOHNS HOPKINS UNIVERSITY.

At the twenty-fourth commencement, held June 13, forty-three received diplomas, among whom were thirteen women. The graduates were presented by Dr. William H. Howell, professor of physiology; the degrees were conferred by Prof. Basil L. Gildersleeve, and Dr. Osler delivered the address. The following appointments have been made: Thomas S. Cullen and

Wm. W. Russell, associate professors of gynecology; George P. Dryer, Ph.D., associate professor of physiology; Reid Hunt, Ph.D., associate professor of pharmacology; Norman McL. Harris, associate in bacteriology; Wm. G. MacCallum, associate in pathology; Percy M. Dawson, instructor in physiology; Charles P. Emerson, instructor in medicine; Eugene L. Opie, instructor in pathology; Merwin T. Sudler, Ph.D., instructor in anatomy; Wm. S. Baer, assistant in orthopedic surgery; Warren H. Lewis, assistant in anatomy; Frank W. Lynch, assistant in obstetrics; John B. McCallum, assistant in anatomy; Harry T. Marshall, assistant in pathology.

OHIO.

Columbus.

DR. J. A. BURGOYNE has been reappointed physician for the Institution for the Deaf.

DR. F. F. LAWRENCE had the degree of doctor of science conferred on him by Baldwin University at the commencement exercises held recently.

Cincinnati.

THE BOARD of Trustees has added the following to the faculty of the medical department of the University of Cincinnati: William Muehlberg, demonstrator of physiology; Brooks Beebe, professor of nervous and mental disease; D. I. Wolfstein, professor of pathology.

THE TRUSTEES of the Laura Memorial College have elected officers as follows: Alexander McDonald, president; Rev. H. M. Curtis, vice president; Richard Folsom, treasurer, and Rev. J. L. Taylor, secretary. Professor Norton resigned, and Drs. R. G. Boone and C. D. Todd were elected to fill vacancies. Dr. Elizabeth Campbell was elected to the chair of theory and practice, and Dr. William Muehlberg, professor of physiology.

MICHIGAN.

DR. R. S. LINN, Detroit, has been appointed an acting assistant-surgeon, U. S. A., with the rank of first lieutenant, and will go to the Philippines.

THE MEDICAL library of the University of Michigan, through Dr. George Dock, has recently come into possession of a rare and valuable book—Laenneck's work on Auscultation and Diseases of the Lungs and Heart.

CALIFORNIA.

A HOSPITAL building for sick children is being erected at San Anselmo, on the grounds of the California Presbyterian Orphanage. The funds are furnished by the King's Daughters of the First Presbyterian Church of Oakland.

PLAGUE PRECAUTIONS.

TO PROTECT Southern California against the bubonic plague, Dr S. J. Quint has been appointed by the United States Marine-Hospital Service and stationed at Kern City to inspect all trains coming south. As a further precaution, in Los Angeles, the health officer is keeping a close watch over Chinatown, and has been empowered to take such action as he deems best to place it in a proper sanitary condition.

Los Angeles.

A class of eighteen was graduated at the commencement exercises of the medical department of the University of Southern California, held June 12. Dr. W. LeMoyné Wills delivered the address in behalf of the faculty, taking as his subject, "A Better Preliminary Education for Medical Students."

MORTALITY STATISTICS.

The number of deaths for May were 146, equal to a rate of 17 per 1000. Contagious diseases reported during the month were: diphtheria, 8; scarlet fever, 16; typhoid fever, 11; measles, 434. There were 30 deaths from pulmonary consumption. On account of the time consumed in recording cases of a disease not usually serious, the Board of Health revoked the rule requiring the reporting of measles, and established a new order directing physicians to report all cases of tuberculosis.

MINNESOTA.

THE GRADUATING exercises of the medical department of

Handline University, Minneapolis, were held June 6. Eighteen received diplomas.

INDIANA.

Dr. S. R. CUNNINGHAM, Indianapolis, has been appointed assistant surgeon of the Northern Indiana Hospital for the Insane, at Logansport.

KANSAS.

A FORTY-ACRE tract of land between Pittsburg and Frontenac has been given to the coal miners of southeastern Kansas for hospital purposes by C. J. Devlin. A model building is to be erected, at a cost of about \$12,000, most of the money being supplied by Mr. Devlin. The hospital will be in charge of the Sisters of St. Joseph, of Wichita.

ABOLITION OF STATE BOARD OF HEALTH.

Dr. W. B. SWAN, secretary of the State Board of Health, believes that the legislature would make a mistake if it abolished the Board and created, in its stead, the office of Health Commissioner. He said: "It has been done in several states, and always with unsatisfactory results. I believe it is best to leave it as it is. The members of the Kansas Board do not draw salaries, and their *per diem* and mileage once in three months amount to comparatively nothing. They come from the different parts of the state with a full knowledge of the health situation, and in a few hours' conference are prepared to act intelligently on the questions that may arise. Taking into consideration the importance of the Board of Health, I am sure that it is the most inexpensive department of the state government."

The conversation in which Dr. Swan thus expressed himself was brought about by a reference to a recent interview in which Governor Stanley stated that, if re-elected, he would recommend that the Board of Health be abolished and that the office of Health Commissioner be created in its stead. The governor's idea was that the Board was a useless body because it was not on the spot; that the secretary or commissioner, being present, always knew what was going on, and in cases of emergency could act promptly. The governor said that he had not been shown that the health board had ever been of any service to the secretary.

AUSTRALIA.

Sydney.

A CASE of exophthalmic goiter has been observed here which is of interest owing to the fact that the patient comes from a mountain town where the supply of water is from a clear stream. Nine other cases in the village seem to be similar to those reported from Switzerland. Good results in this case are being obtained from the use of galvanism, ice-bag to the heart, and hydrotherapeutic measures.

THE PLAGUE.

The total number of cases to May 21, the date of this communication, is 240 and the total number of deaths 83. There were 23 new cases reported this week and the same number last week. There are 100 cases now under treatment. On account of the small number of cases developing among contacts the Medical Association has asked the Premier that they be not quarantined and he has given the Sydney Board of Health power to use their own discretion in the various cases. Among the Chinese eight new cases developed, seven of which proved fatal. Now, an inspection of every Chinese residence in Sydney and its suburbs has been ordered. Some of the islands are apparently imposing a strict quarantine against vessels from Sydney. The *John Williams*, a ship of the London Missionary Society left here for Rarotonga of the Cook Islands, but on her arrival there no communication with the shore was permitted.

CANADA.

Toronto.

ASSOCIATION FOR TREATMENT OF TUBERCULOSIS.

A number of medical men and many other prominent citizens assembled in the City Hall, June 13, pursuant to the resolutions adopted by the Ontario Medical Association, for the formation of a provincial society for the prevention and

treatment of tuberculosis. Toronto was established as the headquarters of the Association, with Dr. James Thorburn as president and Dr. P. H. Bryce as secretary.

VICTORIA HOSPITAL FOR SICK CHILDREN.

The following summaries show the operations of this hospital during the year: Under treatment Oct. 1, 1898, 94; admitted during the year, 576; discharged, 519; died, 42; under treatment Sept. 30, 1899, 109; total, 670, of whom 376 were males and 294 females. There were 27 cases of typhoid fever during the year. This week over 100 of these little patients were conveyed over to their summer home on Toronto Island, the Lakeside Home, built through the generosity of Mr. John Ross Robertson, M.P.

TORONTO GENERAL HOSPITAL.

The number under treatment in all departments of this hospital which includes the Burnside Lying-in Hospital and the Andrew Mercer Eye and Ear Infirmary, on Oct. 1, 1898, was 267; admitted during the year 1899, 286; births in the hospital, 135; total number under treatment, 3388; discharges, including infants, 2922; died, 206; under treatment Sept. 30, 1899, 260. Of the 3388 persons treated during the year, 176 males and 111 females were inmates of the Andrew Mercer Eye and Ear Infirmary, and 302 in the Burnside Lying-in Hospital. The latter number includes 76 male and 59 female children born in the institution. There were 150 cases of typhoid fever and three of puerperal fever present in the year. The total revenue amounted to \$76,633.13.

ONTARIO MEDICAL COUNCIL.

The thirty-fifth annual meeting of the Medical Council of the College of Physicians and Surgeons of Ontario has been in session here the past week. The election of officers resulted as follows: president, Wm. Britton, Toronto; vice-president, W. W. Dickson, Pembroke; registrar, R. A. Pyne, Toronto (re-elected); treasurer, H. Wilberforce Aikens, Toronto (re-elected); solicitor, B. B. Osler, Q. C., Toronto (re-elected); auditor, James Carlyle, Toronto. Resolutions were introduced in regard to inter-provincial registration, and referred to a special committee for a report, which has not yet been presented. The property committee recommended that the medical Council building in Toronto should not now be offered for sale. The new prosecuting officer reported that in the seven months since he assumed office, 63 cases had been handled, and 30 convictions had been secured with an average cost of \$2.38 each. The Council refused to appoint a delegate to the board of governors of the Victorian Order of Nurses, as they considered it outside its jurisdiction. Under the discussion of charges of unprofessional conduct in the profession, two cases were considered; one was allowed to go on suspended sentence; the other was stricken from the rolls, because it was shown that he had advertised certain cures for tuberculosis. The case of the local practitioner who was mixed up with a "cancer doctor," was instructed to be further investigated. The following will comprise the discipline committee for the next year: Dr. J. L. Bray, of Chatham; Dr. V. H. Moore, Brockville; and Dr. Cl. T. Campbell, London. The executive committee was elected as follows: Dr. Britton, Toronto; Dr. Henderson and Dr. Dickson.

TORONTO UNIVERSITY.

The first annual meeting of the alumni association was held on the afternoon of June 12, the president, Dr. R. A. Reeve, dean of the medical faculty, presiding. Arrangements were made for the publication of a journal in the interests of the university, to be called *The University of Toronto Monthly*. Dr. Reeve was re-elected president by acclamation. At the first alumni dinner in the evening four hundred were present. The chief speakers were Chief Justice Sir William R. Meredith, the new chancellor of the University, and Sir Charles Tupper, leader of the opposition in the Canadian House of Commons. The chancellor's address was listened to with the greatest attention, particularly that part relating to the trouble between the medical department and Trinity Medical College. He thought that, while the solution of these difficulties rested with the legislature of the province, the University would consider all complaints, carefully and wisely, but it would never agree of its own will, unless compelled by the Legislature, to surrender the medical faculty as a branch

of its work. He declared in favor of the University of the Province being a state institution. In connection with this matter it is understood that Trinity Medical College has appointed a committee to wait on the Senate with regard to amalgamation of the two faculties. On the afternoon of June 14, the degrees in medicine, arts, etc., were conferred on forty-four. At the alumni meeting Dr. Reeve called the attention of the members to the fact that the graduates of Toronto University in all departments now numbered something like 10,000, and it would be important for them to discuss and consider in the interval before the next annual meeting, the question of parliamentary representation.

PARIS LETTER.

MEDICAL TRIPS TO WATERING PLACES.

Dr. Carron de la Carrière, former interne of the Paris hospitals, is at the head of a scientific movement, which consists in undertaking every year a journey to the principal mineral waters of France. Last year 97 medical men, among whom could be counted a certain number of foreigners, such as Ehlers of Copenhagen, Vanelroy of Brussels, and Laache of Christiania, undertook this trip and visited Nérès, La Bourboule, le Mont-Dore, St. Nectaire, Royat, Châtel-Guyon, Bourbon-l'Archambault, Bourbon-Lancy, St. Honoré, Pougues, the sanitarium of Durtol, and Vichy. Dr. Landouzy, who is professor of therapeutics at the Faculty of Medicine, was the scientific director of this excursion, and delivered lectures at each watering-place on its advantages, the qualities of the waters, the methods used, and the results obtained.

A similar excursion will be undertaken this year under the guidance of Dr. Landouzy, which will include the Southwestern bathing resorts: Bagnères de Suchon, Capvern, Bagnères de Bigorre, Argelès, Barèges, St. Sauveur, Cauterets, Eaux-Bonnes, Eaux-Chaudes, Saint-Christan, Pau, Salies-de-Bearn, Biarritz, Cambo, Hendaye, Dax, Arcachon.

For American medical men in France for the exhibition this would not only be an easy way of acquiring information regarding these waters, but also an economical and delightful means of seeing one of the most beautiful parts of France, and the Pyrenees.

RUBBER GLOVES IN SURGERY.

At the last meeting of the Society of Surgery a discussion was held on the use of gloves in operative surgery and the precautions necessary to ensure complete asepsis of the hands. Some surgeons declared that gloves were quite useless, while others maintained that they were a great element of security.

Another point discussed was whether a surgeon should operate when he has been in attendance on an infectious case during the preceding twenty-four hours.

Dr. Quénu, surgeon at the Cochin Hospital, referred to his last year's report, based on the statistics of this service during 1897 and 1898, and insisted on the following points: The patient should be bathed at least five or six times, and the last time, soap, alcohol and ether should be used. Rubber gloves should be worn, as complete asepsis is thereby obtained. They should, however, be used only in certain cases, such as operations on infected patients. When it is found necessary to do without them, on account of delicacy of touch needed during the operation, it will be found advantageous to put on sterilized gloves if one is obliged to operate soon after.

Dr. Quénu said that he used for his ligations rubber thread, as it was more easily sterilized than silk, was more compact, and stronger. Dr. Quénu's remarks brought forth some objections from Dr. Roehaud, who asked Dr. Quénu if he thought it wise for surgeons to visit dissecting-rooms. This was a veiled allusion to the fact that Dr. Quénu is chief of practical work at the dissecting-rooms belonging to the hospitals—the amphitheater of Clamart. Dr. Quénu answered that he did not consider the subjects used in dissecting work as very virulent, that the use of gloves while dissecting was sufficient protection, and that the chief of a surgical service should never attend autopsies. The discussion was taken up two weeks later by Dr. Bazzy, who told the Society that, after having put his fingers into various virulent cultures, and washed his hands with the greatest care, he had performed laparotomy on four rabbits, and had handled their intestines. The rabbits,

which he showed, made a speedy recovery. Four other rabbits were treated in like manner, without any antiseptic precautions being taken, and they all died in a few hours.

MASSAGE OF THE HEART IN SYNOPE.

Dr. Bazzy, who has a wide reputation as a genito-urinary specialist, is a plain-spoken man, and does not believe in complicating operations too much. When Dr. Tuffier described his method of massage of the heart in syncope, during the administration of chloroform, and indicated how the incision should be made to uncover the heart, Dr. Bazzy said: "Gentlemen, I have seen this operation carried out, and it was something awful to behold—*c'était effrayant*."

MEDICAL EXHIBIT AT THE EXPOSITION.

The Assistance Publique, as it is called in Paris, i. e., the organization which sees to the care and sustenance of the sick and the poor, is the largest and most important body of its kind in the world. Its exhibit is in the Pavilion of the City of Paris, and is on the whole rather disappointing. Foreign physicians can best see the working of the hospitals by visiting the new wards opened in the Cochin and Enfants Malades Hospitals, or by inspecting the Boucicaut Hospital, which is the finest of its type in France. Among some rather dry material of the exhibit, such as graphic charts of infectious diseases, increase in the number of patients, etc., there are two relics of former times which will excite the interest of everyone. One is an old four-posted bed, in use at the Hôtel Dieu during the eighteenth century, which was sometimes used for four patients. Wax effigies represent the patients lying in bed, three of them being stretched out, and a fourth warming himself beside a brazier. The bed is covered with a species of canopy surrounded with red cloth curtains, and there is a green baize coverlet over the bed. On the other side of the room is shown the new style of iron bed, with iron and porcelain night-table, glass spittoon, and all the different modern articles in use in a hospital.

In the next room is the representation of the hole in the wall through which foundlings were passed into the Foundling's Hospital, or Hôpital des Enfants Assistés. This large opening was furnished with a cradle turning in a sort of large box. The woman who wished to abandon her child put it in the cradle, rang the bell, and the watchman inside the building made the box revolve on its pivot and took out the child. This is what was called in olden times a "tour," and was in use up to 1850. Since that time children are registered at a special office. Surgical instruments are also exhibited; some of which date from the time of Dupuytren.

SMALLPOX AT LYONS.

Lyons has been having a rather severe epidemic of variola, to judge from the statistics furnished. From February 16 till April 30, there were 308 cases of smallpox with 66 deaths. As there were 12 deaths among patients outside the hospitals, this makes an average of 9 deaths a week. Since the beginning of May there has been an increase in the disease, as 77 new cases were reported from the 2d to the 9th of May.

HEALTH OF PARIS.

In Paris there seems to be very few cases of smallpox and the general health of the city has remained quite satisfactory. This condition of the public health is of great importance, on account of the exhibition, as any rumor of an outbreak of plague or smallpox would precipitate a financial disaster.

Correspondence.

Hypothetical Questions in a Suit for Malpractice.

TOLEDO, OHIO, JUNE 8, 1900.

To the Editor:—Recently in this city, in a malpractice suit, the following questions were asked:

Assuming that upon a surgical operation, through the usual incision for appendicitis, a surgeon finds the appendix normal, and the condition of the surrounding parts so satisfactory that he returns the appendix to its former position, and permanently closes the incision without drainage, by through-and-through silk-worm gut sutures, reinforced by buried kangaroo tendons, through the peritoneal parts, and immediately thereafter makes an incision in the median line, and removes a

ruptured tubal pregnancy, leaving the surrounding parts in such condition that he permanently closes the latter incision without drainage, with through-and-through silk-worm gut sutures, reinforced by buried kangaroo tendons, through the peritoneal parts, and within ten days thereafter, preceded by great abdominal pains, pus forces its way through the first incision in such quantities that a cotton pad one inch thick, by eight inches square, is to half its extent, twice a day saturated thereby, and such pus, without diminution, continues to discharge for the period of ninety days, to what would you, as a physician and surgeon, attribute the origin of such pus?

What would you do under such circumstances?

If the same conditions continued for four months, to what would you attribute the origin of such pus? What would you do, etc.?

If the same conditions existed for six months, to what would you attribute the origin of said pus? What would you do, etc.?

If the same conditions existed for nine months, to what would you attribute the origin of said pus? What would you do, etc.?

If the same conditions existed for twelve months, to what would you attribute the origin of said pus? What would you do, etc.?

If, after eighteen (18) months, the same conditions, having continued to exist, the said first incision being opened up, and there should be found in the abdominal cavity, a cheese-cloth sponge, composed of eight layers of cheese-cloth $2\frac{1}{2} \times 3$ inches in size, saturated by pus, and the same had been in said cavity from the time of the first incision, to what would you attribute the origin of said pus, so discharging during said eighteen months?

The grounds for the suit as alleged by the plaintiff are sufficiently well outlined by the questions. The legal points which the plaintiff undertook to prove were lack of ordinary care and skill in making the operation, and inattention, neglect, and lack of ordinary skill in the care of the patient after the operation.

Medical experts were examined on the steps of an ordinarily skillful operation, the amount of pus which an infected kangaroo tendon would or could cause to be secreted but the question which caused experts the most trouble, was to fix a time after an operation where, if conditions as mentioned in the hypothetical question had supervened, they would cease to wait for nature to right the trouble, and they would seek to do so by surgical means. The examination of one expert elicited the fact that he himself had in one instance waited for six years for nature to discharge a suture which he had introduced during the operation. Only the experts for the plaintiff were heard, as at the close of the plaintiff's evidence the defendant moved to dismiss the case because the statute limitation had expired before the proceeding had been begun, and the court so held.

One of the most powerful influences, because the most subtle, which leads to the physician's decision in such a case is a purely psychologic one, and one which he ought always to be on the lookout for. There can be no question that a physician will, with less personal disquiet, invoke surgical influences in such a case as the above, if it be referred to him, than in a case of his own. And where a physician's desire is strong in a given direction, it is astonishing how that desire will cover up unwelcome symptoms, and how it will exaggerate the diagnostic and prognostic value of intercurrent and unimportant ones.

The case is to be carried up on error.

JAMES L. TRACY.

Value of the Medical Visit.

ST. LOUIS, June 14, 1900.

To the Editor:—The following is one of many letters which I have received since the publication of my communication on "The Value of the Medical Visit" in THE JOURNAL of June 2. (p. 1430):

TOLEDO, June 7, 1900.

C. H. HUGHES, M.D.:

ST. LOUIS, Mo.:

My Dear Doctor:—Kindly tell me if you ever knew a physician who did or could carry into practice the very truthful

propositions of what ought to be done, as outlined in your letter in THE JOURNAL.

I believe it is a fact that in this city, a recent graduate is more likely to demand a good fee than is the man whose long experience should entitle him to it, and I think that the universal practice is to charge one price for a visit.

Respectfully, _____,

Replying to this and many other letters, I would say that I always estimate a visit according to what I do for the patient; according to the time spent with him and lost from my office or hours of study and investigation; according to the time passed since I graduated; according to the ability or non-ability to compensate for full value of service; according to special manipulative and technical skill demanded and the value of advice given, as growing out of the facts learned and the skill and experience possessed.

For all to charge one price for a visit is to rob experience of its due value, and younger medical men of legitimate opportunity in practice.

C. H. HUGHES, M.D.

Medical Transactions.

HARTFORD, CONN., June 16, 1900.

To the Editor:—Volumes of transactions of medical societies are very often disappointing to the reader. It is a question whether the publication of such volumes has more than a mere local interest. The criticism often made of the papers of the AMERICAN MEDICAL ASSOCIATION is that they have only a personal and local interest, and rarely rise to the height of being real contributions to the literature of the subject. This was true in some cases years ago, but there has been a gradual and well-marked improvement since THE JOURNAL began to publish these papers. Each year's transactions show a larger proportion of well-rounded, thoroughly-studied papers, and this is the secret of the increasing respect which the ASSOCIATION is receiving in all quarters. State and local associations, whose published volumes of transactions are increasing rapidly year after year, have a local interest which should be encouraged. While many of them are but little above the ordinary journal in their ephemeral character, their value undoubtedly is more to the author than to the reader. As studies of psychology and the growth of medical thought and practice, they are exceedingly interesting.

A study of the transactions of different states is very interesting and is probably on a par with the sermons of the divines of a hundred years ago. Papers read in these local and state societies, when confined to epidemics and discussion of local conditions falling under the observation of the author, have great value, but when the author goes out into the field of medicine, discusses larger topics and draws weighty conclusions concerning scientific theories and movements, the value of his contribution is lost. The most valuable papers ever presented to the AMERICAN MEDICAL ASSOCIATION were local personal studies of diseases and methods of treatment which the author had discovered and tested in his experience. If they were extreme and unsupported by other deductions, or contrary to the present experience, the test of time always brought them into prominence or forgetfulness. An author who gives his personal experience, with the facts on which it is based, no matter what transactions it may be published in, is sure of recognition if his conclusions are correct.

The value of these local transactions is more largely in the culture and practice which it brings to the author in putting his ideas into print. Until recently papers of this class were almost the only biographical data which could be found regarding physicians at death. A recent critic has very severely commented on the uselessness of many of these volumes of state and society transactions. This is only partially true, for while it may have only slight value outside of the vicinity, it certainly is worth the publication and the effort to perpetuate it. The same critic has found in volumes of transactions of societies of specialists a dreary waste of words and unfounded theories. This is also an error, although some articles written by specialists abound in technical terms in such a profusion as to indicate darkening counsel with words. A few text-books are marred by this defect. The reader is obliged to get down a modern dictionary to follow the author.

and when, with great labor, he has discovered the meaning, it is trivial and unimportant.

The literature of medicine has attained such proportions that it attracts an army of writers who seek to appear on the printed page rather than to become instructors or teachers of new facts. Our ASSOCIATION meetings are gradually drawing the lines, trying to eliminate writers who have nothing to say and writers who serve up old theories without the favor of novelty or personality. This is being accomplished in the Sections very largely. Better papers are called for, and shorter time is given, forcing the writer to condense what he has to say, to the great satisfaction of the listener. At the International Congresses at Moscow, and elsewhere, this great defect of inferior papers bids fair to destroy their usefulness. At Paris an effort will be made to check this in some measure, but the difficulty is very great. Large numbers of men will insist on reading papers that contain no new facts, to the disgust of those who have real contributions. At the meeting at Atlantic City, the officers of several sections made strenuous efforts to raise the grade of the papers offered and to keep out old discussions of common-place subjects unless by men of acknowledged ability. Authors of papers should never forget that the scope of the AMERICAN MEDICAL ASSOCIATION is far broader than that of little sectional gatherings.

Through the columns of THE JOURNAL, papers come before thousands of the best men in the profession, and unless these authors have something to say and say it briefly and clearly, their efforts will be unnoticed. In a local medical society or in a state society the personality of essayists will attract readers and attention, and the transactions in which these papers are published will keep up a personal interest not noticed otherwise. It is an error to suppose that a paper which is praised at the local society will receive equal praise when brought before the general profession. Many a man has become disgusted at not receiving the attention for his contribution before the AMERICAN MEDICAL ASSOCIATION which was granted to him by his local society, and has attributed it to jealousy and ring rule. Many of the bitter enemies of our ASSOCIATION have become deluded with this idea and have become bitter detractors. Notwithstanding this, the ASSOCIATION goes on, aiming to be national in its efforts and work, and broad and catholic in its recognition of scientific facts everywhere. The seeker for mutual admiration and the mutual admiration society should confine his efforts to his local society and live in its transactions. T. D. CROTHERS, M.D.

Book Notices.

DISEASES OF THE GALL-BLADDER AND BILE-DUCTS, INCLUDING GALL-STONES. By A. W. Mayo Robson, F.R.C.S., Senior Surgeon to the General Infirmary at Leeds, assisted by Farquhar Macrae, M.B., C.M. (Glas.). Second Edition. Cloth. Pp. 313. Price, \$3. New York: William Wood & Co. 1900.

This second edition of Mayo Robson's lectures on "Diseases of the Gall-Bladder and Bile-Ducts" contains, in addition to the former contents, chapters on Membranous Cholecystitis and on Gall-Stones, and numerous additions throughout the text. The cases have been classified, instead of being all grouped together at the end of the work, of which they take up about one-fourth or one-third in tabulated form. The series illustrates the advance that has been made in the surgery of this region, and the much more favorable results of late years.

DISEASES OF THE NOSE AND THROAT. By J. Price-Brown, M.B., L.R.C.P.E., Member of the College of Physicians and Surgeons of Ontario; Laryngologist to the Toronto Western Hospital; Laryngologist to the Protestant Orphans' Home; Fellow of the American Laryngological, Rhinological, and Otolological Society; Member of the British Medical Association, the Pan-American Medical Congress, the Canadian Medical Association, the Ontario Medical Association, Etc. Illustrated with 159 Engravings, including 6 Full-Page Color-plates and 9 Color-cuts in the text. Cloth. Pp. 470. Price, \$3.50. Philadelphia: The F. A. Davis Co. 1900.

This handsome volume, by a prominent Canadian physician, is a very valuable addition to the literature of diseases of the

nose and throat. The author has given the results of his experience, as a specialist and general practitioner, with these affections, in a practical way that can not but be of value to the student and practicing physician. Certain subjects which are generally included are omitted, for reasons stated by the author in his preface. Aural affections, for example, which are usually included with diseases of the nose and throat, are only incidentally touched upon, and the subject of diphtheria is entirely left aside. The only omissions, however, which might have been better avoided are some slight ones in regard to special points, such, for example, as the use of suprarenal extract, which certainly has a place in works on nose and throat diseases, but which we do not here find alluded to. It is not a work to post a person fully on the subject if we give it its usual limits, but so far as it goes it is a most valuable addition to the literature.

THE IRRIGATION TREATMENT OF GONORRHEA: ITS LOCAL COMPLICATIONS AND SEQUELE. By Ferd C. Valentine, M.D., Professor of Genito-Urinary Diseases, New York School of Medicine. Illustrated by fifty-seven engravings. Cloth. Pp. 221. Price, \$2. New York: William Wood & Co. 1900.

The object of this work, according to the author's statement at the close, is to "place before those physicians who may not be thoroughly familiar therewith:

1. The rationale and technique of irrigations in acute gonorrhoea.
2. The advantages of dilatations and irrigations in chronic gonorrhoea.
3. The dangers of uncured gonorrhoea, and the means of locating the foci of the disease, especially after its external manifestations have subsided.
4. To urge physicians to use their influence for the dissemination of a better understanding of the disease.

Comparatively few text-books treat of this special therapeutic method in this disease, the importance of which has only of late been fully appreciated. As the book is intended for the general practitioner, to whom it is dedicated by the author, it will, without doubt, fill a very useful place in medical literature. It is clearly written, very fully illustrated, and covers the subject in an exhaustive way. We trust the general practitioner will appreciate and utilize it.

HOME NURSING. MODERN SCIENTIFIC METHODS FOR THE CARE OF THE SICK. By Eveleen Harrison. Cloth. Pp. 325. Price, \$1. New York: The Macmillan Co. London: Macmillan & Co., Ltd. 1900.

This little work contains a description of the general principles and methods of nursing as applied to the home care of the sick, and, therefore, ought to serve a very useful purpose. There are many cases, as the author says, where the trained nurse is not really required, and many others where the expense is an unsurmountable bar to her employment, and it is for such cases as these that the book is designed. So far as we can see, it contains a very valuable amount of information excellently given, and can not help but be of service. There are one or two cases where we might take exception. It is possible that some of the directions in regard to poisoning are too general. In the main, however, the author is safe in her recommendations, and the book can be most heartily indorsed, as a whole, for the purpose for which it is intended.

SERUM THERAPY. Published by the Scientific Department of Frederick Stearns & Co., Detroit, Mich.

This brochure of fifty pages contains matter of interest regarding serum therapy, how antitoxin serums are produced, directions for the collection and transmission of specimens of sputum, etc., for bacteriologic examinations, and other valuable information.

ANESTHETICS: THEIR USES AND ADMINISTRATION. By Dudley Wilmot Buxton, M.D., B.S., Member of the Royal College of Physicians. Third Edition. Cloth. Pp. 320. Price, \$1.50. London: H. K. Lewis. Philadelphia: P. Blakiston's Son & Co. 1900.

This volume is the third edition of a comparatively well-known English work, which has been out of print some time, revised and brought up to date. The main additions are descriptions of methods of giving nitrous oxid in combination with oxygen, ether in combination with oxygen, Dr. Flux's open method of giving nitrous oxid, Schleich's methods of local

and general anesthesia, and Bier's method of intrathecal cocainization, but which should be more properly credited to Corning, our own countryman. The methods also for prolonging anesthesia under nitrous oxid are noticed. For a convenient manual on the general subject, it will serve a useful purpose.

Deaths and Obituaries.

RESOLUTIONS ON DEATH OF DR. MILLER.

The following resolutions on the death of Dr. Truman W. Miller, which was noticed in THE JOURNAL, June 2, were passed by the ASSOCIATION at its recent meeting:

WHEREAS, On the eve of this annual meeting, Dr. Truman W. Miller, vice-president of the Board of Trustees, departed this life; and

WHEREAS, During his many years of membership and office in this ASSOCIATION, Dr. Miller had by his force of character his business ability and his untiring energy rendered valuable services to it; and

WHEREAS, During his long career in the practice of medicine, covering thirty-seven years, and reaching from the Civil War, in which he served as surgeon, until a few months ago, when he was stricken by his final illness, he had occupied a front rank in our profession, particularly as an educator and as a friend and counselor of younger members; and

WHEREAS, By his personal traits of character, his integrity, his good-heartedness and his readiness to help and advise, he had endeared himself to all who knew him; therefore be it

Resolved, That the AMERICAN MEDICAL ASSOCIATION deeply deprecates his loss to the medical profession and to itself, and extends to his family its sincere sympathy and condolence.

WILLIAM PIERSON, M.D., New York University, 1852, died at his home in Orange, N. J., June 12. He was born Nov. 20, 1830, and was the eldest son of Dr. William Pierson, whose name was long prominent in the medical annals of his state. He was secretary of the New Jersey State Medical Society for thirty years, afterward its vice-president for an extended term, and at the recent annual meeting in Atlantic City was elected its president. He was the attending physician to the St. Michael's and St. Barnabas' hospitals and medical director of the Orange Memorial Hospital.

RAPHAEL EDMONSTON, M.D., died in Manila, June 5, aged 27 years. He was graduated from the medical department of the Georgetown University in 1897, and during the Spanish-American War received an appointment of assistant-surgeon. In February, 1899, he was ordered to the Philippines, where he was engaged throughout the Luzon campaign.

ELDRIDGE K. LEONARD, M.D., licentiate of the Connecticut Medical Society, of which body he was also a member, died at his home in Rockville, Conn., June 13, aged 69 years. Dr. Leonard assisted the late Dr. Storrs, of Hartford, Conn., in an operation two weeks previously and contracted septicaemia. The case was a hepatic abscess.

GEO. H. TREBEL, M.D., Hamilton, Ind., died June 9, aged 35 years. He was graduated from Capital University in Columbus, Ohio, also from Miami Medical College in Cincinnati. He had since practiced in Hamilton, with the exception of one year spent in study in Germany and France.

J. HARRIS OXNER, M.D., died in Rome, N. Y., June 8, aged 58 years. He was graduated from the medical department of the University of Michigan in the class of 1880, and had since practiced in Rome.

WILLIAM B. RIBBLE, M.D., Berkshire Medical College, Mass., class of 1849, died from cerebral apoplexy at his home in East Millstone, N. J., June 10. He was over 75 years of age, and was well-known as an active practitioner.

GEORGE M. BEAKES, M.D., Albany, 1856, died of paralysis at his home in Beekingburg, N. Y., June 16. He served during the Civil War as a surgeon of the Fifty-sixth N. Y. Vol. Infantry.

JOSEPH BEJACH, M.D., assistant physician in the St. Louis Hospital, died June 9. He was a graduate of the medical department of Washington University, class of 1899.

EDWARD MARIS, M.D., Jefferson Medical College, 1856, died at his home in Philadelphia, June 13, aged 68 years.

J. E. KIMBALL, M.D., died in Nashua, N. H., June 8, aged 41 years. He was graduated from the medical department of the University of Vermont in 1886.

Miscellany.

The Abortive Treatment of Suppuration of the Eyeball.—In the treatment of suppuration of the eyeball from various causes, Snell (*The Lancet*, March 31, 1900, p. 925), after the administration of ether, divides the cornea with a cataract-knife or with Beer's knife, unless it is already destroyed. He then removes the remains of the cornea up to the sclera with scissors. The remaining contents of the globe of the eye are extracted with forceps, and the interior of the globe is cleansed with Mules' scoop, or cotton-wool and forceps may be employed to wipe out the contents. Finally, sublimate solution is freely syringed into the cavity of the eye until all of the contents have been removed or washed away, and only the bared sclerotic remains. Gauze is lightly packed into the eyeball and a bandage is applied. The dressings are changed on the night after the operation, and during the next few days the eye is syringed twice a day and the gauze reapplied.

NEW PATENTS.

- Patents of interest to Physicians, June 5 and 12.
- 650,822. Ligature tier. Milton Cain, Jarholo, Kan.
650,933. Disinfectant composition. Eugene Fournier, Paris, France.
- 651,310. Bed or douche pan. Daniel Hogan, New York City.
651,047. Sprayer or atomizer. Clinton H. Leggett, New York City.
- 651,048. Sprayer or atomizer. Clinton H. Leggett, New York City.
- 651,150. Vaporizer. James H. Valentine, Chatbam, N. J.
651,061. Diamidionaphthol. Arthur Weinberg, Frankfort-on-the-Main, Germany.
- 32,788. Design. Bed pan. Daniel Hogan, New York City.
651,777. Electrotherapeutic apparatus. Fred H. Brown, Chicago.
651,346. Making cyanids. August Dzuk, Hanover, Germany.
651,605. Hospital buggy. Louis E. Hoffman, Cleveland, Ohio.
651,761. Device for lifting and moving the sick. Charles W. Jones, Grand Rapids, Mich.
- 651,717. Apparatus for concentrating sulphuric acid. Jacques L. Kessler, Clermont-Ferrand, France.
- 651,738. Invalid's bed. Samuel Nicholls, Sr., Kenesaw, Neb.
651,470. Speculum. Charles J. Philling, Lansdowne, Pa.
651,472. Electrical appliance for the cure of deafness. Wm. J. Tindall, New York City.

CHANGE OF ADDRESS.

- Dr. A. L. Anderson, from 912 Walnut St. to Rookery Bldg., Kansas City, Mo.
- Dr. F. F. Bryan, from Newberry Hotel, Chicago, to Georgetown, Ky.
- Dr. C. Bell, from Charlottesville, Va., to 1909 G St. N. W., Washington, D. C.
- Dr. C. Zimmer Corns, from Delmar to Sheffield, Ala.
- Dr. J. A. Corn, from Clifton, Kan., to City Hospital, Kansas City, Mo.
- Dr. C. J. Carson, from 2400 Dearborn St., Chicago, to Marten Bk., Marshall, Mich.
- Dr. H. B. Citron, from 56 E. 3d St., New York City, to 80 Columbia St., W. New Brighton, N. Y.
- Dr. G. N. Drysdale, from Crescent City to Yreka, Cal.
- Dr. R. J. Danner, from Louisville, Ky., to Elнора, Ind.
- Dr. H. M. Farney, from Shukert Bldg. to 3814 Windsor St., Kansas City, Mo.
- Dr. O. A. Plesburg, from Minneapolis to North Branch, Minn.
- Dr. L. G. Frankenthal, from 3236 Michigan Ave. to 48th and Kimbark Ave., Chicago.
- Dr. B. Getzlaff, from 126 Division St., Benton Harbor, Mich., to 368 Larrabee St., Chicago.
- Dr. M. D. Gibbs, from Victor to Altman, Colo.
- Dr. E. M. Hurst, from Mt. Meridian to Cloverdale, Ind.
- Dr. M. O. Heckard, from 1251 to 1276 W. Madison St., Chicago.
- Dr. H. P. Howard, from Alexandria to Burkes Garden, Va.
- Dr. E. M. Holmes, from Readyville to Bradyville, Tenn.
- Dr. W. S. Hamilton, from Chicago, Ill., to Normau, O. T.
- Dr. H. S. Herr, from 1195 Pearl St. to 57 Marlyn Ave., Cleveland, Ohio.
- Dr. P. H. Irish, from Minneapolis to Brainerd, Minn.
- Dr. E. A. Irwin, from Chicago, Ill., to Boulder, Mont.
- Dr. G. P. Kerrigan, from 358 Ogden Ave. to 241 S. Hoyne Ave., Chicago.
- Dr. H. C. Johnson, from 2601 Calumet Ave., Chicago, Ill., to 13 6th St., Fond du Lac, Wis.

Dr. J. A. Jeffries, Jr., from Charlottesville to Warrenton, Va.
 Dr. W. A. Logan, from Louisville, Ky., to Bryan, Ala.
 Dr. W. E. Brown, from Coalsville, Ohio, to Taylorsville, Ill.
 Dr. A. Lukens, from 1068 Lexington St., New York, to Pelham, N. Y.
 Dr. S. J. Lieberman, from 222 E. Broadway to 660 E. 173d St., New York City.
 Dr. J. F. Liken, from 2302 Cherry St. to 424 Melrose Ave., Toledo, Ohio.
 Dr. T. W. Morgan, from 41 Ladin St., Chicago, to Dawson, Ill.
 Dr. J. H. Miller, from 1901 Jefferson St., Baltimore, Md., to Pana, Ill.
 Dr. L. MacKenzie, from 143 Robert St., Toronto, Canada, to Dwight, Ill.
 Dr. G. W. Mahoney, from Venetian Bldg. to Room 306, 100 State St., Chicago.
 Dr. T. S. K. Morton, from Philadelphia, Pa., to Honnedaga, N. Y.
 Dr. C. S. Maxwell, from Kenansville to Mt. Olive, N. C.
 Dr. E. L. McCrea, from Lamar, Mo., to Table Rock, Neb.
 Dr. J. B. Mears, from Charlottesville to Keller, Va.
 Dr. H. C. Miller, from Detroit, Mich., to Gibbs Bk., Findlay, O.
 Dr. F. E. North, from Chattanooga, Tenn., to Cal. Woman's Hospital, San Francisco, Cal.
 Dr. G. W. Nihart, from Mendon to Petoskey, Mich.
 Dr. H. Nichell, from 80 Sycamore St. to 27 Days Park, Buffalo, N. Y.
 Dr. C. A. O'Quinn, from Dupont to Mayday, Ga.
 Dr. E. D. Powell, from Winona to Elliott, Miss.
 Dr. J. N. Rape, from Tebula to Moss Point, Miss.
 Dr. F. D. Reames, from Portland to Klamath Falls, Ore.
 Dr. T. J. Stiver, from 1640 Wilson St. to Masonic Temple, Denver, Colo.
 Dr. G. T. Spearman, from Hamilton to Leon Junction, Texas.
 Dr. J. W. Shaffer, from Sandusky, Ohio, to Cartwright, Pa.
 Dr. W. H. Valentine, from Minneapolis to Tracy, Minn.
 Dr. O. J. Westlake from 408 E. 12th St. to 1010 Main St., Kansas City, Mo.

Queries and Minor Notes.

REQUIREMENTS FOR PRACTICE IN NEW JERSEY.

ELMIRA, N. J., June 14, 1900.

To the Editor:—Will you kindly inform me regarding the requirements for the practice of medicine in the State of New Jersey?

M. C. B.

ANSWER:—The requirements in New Jersey are: 1. Evidence that the applicant is over 21. 2. Certificate of moral character from at least two physicians in good standing, one a resident of the State. 3. Graduation from a reputable literary or scientific college, high school, or academy, or a preliminary examination covering the subjects required by the board. The certificate of academic education must accompany the application. 4. A diploma from a legally incorporated medical college recognized in good standing by the board at the time of issue of the diploma in the United States, or a diploma conferring a full right to practice in all branches in some foreign country, and evidence that the applicant has studied medicine four years, including three courses of lectures in different years in a legally incorporated foreign or American medical college prior to granting of said diploma. 5. Examination by board of medical examiners which is given the third Tuesday and Wednesday of June and September of each year. The application for blank forms should be made to the secretary of the board, Dr. E. L. B. Godfrey, Camden, N. J.

LAWS GOVERNING THE PRACTICE OF MEDICINE.

GRAND RAPIDS, O., June 12, 1900.

To the Editor:—Will you please tell me where I can find the laws governing the practice of medicine in the different states? I especially wish to know the law governing the practice in the States of California and Utah. Respectfully,
 C. B. C.

ANSWER:—The latest full statement of the requirements for practice in the states is in the report of the Illinois State Board of Health for 1898. To practice in California a diploma from a regular medical college in good standing is required. It should be forwarded to the board of examiners, of which C. C. Wadsworth, 1144 Van Ness Ave., San Francisco, is the secretary. The fee is \$5. At the present time three full courses or lectures are required of the applicant before receiving a diploma. In Utah, both the diploma and an examination by the board of examiners are required. Examinations are held in Salt Lake City on the first Monday of January, July and October. The secretary of the board of examiners is Dr. Brint Stringham, Salt Lake City.

The Public Service.

ARMY CHANGES.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., June 2 to 6, 1900, inclusive:

Edward T. Comeya, major and surgeon, U. S. A., leave of absence granted.

Michael E. Hughes, acting asst.-surgeon, relieved from duty in the Department of Porto Rico; at the end of his present leave

of absence he will proceed from Adams, Mass., for duty in the Department of California.

Frank R. Keefer, major and surgeon, U. S. V., from San Francisco, Cal., to Washington, D. C., reporting for instructions to the surgeon-general.

James P. Kimball, lieut.-col., deputy surgeon-general, U. S. A., leave of absence granted.

Ben H. Metcalf, acting asst.-surgeon, from Winthrop, Mass., to duty at Fort Banks, Mass.

Samuel O. L. Potter, major and surgeon, U. S. V., now at San Francisco, Cal., to temporary duty in the Department of California.

Elmer A. Scherrer, acting asst.-surgeon, leave of absence from the Department of California extended.

Rodney D. Smith, acting asst.-surgeon, from Bloomington, Ind., to the Department of California.

Samuel M. Waterhouse, lieutenant and asst.-surgeon, U. S. A., from Fort Banks, Mass., to duty at Fort Meade, S. D.

Roy A. Wilson, acting asst.-surgeon, to Fort Slocum, N. Y., to accompany recruits to San Francisco, Cal., and return to his proper station, Fort Totten, N. Y.

Charles K. Winne, major and surgeon, U. S. A., member of a board to meet at Sheridan, Wyo., to examine into and report upon the most suitable site for a permanent military post on the military reservation near that place.

DEATH

General McArthur cabled from Manila, P. I., June 5, 1900, notice of the death of Lieut. Raphael A. Edmonston, asst.-surgeon, 34th Vol. Inf. of carbuncle of face.

NAVY CHANGES.

Changes in the medical corps of the U. S. Navy for the week ending June 9, 1900.

P. A. Surgeon A. M. D. McCormick, detached from the *Montgomery* and ordered to the *Chicago*.

Asst.-Surgeon J. H. Whiting, detached from the *Chicago* and ordered to the *Montgomery*.

P. A. Surgeon W. C. Braisted, ordered to the *Massachusetts* immediately.

P. A. Surgeon L. L. Von Wedekine, detached from the *Richmond* and ordered to the *Indiana* immediately.

Pharmacist S. W. Douglas ordered to additional duty on the *Massasett*.

MARINE-HOSPITAL CHANGES.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital Service for the seven days ending June 7, 1900.

Surgeon C. E. Banks, granted leave of absence for two months and 20 days from July 1, 1900.

Surgeon D. A. Carmichael, relieved from duty in the U. S. Consulate, and directed to assume command of the quarantine service at Honolulu, H. I., on June 14.

Asst.-Surgeon Taliaferro Clark, relieved from duty at the Tortugas quarantine station, and directed to proceed to Washington, D. C.

Asst.-Surgeon John McMullen, directed to assume command of the Tortugas quarantine station.

Asst.-Surgeon J. W. Amesse, directed to proceed to Honolulu, H. I., and report to Surgeon D. A. Carmichael for duty.

Acting Asst.-Surgeon L. C. Bean, granted leave of absence for 10 days from June 4.

Acting Asst.-Surgeon John E. Bready, granted leave of absence for 7 days from June 16.

Acting Asst.-Surgeon W. J. O'Reilly, granted leave of absence for 5 days from June 1.

Acting Asst.-Surgeon C. F. Ulrich, granted leave of absence for 29 days from June 1.

Hospital Steward and Chemist W. E. Macdowell, directed to report at the bureau for instructions preliminary to departure for Havana, Cuba.

Hospital Steward F. R. Hanrath, granted leave of absence for two months, on account of sickness, from date of being relieved from duty.

Hospital Steward S. W. Richardson, directed to rejoin station at St. Louis, Mo., and then to proceed to Savannah and Waycross, Ga., for special temporary duty.

Hospital Steward Myron R. Mason, relieved from duty at Portland, Me., and directed to proceed to Dutch Harbor, Alaska, and report to medical officer in command for duty and assignment to quarters.

Hospital Steward J. E. Beck, relieved from duty at San Francisco, Cal., and directed to proceed to Fort Stanton, N. M., and report to medical officer in command for duty and assignment to quarters.

HEALTH REPORTS.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Marine-Hospital Service, during the week ended June 16, 1900.

SMALLPOX—UNITED STATES

California: Oakland, May 12 to June 2, 5 cases.
 Colorado: Arapahoe Co., May 28 to June 4, 1 case; Archulla Co., May 28 to June 4, 1 case; El Paso Co., May 28 to June 4, 2

cases; Logan Co., May 28 to June 4, 1 case; Mesa Co., May 28 to June 4, 1 case.

Delaware: Wilmington, June 2-9, 1 case.
District of Columbia: Washington, June 2-9, 4 cases.
Illinois: Cairo, May 26 to June 2, 4 cases; Chicago, June 2-9, 4 cases.
Indiana: Evansville, June 2-9, 1 case.
Kansas: Wichita, June 2-9, 5 cases.
Kentucky: Covington, June 2-5, 28 cases.
Louisiana: New Orleans, June 2-9, 41 cases, 21 deaths.
Maine: Portland, June 2-9, 4 cases.
Massachusetts: Fall River, June 2-9, 9 cases; Lowell, June 2-9, 1 case.
Michigan: Grand Rapids, June 2-9, 1 case; Jackson, June 2-9, 1 case.
New Hampshire: Manchester, June 2-9, 2 cases.
New York: New York, June 2-9, 4 cases.
North Carolina: Newbern, June 2-9, Several cases.
Ohio: Cleveland, June 2-9, 22 cases.
Tennessee: Memphis, May 20 to June 2, 13 cases.
Utah: Salt Lake City, June 2-9, 2 cases.

SMALLPOX—FOREIGN.

Austria: Prague, May 19-26, 5 cases.
Belgium: Ghent, May 19-26, 1 death.
Egypt: Cairo, May 12-20, 4 deaths.
England: Liverpool, May 19-26, 1 case, 2 deaths; London, May 19-26, 5 cases.
France: Paris, May 19-26, 1 death.
Mexico: Chihuahua, May 26 to June 2, 2 deaths.
Philippines: Manila, April 21-25, 3 cases, 7 deaths.
Russia: Moscow, May 12-19, 31 cases, 2 deaths; Odessa, May 19-26, 4 cases, 1 death; St. Petersburg, May 12-19, 33 cases, 10 deaths.
Straits Settlements: Singapore, April 21-25, 2 deaths.

YELLOW FEVER.

Colombia: Panama, May 29 to June 5, 3 cases.
Cuba: Havana, May 26 to June 2, 3 cases.
Mexico: Vera Cruz, May 26 to June 2, 9 deaths.

CHOLERA.

Siam: Bangkok, April 19, Epidemic.

PLAGUE.

China: Hongkong, April 28 to May 5, 34 cases, 32 deaths.
Egypt: Alexandria, May 12-19, 3 cases, 1 death; Port Said, April 20 to May 28, 41 cases, 21 deaths.
Philippines: Malabon, April 20, 2 cases; Manila, April 7-28, 41 cases, 30 deaths; San Pedro Macote, April 20, Reported.

Current Medical Literature.

Titles not marked with an asterisk (*) are noted below.

Medical Record (N. Y.), June 9.

1.—*Cholecystectomy for Gall-Stones. C. D. Gibson.
2.—*Acute Suppurative Folliculitis of the Scalp. Wm. S. Gottheil.
3.—*Effect of Summer Heat upon the Public Health. Henry D. Chapin.
4.—*Seasickness and What to do With It. Herman Bartsch.

Philadelphia Medical Journal, June 9.

5.—*Endowment of Medical Colleges. W. W. Keen.
6.—*Conclusions Reached After Study of Typhoid Fever Among American Soldiers in 1898. Victor C. Vaughan.
7.—*Criticism in Medicine. George Dock.
8.—*Gastric Ulcer: Nonperforming-Hemorrhage. Wm. L. Rodman.

New York Medical Journal, June 9.

9.—Clinical and Pathological Observations on Some Early Forms of Epithelioma of the Skin. J. A. Fordyce.
10.—Some New Traction Apparatus for Hip Disease, Pott's Disease, Etc. R. Tanstall Taylor.
11.—"Etiolo-Autumnal Fever" in New Orleans, Summer and Autumn, 1899 (concluded). H. A. Veazie.
12.—*Treatment of Opium Habit by Eromid Method. Archibald Church.
13.—*Collection, Preservation and Transportation of Clinical Material for Laboratory Examination. Stuart Hart.
14.—*Ethylic Bromid as Anesthetic for Short Operations. Paul F. Sondern.

Boston Medical and Surgical Journal, June 7.

15.—*Chairman's Address before the Section on Practice of Medicine. George Dock.
16.—*Clinical Report of Cases of Infection due to Bacillus Aerogenes Capsulatus of Welch. Paul Thorndike.
17.—*Report of Cases in which Bacillus Aerogenes Capsulatus was found. Joseph H. Pratt.
18.—*New Method of Intra-Abdominal Operation for Retroverted Uteri. George W. Kean.
19.—New Nasal Scissors for Removal of Lower Turbinate. Carolus M. Cobb.

Medical News (N. Y.), June 9.

20.—*President's Address before the AMERICAN MEDICAL ASSOCIATION. W. W. Keen.

Cincinnati Lancet-Clinic, June 9.

21.—*Medical Treatment of Gall-Stones. Edward S. Stevens.
22.—Eye-Strain. Louis Stricker.
23.—Appendicitis: Its Etiology and Treatment. J. Ambrose Johnston.

Medical Review (St. Louis, Mo.), June 2.

24.—*What not to do in Ear, Nose and Throat Work. M. A. Goldstein.
25.—Case of Multiple Malignant Lymphoma (or Hodgkin's Disease). J. W. Smith.
American Practitioner and News (Louisville, Ky.), May 1.
26.—Some Sociologic Problems for the Medical Man. Ernest G. Mark.
Railway Surgeon (Chicago), May 20.
27.—*Traumatic Lumbago. Howard J. Williams.
28.—*Membransous Conjunctivitis. Thomas McDevitt.
29.—Alcohol as Neutralizer of Poisonous Effects of Carbolic Acid on Tissues. C. H. Richardson.

Annals of Ophthalmology (St. Louis, Mo.), April.

30.—*Ocular Findings in Study of Twenty-three Cases of Epidemic Cerebro-Spinal Meningitis. Burton K. Chance.
31.—Hemianopsia, Half-Blindness. Its Forms, Anatomy, Etiology, Diagnosis, Prognosis and Therapy (continued). Herman Schmidt-Rimpler.
32.—*Lesions of Frontal Sinus and Anterior Ethmoidal Cells and Their Surgical Management. Robert Sattler.
33.—Vesicular Keratitis Following Cataract Extraction. Report of Case. Edgar S. Thomson.
34.—*Case of Reflex Amaurosis. H. C. Sloggett.
35.—Anisometropia and Normal Refraction. Carl Schnlin.

Therapeutic Gazette (Detroit, Mich.), May 15.

36.—Treatment of Simple Fracture of Femur; with Especial Reference to Methods in Use at the Pennsylvania Hospital and Remarks upon Asymmetry in Relation to Shortening After Fracture. Thomas G. Morton.
37.—Frequent and Unstable Deformity from Fracture in Upper Third of Shaft of Femur. Oscar H. Allis.
38.—Treatment of Fractures of Femur in Children. Henry R. Wharton.
39.—Operative Treatment of Fractures of Femur. Gwilym G. Davis.
40.—Ultimate Results of Fracture of Femur. Edward Martin.

American Journal of Medical Sciences (Philadelphia), June.

41.—*Surgical Anatomy of Congenital Dislocation of Hip-Joint. Edward H. Nichols and Edward H. Bradford.
42.—*Fifth Case of Family Periodic Paralysis. Leo M. Crafts.
43.—*Permanent Non-Progressive Ataxia, with Clinical Report of Three Cases. Sanger Brown.
44.—*Spinal Cord Changes in Paralysis Agitans. Max. Nonne.
45.—*Pathologic Anatomy of Cord in Paralysis Agitans and Senility. Charles L. Dana.
46.—*Contribution of Pathology in Chronic Hyperplastic Tuberculosis of Cecum, Based upon Study of Two Cases, in One of which Carcinoma of Cecum Coexisted. T. R. Crowder.
47.—Embryonal Renal Adenosarcoma. Maxmilian Herzog and Denslow Lewis.

Clinical Review (Chicago), June.

48.—Preparation for Obstetrical Operations. C. S. Bacon.
49.—Laryngectomy for Carcinoma: Recurrent Carcinoma: Fibroma: Fracture of Internal Condyle: Perineorrhaphy. Jacob Frank.
50.—Epilepsy with Pronounced Stigmata of Degeneracy: Cerebral Paralysis with Marked Aphasia: Partial Paralysis: Syringomyelia: Acute Mania following Trauma: Case of Spinal Concussion: Traumatic Epilepsy: Two Cases of Facial Paralysis. Daniel R. Brower.
51.—Exophthalmic Goiter: Mitral Stenosis: Empyema: Croupous Pneumonia. J. M. Patton.
52.—Surgical Clinic. Franklin H. Martin.
53.—Clinical Lectures upon Etiology, Pathology, Diagnosis and Treatment of Tumors. A. H. Levings.

International Journal of Surgery (N. Y.), June.

54.—*When to Operate in Appendicitis, and Why. John B. Murphy.
55.—Surgical Treatment of Chronic Empyema. Francis Reder.
56.—Regional Minor Surgery (continued). George G. Van Schaick.
57.—*Total Resection of Spermatic Cordis vs. Castration and Vasectomy in Treatment of Prostatic Hypertrophy. G. Frank Lydston.
58.—Technique of Surgical Gynecology (continued). Augustin H. Goelet.
59.—Treatment of Fractures (continued). W. L. Estes.
60.—Aspects of Electric Treatment in Medicine and Surgery. J. McF. Gaston.
61.—Introductory to Mechanical Diagnosis and Treatment of Urethral Diseases (continued). Ferd. C. Valentine.
62.—Simultaneous Fracture of Vault and Base of Skull. Operation; Recovery. Howard Lilienthal.
63.—Contrast Between Shock and Feigned Injuries. C. A. Teague.
64.—Conservatism in Management of Contused and Lacerated Wounds of Extremities. R. S. Toombs.

Kansas City Medical Index-Lancet, June.

65.—Constipation. S. C. James.
66.—Chemical Analysis of Urine. E. G. Davis.
67.—Inversion of Uterus. A. H. Cordier.
68.—Gastro-Intestinal Disease (to be continued). C. W. Dulin.
69.—Evacuation of Uterus with St. Cyr (Curet). D. W. Basham.
70.—Hysteria: Its Protean Manifestations and Treatment. John Puntun.

St. Louis Courier of Medicine, May.

71.—*Mechanical and Surgical Problems in Paralysis in Children. Virgil P. Gibney.
72.—Leprosy: A Clinical Lecture. Isadore Dyer.
73.—Peroneal Muscular Atrophy. Given Campbell.
74.—Abortion; or, Expulsion of Unviable Fetus. Chas. O. Molz.
75.—True Interpretation of Certain Sounds in Physical Diagnosis. Warren B. Outten.

- Toledo Medical and Surgical Report, June.
- 76.—Treatment of Typhoid Fever. Anna G. Smith.
- 77.—Feeding of Infants. J. D. Ely.
- Brooklyn Medical Journal, June.
- 78.—Varieties of Rheumatism and Their Differential Diagnosis from Rheumatoid Affections. Gleetworth R. Butler.
- 79.—Bacteriology of Acute Rheumatism. Ezra H. Wilson.
- 80.—*Etiologic Factors in Rheumatism. W. N. Belcher.
- 81.—*Is There a Surgical Side to Acute Rheumatism? A. T. Bristow.
- 82.—*Thermotherapy in Rheumatic Affections. G. L. Kessler.
- Woman's Medical Journal (Toledo, Ohio), May.
- 83.—Placenta Previa. Jane R. Keeser.
- 84.—Exophthalmic Goiter. Cora A. Moon.
- Merck's Archives (N. Y.), May.
- 85.—*Adonidin: Physiologic and Medicinal Properties. Heinrich Stern.
- 86.—*Crea and Uremia. H. P. Cole.
- 87.—*Influence of Icthalbin on Metabolism and Intestinal Activity. Drs. Rolly and Saam.
- St. Louis Clinique, June.
- 88.—Relation of Chemistry to Practice of Medicine. C. W. Lillie.
- Yale Medical Journal (New Haven, Conn.), June.
- 89.—Parasitic Eczemas. Chas. A. Knoch.
- 90.—Pott's Disease. Dudley Carleton.
- 91.—Some Notes on Use of Hyoscin. Henry S. Noble.
- The Medical Dial (Minneapolis, Minn.), June.
- 92.—Notes from a Lecture on Paresis before the Senior Medical Class of Hamline University. C. K. Bartlett.
- The Post-Graduate (N. Y.), May.
- 93.—Memorial Papers on Dr. William A. Hammond. By A. E. Lancaster, D. B. St. John Roosa, Joseph Collins, Chas. L. Dana, Joseph R. Smith and Andrew H. Smith.
- 94.—Some Neurologic Notes. Philip Meirowitz.
- 95.—Concerning Amblyopia and Squint. Francis Valk.
- 96.—Reply to Prof. Valk's Paper "Concerning Amblyopia and Squint." A. E. Davis.
- 97.—*Physics of Steam Sterilization. Theodore Dunham.
- 98.—*Physiologic and Artificial Sleep, with Remarks upon New Hypnotic Chloralure. Wm. Henry Porter.
- 99.—Notes from Clinics. Dr. Caillé.
- Medical Standard (Chicago), June.
- 100.—Illinois State Medical Society Organization. William O. Ensign.
- 101.—Syphilis: Phenomena and Management. Wm. S. Gottheil.
- 102.—Some Considerations in Diagnosis and Treatment of Diseases of Stomach. A. A. Kerr.
- 103.—Peritonitis Epidemica. Marens P. Hatfield.
- 104.—Treatment of Hemiplegia, Enlarged Prostate, etc., by Electro-Therapeutics. C. S. Neiswanger.
- 105.—Treatment of Diseases of the Heart. Albert Abrams.
- Pennsylvania Medical Journal, May.
- 106.—Address before Butler County Medical Society: How to Maintain a Professional Existence. H. D. Hockenberry.
- 107.—Grave Diseases in Young Children often Due to Latent and Undiscovered Inflammation of Middle Ear. Charles H. Burnett.
- 108.—Seventy-five Cases of Abdominal Surgery. W. D. Hamaker.
- 109.—*Treatment of Typhoid Fever. T. Q. Garvey.
- 110.—Progress of Laryngology. Lewis S. Somers.
- Southern Practitioner (Nashville, Tenn.), June.
- 111.—Intestinal Obstruction (continued). Richard Douglas.
- 112.—Alcohol as an Anesthetic. Doering J. Roberts.
- Canadian Journal of Medicine and Surgery (Toronto), June.
- 113.—*Relation of Deformity of Pelvis to Lateral Curvature of the Spine. H. P. H. Galloway.
- 114.—Clinical Notes on the Use of Eudoxin in Typhoid Fever. A. J. Harrington.
- 115.—Broad Ligament Cyst. Chas. M. Smith.
- Georgia Journal of Medicine and Surgery, June.
- 116.—Human Tuberculosis with Especial Reference to Pulmonary Consumption. "The Great White Plague." W. L. Hughlett.
- 117.—The Physician the Nation's Guardian. J. Weston King.
- 118.—Diseases of Stomach. Edgar J. Sprattling.
- 119.—*Report of Unique Case of Appendicitis, with Some Thoughts on Treatment. James T. Jelks.
- Texas Medical Journal (Austin), May.
- 120.—Maladministration of Public Medical Affairs in State of Texas. H. A. West.
- 121.—Three Cases of Closure of Jaws, Produced by Mercurial Stomatitis. J. E. Thompson.
- Medical Council (Philadelphia), June.
- 122.—The Eye: How It Sees; Its Defects; and Their Cure with Glasses (continued). A. H. P. Leuf.
- 123.—Fibro-Myoma of Vulva. A. Morgan Cartledge.
- 124.—Gastritis: Its Pathology and Treatment. G. M. Randall.
- 125.—*Treatment of Appendicitis, with Report of Eight Cases. Oscar S. Brown.
- 126.—Treatment of Diseases of Nose, Throat and Ear by Family Physician. E. B. Gleason.
- 127.—Points in Surgery. Wm. V. Morgan.
- Charlotte Medical Journal, May.
- 128.—Bacterial Diseases in General. Geo. W. Freese.
- 129.—Hypertrophy of Pharyngeal Tonsil. Walter W. Duson.
- 130.—Sanitary Supervision of Schools. R. Percy Smith.
- 131.—Mitosis, or Regeneration of Endometrium. Byron Robinson.
- 132.—Laryngeal Diphtheria. Eugene B. Glenn.
- Journal of Comparative Neurology (Granville, Ohio), May.
- 133.—Observations on Sensory Nerve-Fibers in Visceral Nerves, and on their Modes of Terminating. G. Carl Huber.
- 134.—Sensory Nerve Terminations in Tendons of Extrinsic Eye-Muscles of the Cat. G. Carl Huber.
- 135.—Contribution on Nerve Terminations in Neuro-Tendinous End-Organs. G. Carl Huber and Lydia M. De Witt.
- 136.—New Brain Microtome. Henry H. Goddard.
- 137.—Proposed Neurologic Bibliography of Ichthyopsida. F. J. Cole.
- 138.—Number and Size of Nerve Fibers Innervating Skin and Muscles of Thigh in Frog (*Rana Virrescens* Brachycephala, Cope). Elizabeth H. Dunn.
- 139.—Digest and Criticism of Data upon which is Based the Theory of Ameboid Movements of Neurons. H. Heath Bowden.
- Memphis Medical Monthly, June.
- 140.—Aseptic Management of Normal Labor. S. S. Crockett.
- 141.—*Notes on Some Points in Obstetric Practice. Gustav Kollischer.
- 142.—Treatment of Urethral Stricture. W. Frank Glenn.
- 143.—*Warning in Regard to Vaccination. Some Comparisons. F. J. Rnyoun.
- 144.—Modern Smallpox, with Report of Cases. F. S. McRady.
- New Orleans Medical Journal, June.
- 145.—Some Recent History of Smallpox in New Orleans. Quitman Kolbke.
- 146.—Virescence is a Necessity for Medical Progress. S. P. Delaup.
- 147.—Annual Report of 1900 to President of Tulane University of Louisiana, at Annual Commencement of Medical Department, May 2, 1900. Stanford E. Chaillé.
- 148.—Medical Journalism. Chas. Chassignac.
- 149.—Report of Case of Gunshot Wound of Left Lumbar Region, Penetrating Abdomen: Three Wounds of Colon and One of Stomach. Celiotomy. Enterorhaphy. Recovery. E. D. Fenner.
- 150.—Case of Dermatitic Herpetiformis in Child Three Years of Age Cured by Circumcision. J. N. Rousseau.

AMERICAN.

1. Cholecystectomy for Gall-Stones.—The removal of the gall-bladder has not been a popular operation, especially in English-speaking countries, but Gibson believes that it has a far wider field of usefulness than its history would indicate. He reports two cases in which this operation was performed to advantage. One was that of a young person, with chronic cholecystitis and numerous stones in the gall-bladder, who came under observation during an acute exacerbation. The bladder was dissected out whole, and uneventful convalescence followed. In the second case, there was a small atrophic gall-bladder with stones and impacted calculi in the cystic and common ducts. This case occurred in an elderly woman. Choledeochotomy was performed and cholecystectomy was the supplementary operation. There was a temporary benefit, but the patient died from exhaustion, due chiefly to capillary hemorrhage from jaundice. The cholecystectomy was not an essential feature in the fatal result, and Gibson says that this was the only possible method of dealing with the gall-bladder. He believes that this method is a physiologic operation, and that, while it is more dangerous in itself than cholecystotomy, it will not be in properly selected cases. The objection that it deprives the body of an organ of more or less physiologic importance, he answers by questioning the real necessity of a gall-bladder. In conclusion, he sums up the conditions calling for this operation as follows: "In all cases of cholecystitis with or without stones, acute or chronic, provided that the gall-bladder and gall-ducts can be properly explored, and that the conditions promise an easy removal of the gall-bladder, it is to be borne in mind that the more distended the gall-bladder, the more likely is its separation from the liver to be easy, and provided that the common and cystic ducts—sometimes also the hepatic—are demonstrated to be free from stone, and that in addition to stone there is no other obstruction of the lumen of the common duct such as a tumor, benign or malignant, of the pancreas. The operation is also recommended even when its performance is difficult or possibly entails a slightly greater risk in a limited class of cases—that is, when it is the only satisfactory way to deal with the gall-bladder as a prophylactic measure against malignant disease in the presence of long-standing irritation. If these various limitations receive a strict interpretation, the number of cholecystectomies that are justified by the above indications will be comparatively restricted, and the operation will be done only under circumstances that permit of its greatest usefulness with a minimum of risk."

2. Acute Suppurative Folliculitis of the Scalp.—Gottheil discusses two cases of disease that, he thinks, differ from the

types described by French and other authorities, in that at least one of these recovered. Washing with disinfectants, like salicylic acid oil, warm water and tar soap, and later xeroform and olive-oil finally produced a cure in about three months after beginning the treatment. All the hair follicles were involved and every hair shaft was detached, but the papillae were not destroyed and the hair reappeared as abundantly as before though somewhat more inclined to be curly. This seems to form a picture that differs essentially from the folliculitides described by Quinquaud, Crocq, Besnier, and others.

3. **Effect of Summer Heat on Public Health.**—Chapin gives tables of the comparative mortality of the different months in the different years, showing the cases of gastro-intestinal diseases during the summer months in the city of New York. They show, however, a diminution of the death-rate from these troubles in the last few years, which is encouraging. Aside from gastro-intestinal disease, one of the greatest dangers in the summer months is from sunstroke. The general depression, due to great heat and humidity, is also noticed. In two nervous diseases, meningitis and convulsions, the summer death-rate is higher than the winter, though it is possible that some of the cases of meningitis are incorrectly diagnosed. Everything that can be done by the municipality to prevent the results of this unfavorable condition should receive attention, as the removal of decaying matter, the planting of small parks to give the cooling and purifying effect of vegetation, and especially cleanliness and care in the home life of the citizens. The use of alcoholics should be protested against, and also the excessive use of nitrogenous foods.

4. **Seasickness.**—The instructions offered by Partsch for those liable to incur seasickness are to take no special precautions beforehand, to arrange to have nothing on the mind as regards conveyance, clothing, etc. Good ventilation should be looked for, hence, rooms amidship are preferable. The air inside should be as good as that outside if possible, as second-hand air is a factor in the causation of seasickness. He suggests staying on deck as much as possible, with the eyes closed most of the time, especially during the day, until immunity from optical vertigo is acquired. By this is meant the dizziness and nausea which often follows continued observation of unusual conditions in the environment. When the slightest sensation of illness is felt, one should lie down at once and close the eyes, using only one pillow, or none at all if very sick, as a pillow often makes the difference between almost absolute ease and great misery. Steamship motion can be analyzed into twenty-six different factors, and is, therefore, very complicated and almost incomprehensible. The person not being adjusted to the variations, the case becomes much like that produced by going up and down uneven stairs in the dark. The shock or disturbances occur in a continued series, each varying slightly and result in an accumulation of violence that we call seasickness. What is first disturbed in the mechanism is the vaso-nervous system; the blood-vessels in the abdominal cavity are relaxed, thus permitting the occurrence of a deficiency in the brain which is subjectively interpreted as nausea. Retching is Nature's remedy for this condition; the regurgitation of food from the stomach being merely an incident. After two or three days' seasickness and abstinence from food the patient's blood becomes impoverished, and this must be remedied by eating; if enough can not be taken at one time, frequent eating is recommended, seven times a day being about right. One should eat about fifteen minutes before rising, the three regular meals, half-way between meals, and at bedtime. He thinks that it matters very little what is eaten provided it is what is craved. Porter and stout are good, and so are hard, sour apples. When one is already seasick, liquid foods that require the least in digestion are best; when able to be up and about the meals should be eaten regularly, and followed by recumbency for at least fifteen minutes. At the table it is best to commence eating as soon as seated; if necessary in order to do so go to the table late and if possible stipulate with the steward for immediate attention. He prescribes malt beverages and alcoholics quite freely, and advises the patient to have a supply of eatables in the stateroom, making due allowance, of course, for the rats. All mental

and muscular exercise should be avoided. When eating little, constipation is natural, but if it continues in convalescence, an enema of 20 drops of glycerin is the best relief. If the seasickness is accompanied with serious headache or mental uneasiness bromid is useful.

5.—See THE JOURNAL of June 9, p. 1445.

6.—Ibid., p. 1451.

7.—Ibid., p. 1459.

8.—See abstract in THE JOURNAL of May 19, p. 1259.

11. "**Estivo-Autumnal Fever.**"—Veazie concludes his discussion of the diagnosis of yellow and malarial fever and their combination. His article is written simply to emphasize the fact that by clinical evidence alone we can not, in many cases, distinguish malarial and other pathologic conditions from yellow fever without the aid of the most searching microscopic and bacteriologic research. He agrees in this with the report of the Marine-Hospital Yellow Fever Commission. See also abstract in THE JOURNAL of June 16, ¶ 2, p. 1579.

12.—See abstract in THE JOURNAL of May 26, p. 1335.

13. **Collection of Clinical Material for Examination.**—Hart gives directions for collecting blood, serum and other materials for laboratory examination. The blood is best obtained from the tip of the finger or the lobe of the ear, the part having been carefully cleansed. A quick stab with an ordinary surgical needle will afford a free flow, which should be obtained without pressure. The first drop should be washed away and the blood then collected on glass microscopic slides. Blood serum can be obtained by raising a small blister, and collecting on a slide. Gastric contents should be collected in a wide-necked bottle that has been carefully washed. He figures a special form of sputum box, that will also do for the preservation of feces. For urine examinations at least three specimens should be obtained in the twenty-four hours, one on rising, the second at midday, and the third at bedtime. By adding some substance of bactericidal properties, the sediment and urea content may be preserved unchanged. For this, he suggests the use of nrotropin, 1 gram to each 100 c.c. collected.

14. **Ethylic Bromid.**—Sondern recommends this agent as one of the safest and best for short operations. It must be very volatile, when poured on the hand must evaporate rapidly, must be entirely colorless and have a sweet odor. The entire quantity for a child is 5 to 10, and for an adult 10 to 20 grams. This is poured on an anesthesia mask, allowing only a small quantity of air. Anesthesia is obtained in from twenty to forty seconds, when the mask is removed and not reapplied. The administration must be arrested at the proper time, which is shown by the relaxation of the muscles of the neck and arms. If this is unobserved and the anesthesia is continued the muscles contract and there is danger of asphyxia, especially when operating on the larynx. If this moment has been allowed to pass, it is better to let the patient come out, and reanesthetize, preferably at another time. The anesthesia lasts about two minutes. For a person from 3 to 16 years of age, ethylic bromid has no equal, as the patient, though not completely unconscious, feels no pain. The fatal cases recorded may be attributed to either the use of ethylene instead of ethylic bromid, the use of an old solution, the use of the drug in repeated small quantities, the continuance of administration for longer than one minute, or repeated administration. The mask should never be applied more than twice at one sitting, as a case has been recorded where death occurred at the third application.

15.—See THE JOURNAL of June 9, p. 1445.

16 and 17. **Bacillus Aerogenes Capsulatus.**—Thorndike reports four cases of chronic malignant edema, in which the special bacillus of the disease was not found. Three of these cases occurred in the practice of Dr. Post, and one was of his own observation. He suggests that they are due to the bacillus aerogenes capsulatus of Welch. The lesson to be learned from these cases is to operate as soon as possible and after the time when the whole of the diseased tissue can be removed, if earlier operation is impossible. Pratt reports on the same sub-

ject five cases, including Thordike's, with bacteriologic examinations. Of these only one was a case of pure infection with the gas bacillus, and it shows the marked progressive properties it may possess. In three cases, the organism appeared to gain entrance into the system from the gastro-intestinal tract, and in two, it was probably introduced by dirt through the wounds of the skin. The first case shows how rapidly the germs can be destroyed by cold. Immediately after death the body was placed in a cold-storage room where the temperature fell at night to 26 F., and it remained there sixteen hours. The bacilli found were in a condition impossible to cultivate. This Pratt attributes to the action of cold; a peculiarity that has been already noticed by Blumer, Welch and Flexner. The lesions produced by the gas bacillus on muscle tissue are remarkable: In some places the fibers were broken into small pieces and the fragments separated one from another and laid in different planes. Their torn edges were distinct, and their striæ well preserved, giving an appearance of debris, thrown about by an explosion. In other places, degeneration and digestion of muscle fibers appeared to have taken place.

18. **Uterine Retroversion.**—Kaan reports an operation that has some advantages in cases of retroversion. This method consists in picking up the round ligaments on a gathering-string and so shortening them that the uterus is placed in the normal position. He picks up the round ligament and peritoneum together with a double hook, about midway between the cornu of the uterus and the internal abdominal ring, then passes a suture of silk subperitoneally from the uterus as far outward along the round ligament as seems necessary. The tissue is puckered along this suture, the two ends of which are then tied together with moderate traction. To avoid cutting through, the silk used is of medium size and is passed into the tissue of the fundus at its point of entrance and through the ligamentous tissue at its exit. The strain on this stitch, however, is not nearly so great as on those of ventral suspension, which drags the uterus out of position.

20.—See THE JOURNAL of June 9, p. 1445.

21. **The Medical Treatment of Gall-Stones.**—Stevens holds that it is frequently difficult and often impossible to make a positive diagnosis of gall-stones, and that there is no known medicine by which their solution can be effected. Introducing a canula into the gall-bladder for the purpose of sounding for stones, introducing solvent remedies, or withdrawing fluids is dangerous as compared with the amount of good likely to be obtained, and should not be practiced. The same is true of massage in emptying the gall-bladder; and he says that there is only one safe and radical cure, that is, surgical operation. There is, nevertheless, what may be called a medical treatment of gall-stones that is often efficient in the relief of pain and other symptoms, and satisfies the patient that something is being done. Hot water applications may do some good but the use of opiates at the beginning of the attack is to be avoided. Constipation and intestinal sepsis should be treated. The administration of laxative medicines is often followed by so remarkably favorable results that the patients sometimes believe they have been cured, and the physician is also deceived. Salines and oils tend to lessen the congestion and cause an expulsion of septic products, and their use is, therefore, legitimate.

24. **What Not to Do in Ear, Nose and Throat Work.**—The things to be avoided that are mentioned by Goldstein are the use of water in syringing and attempting to get foreign substances, especially articles that swell, out of the ear; and the use of heavy, sticky oils with anodynes for the relief of pain. There is only one condition suitable for syringing, namely, the removal of impacted cerumen. He alludes to the abuses of the air-douche, and warns against its use in otitis media or acute coryza. The nasal douche also comes under his condemnation, and he thinks it will become obsolete. The spray requires too much air-pressure for its manipulation, thus causing much irritation and sometimes damage instead of benefit. The use of concentrated and irritating medicines in the nasal passages is also condemned. The use of cocaine to make the patient feel relieved without permanent benefit should come under the head of malpractice.

27. **Traumatic Lumbago.**—By traumatic lumbago, Williams understands a sprain or contusion of the lumbar and ligamentous attachments of the vertebra, which is one of the most common predecessors of spinal traumatic neurosis or neurasthenia. It is characterized by pain and difficulty in moving and, in some cases, interference with bladder and rectum, due to the pain. There is no paralysis, though at times there may be incontinence or retention. The duration of the condition is variable, the symptoms usually passing off in a month or less, but the back is often left sensitive for months or years. He does not believe that the cord is injured in these cases, and thinks that the hysterical disturbances and neurasthenia that follow are largely, if not totally, due to suggestion.

30. **Ocular Findings in Cerebrospinal Meningitis.**—The details of the ocular findings in 23 cases are given by Chance. Most of these were studied during the second or third week of the disorder and under considerable difficulty as regards ophthalmoscopic examination. Slight conjunctival discharges were observed in 7 cases. Motor disturbances were: internal squint of both eyes in 2 cases, complete ptosis of the left side in 1, complete mydriasis in 1, with slight contraction during convergence. Irregular degrees of dilatation of both eyes were observed in 6, and pin-point contraction in 3 cases. In no case was there cloudiness or other disturbance of the media, nor any disease of the iris, choroid or retina. In all the cases examined, there was congestion of the optic disc with some congestion of the choroid and retina. The optic nerve-heads were edematous and their surfaces and border lines blurred, usually unequally in two eyes. One case presented a height of three diopters in the right disc while the left side was measured by five. No hemorrhages nor embolic infarctions were observed in any of the cases, but in numerous instances, lymph-sheaths of even the smallest vessels were distended. In two or three, a certain circumpapillary region was free, while the swellings were noted in the periphery some distance off.

32. **Lesions of the Frontal Sinus, Etc.**—After describing the anatomy and development of the frontal sinus, Sattler gives the treatment of inflammation of these parts and the outcome. The successful treatment is almost exclusively surgical; and the author condemns an attempt to establish drainage through the closed and occluded fronto-nasal canal. The only method to be recommended is opening from without, the technique of which he describes.

34. **Reflex Amaurosis.**—The condition reported by Sloggett, which is unique in his experience and which he finds mentioned only by Swanzy, and by him discredited, is one of amaurosis due to reflex from the teeth. His patient had had no toothache or pain in the teeth themselves during the manifestation of eye symptoms which were completely relieved by the extraction of the decayed roots. The ophthalmoscopic examination throughout had been negative as regards any pathologic conditions, while the light perception was entirely lost during the attack.

41. **Congenital Dislocation of the Hip-Joint.**—Bradford discusses the anatomical causes of relapses after forcible reduction of congenital dislocation of the hip-joint. His observations are based entirely on the examination of five specimens. He finds that the principal anatomical peculiarities, which vary considerably in the individual cases, are dislocation of the head of the femur outward and slightly forward on the surface of the ilium, with a narrow triangular acetabulum facing more or less directly outward. The head of the femur is diminished in size and the angle of the neck to the shaft is reduced to nearly a right angle, while there is an increase in the angle of femoral torsion. The capsular ligament may be in the form of an hour-glass or simple sac, adherent to the surface of the ilium above, sometimes about the acetabulum below, and contracted at the neck of the femur. The obstacles to reduction are the peculiar attachment of this ligament, causing shortening of the ligamentous bands at various points, chiefly laterally and below; its constriction, sometimes in the middle, making it impossible to draw the head of the bone through; thickening of the capsule just above the apex of the acetabulum; adhesions between capsule and head of the

femur; contraction of the acetabulum; increase of femoral torsion so that when the head of the femur is placed in the normal acetabulum the knee looks inward. The obstacles to retention of the head after complete reduction are: flattened, or insufficient and too oblique acetabulum; insufficient head; short neck of the femur, and obliteration of the cavity of the acetabulum by a mass of dense fibrous tissue. The development of successful treatment of congenital dislocation of the hip will depend on the accumulation of experience and thorough pathologic knowledge. The skiagraph is of great value, and if it is perfected to an extent that will enable one to see more perfectly the condition before, during, and after treatment, still greater results may be expected.

42. **Periodic Family Paralysis.**—Crafts reports a case of this condition which he considers due to a toxin acting periodically, though it is possible that this or a similar toxic agent is causative also in myotonia and myopathies.

43. **Permanent Non-Progressive Ataxia.**—Three cases of permanent ataxia of rather dubious pathologic nature are reported by Brown, but he does not give any original hypothetical explanation. Two of them seem to be associated in their origin with pregnancy and its accidents. The other is that of a man, who was first troubled with blindness and severe headaches.

44 and 45. **Paralysis Agitans.**—Nonne's communication was called forth by a paper of Dana's, who, he thinks, differs from him in claiming positive lesions for paralysis agitans. He replies that the changes, which he found by the aid of the Nissl method, are the same as those discovered by Dana, and that there is no difference in the changes found in the senile cord and those discovered in paralysis agitans. The changes are not pathognomonic either in his opinion or those of German authorities. Dana follows this paper with a note claiming that the differences between them are not great, as he has held that paralysis agitans is a distinct clinical entity and not premature senility, and that we should some time find its anatomical basis. In his experience, he does not find the pathologic picture of the two conditions identical. He says that he never claimed any pathognomonic changes in the anterior horn cells, and that he found that there is an unusual degree of degeneration, vascular and sclerotic change in the anterior horn in this disorder, and more there than in any other part of the nervous system. His view is that in this disease the interruption in the flow of nerve impulses from the corticospinal dendrites to the anterior horn cells is only a working hypothesis, but that it is in harmony with pathologic findings, as Nonne admits.

46. **Tuberculosis of the Cecum.**—Crowder describes two cases of tuberculosis of the cecum and discusses the pathology, anatomy, etiology, pathogenesis and course. He finds that it occurs about equally in the two sexes and that it seems probable that the acute infectious or inflammatory conditions play a part in the etiology, and that the specific tubercular infection may reach the cecum through food. The cecum is in the primary localization in a great majority of cases of tuberculosis of the intestinal tract, as shown by Fenwick and Dodwell. The nature of the process is essentially a slow, chronic inflammation of slight intensity and, if it is limited to the cecum and not associated with active pulmonary involvement, the progress is slow, and sooner or later produces a tumor which may pass on to necrosis and abscess, terminating in localized suppurative peritonitis, or may break through the abdominal wall. The extension of the disease may be by the peritoneum itself, causing tuberculous peritonitis, which is comparatively rare, or it may be downward through the colon. It is generally by way of the mesenteric lymphatics. The relation of tuberculosis to carcinoma is discussed in conclusion. In the second of his cases, the patient died of malignant disorder in this region, which seems to have taken its origin from old tuberculous ulcers. In the other, the disorder was localized and recovery was apparently complete after resection.

54. **When to Operate in Appendicitis.**—Murphy thinks that the number of deaths is much smaller than it was ten or twenty years ago, when it was called "inflammation of the bowels;" and that this is due to better surgical treatment.

Speaking of the subject from a mortality standpoint, he excludes three classes of cases: appendicular colic, a condition which he thinks exists and can be diagnosed; catarrhal appendicitis as it is generally understood, since it does not materially, if ever, jeopardize life; partially recurrent appendicitis, a mild type which may be either the first or second of the above mentioned forms. The only one to be considered in relation to mortality is the acute infective appendicitis. He describes the conditions of this type as they occur, and discusses the symptoms. He believes that there is no need of asking "what will be the outcome" in any case where operation can be performed not over twenty-four or forty-eight hours after the beginning of the symptoms. If the diagnosis can be made in twenty-four hours and the operation performed immediately, there is a mortality of about 2 per cent., but after that the ratio greatly increases. If it is to be done, it should generally be inside of the first forty-eight hours. If the disease has advanced to the third or fourth day and there is circumscribed abscess with low temperature, it may perhaps be safe to wait, but even then the risk is possibly greater than that of operation. His general conclusion is that it is not justifiable to hold a single case of appendicitis beyond twenty-four hours after the diagnosis is made, without operating.

57. **Total Resection of Spermatic Cord.**—Lydston prefers total resection of the cord to either castration or vasectomy, as it is more rational and effective than the latter and superior to the former, for the following reasons: 1. It produces less traumatism, a very important item in old men. 2. It causes less danger to the kidney, because of minimized shock. 3. It causes none of the psychic disturbance incident to a consciousness of the loss of the testes. 4. It permits the use of cocaine with more safety. 5. It makes subsequent shrinking of the testes so gradual that little complaint is made. Apropos of the danger of renal disturbance following castration, he says: I am satisfied that quite a proportion of the "peculiar" cases of mental aberration and delirium following the operation are uremic. The operation can be performed under cocaine, .5 to 1 per cent. in 1 per cent. carbolic, with 10 per cent. antipyrin. One cord being resected at a time, it is easy to postpone the second operation in case the symptoms of cocaine poisoning develop, which is very unlikely. The weakness of the patient may also be a cause for the second operation. He is in the habit of exposing the cord by an inch or inch and one-half incision over the inguinal ring. He divides the cord and ligates it in sections, taking out an inch or more of the structure. The vas deferens is excised separately, the stumps of the cord are sutured and tied together, and the tunica vaginalis is sutured carefully with catgut before closing the external wound.

71. **Paralyses of Children.**—The paralyses of children are: cerebral, spinal, and peripheral. The first of these may be considered as permanent for all practical purposes, the second often permanent, but the extent and duration depends on the cause, and the third is usually self-limited and complete recovery may occur. One of the first problems is in regard to what should be done with the muscles, i. e., whether we should advise exercise or rest. Gibney finds that in these patients it is best to advise absolute rest in the beginning, and to protect the joint from strain during the first year. He speaks highly of the practice of division of the tendons of contracted muscles, as putting them in better position and relieving the strain; and he has also grafted the tendons in certain cases. In conclusion, he says there is much to be learned in the treatment of paralysis, and many mechanical and surgical problems are yet to be solved. The early recognition of the lesions producing paralysis, the management of the early stages, the conservation of power, the protection of the fibrous structures about the joints, the prevention of deformity, when it does occur, the vicarious functions of muscles, the ablation of joints in "dangle legs," are points to which he calls attention.

78. **Varieties of Rheumatism.**—Rheumatism is here put under three heads: Rheumatic fever—acute or subacute, chronic articular, and muscular rheumatism. The first of these is an infectious disorder, the second not so clearly such, and the third has more evidence in favor of its neurotic origin

than of its infectious character or close relation to the acute form. The rheumatoid affection includes gout and arthritis deformans; other types mentioned are acute arthritis of infants, joint symptoms in hemophilia and some affections of the nervous system, also rheumatic and tuberculous changes in the bones. The differential diagnosis is discussed, showing that while articular rheumatism is generally easily diagnosed, there are some conditions, especially in children, that may give a little trouble. Secondary arthritides of the acute septic forms are as a rule easily separated. Acute gout may be mistaken for rheumatism, but it occurs later in life, and is associated with local symptoms that are out of proportion to the constitutional disturbance. The acute forms of arthritis deformans may also give some trouble, but the greater elevation of temperature, more marked redness and pain and the presence of serous membrane inflammations will rule out arthritis deformans. There should be rarely any trouble in making the diagnosis in chronic rheumatism. Arthritis deformans is especially difficult to distinguish from rheumatic troubles in its early stages, but when the articular deformations occur there is not much doubt. Muscular rheumatism, as a rule, gives very little trouble in its diagnosis.

80. Etiology of Rheumatism.—Belcher notices the theories and the bacteriologic researches that have been published in regard to the cause of rheumatism, and concludes that acute rheumatism may be regarded as an infectious disease presumably induced by micro-organisms.

81. Surgery of Rheumatism.—Bristow's article is largely given to a discussion of O'Connor's method of treatment, which he thinks is more rational than might at first be supposed. He would not open the joints as soon as the nature of the disease is evident, but when there is danger of cardiac complication, or when the case has defied medical treatment. He thinks that this new departure is worthy of consideration and that we should follow it, avoiding rashness and holding fast to all that is good in it.

82. Thermaerotherapy in Rheumatism.—Kessler discusses the use of the hot-air treatment and notices a very large number of conditions in which it was of value, including acute articular, chronic muscular, and specific rheumatism, rheumatic pleurisy, rheumatic gout and arthritis deformans. He mentions the case of a patient who had been helpless for years but was completely relieved in thirty treatments.

85.—See abstract in our Therapeutics Department, this week.

86. Urea and Uremia.—From a consideration of the subject Coile concludes: 1. That acute uremia occasionally occurs without suppression of urine or obstruction to its flow, and in the absence of structural change of the kidney. 2. That acute uremia may occur while the amount of urea excreted is far above the normal. 3. That in such cases the increased amount of urea in the blood is from rapid tissue disintegration, until the blood is badly poisoned, and then is probably increased by nitrogenous food eaten, which can not be assimilated, and which disintegrates in the blood. 4. That in the treatment of acute uremia active diaphoresis is of little value, as so small an amount of urea is obtained that it is practically unappreciable, and the blood is thus deprived of its water and salt, which is not only unharmed but of great value.

87. Ichthabalin.—Rolly and Saam, from experiments with ichthabalin, find that it exercises a decidedly favorable influence, causing reduced excretion of nitrogen in the urine, and increase in weight. Its action on intestinal fermentation was positive, and it was found that the quantity of ethyl-sulphuric acid was permanently reduced in all four tests. The reduction within three days amounted to from one-third to one-fourth of the original value, only to increase again on suspension of the remedy. Notwithstanding the reduction of ethyl-sulphuric acid, the dejections still retained their fetid character, which is hard to explain, as the clinical results were eminently satisfactory in other respects. They suggest that a lessening of intestinal fermentation is obtained and that calomel can perhaps be replaced by ichthabalin in children, where a purgative effect is not desired at the same time.

91. Hyoscin.—From his experience, Noble has formed the following opinions in regard to this drug: It is uncertain to some extent in its action, and not every case will be benefited; about two or three out of every five. In old and feeble patients, a very small dose should be used, as they are profoundly affected by it. The remedy is equally beneficial when given by the stomach or hypodermically. If after gradually increasing the dose by the mouth, up to 1/60 gr., the desired effect is not obtained, it is useless to increase it further. Frequent doses are not required, not more than two being necessary in twenty-four hours. It does not act as a hypnotic except by allaying excitement; and may be combined to advantage with chlorid and bromid. He has never obtained anything like a curative effect with it, though it has been of decided benefit in relieving symptoms. It has little effect on the hallucinations of sight and hearing. One advantage of its use is its tastelessness and the small doses in which it can be employed. If the desired results are not secured by the administration of two doses of 1/75 gr. in twenty-four hours, it is well to abandon its use. Another advantage is the relief it affords to spasmodic contraction or cramps of the muscles of the lower extremities on retiring after unusual exertion during the day. A dose of 1/20 gr. given a half hour before retiring will usually entirely overcome this trouble.

97. Steam Sterilizers.—From experimental researches, Dunham concludes that the steam-gauge of pressure sterilizers indicates the temperature in all parts of the sterilizer only when all the air has been expelled and the sterilizer is filled with saturated steam. The thermometer in the top of the sterilizer gives no indication of the temperature at the lower parts, and if it is to be used as a guide, its bulb should be placed close to the bottom of the chamber. For sterilization done in hospitals, the ejector is a delusion worse than valueless in getting rid of the air; for the quickest method of doing this and replacing it by steam is by having all the steam enter at the top and the air pass out through the bottom and bubble up through water until a sharp water-hammer with very minute bubbles is established. Then the air is out for all practical purposes.

109. Treatment of Typhoid Fever.—Garvey discusses the various methods of treatment suggested: the antipyretic, antiseptic, eliminating and antitoxin. As regards the first, he thinks that it is untenable, though if so, it is hard at first to explain why Brand's treatment shows such a low mortality. The theory that is receiving the most support is that the action of cold water is not so much to lower the temperature as it is eliminative. The intestinal antiseptic treatment has come to stay, the drugs introduced for this purpose do not attack the bacillus typhosus, but rather the intestinal toxins produced. The third system, which is advocated by Thistle, of Canada, and Thompson, of New York, consists in eliminating by attempting to carry off the toxic substances they contain by purging, etc. He does not strongly commend this, though it has its merits, but he thinks that when the antitoxin treatment comes, it will be the ideal, for serumtherapy is the treatment of the future for typhoid.

113. Curvature of the Spine.—The theory advanced by Galloway is that many cases of lateral curvature of the spine are due to a pelvic deformity making an inclined sacral base for the spinal column. He believes that this cause has not been sufficiently recognized in the text-books, and he illustrates from various authorities, showing the pelvic deformity and consequent spinal curvature. He claims that the pelvic distortion, which in many cases may be credited to rickets, is the original cause and not the secondary result.

119.—See THE JOURNAL of October 21, p. 1041.

125. Appendicitis.—Brown believes that at least 90 per cent. of all cases of appendicitis can be successfully treated by medical means according to the method suggested by Terry, of New York, which consists of cathartic doses of castor-oil with olive-oil, followed by large draughts of hot water, and later by enemas of glycerin and olive-oil. Flax-seed-poultice plasters are applied to the abdomen. The diet is light and of easily digested food. Terry claims that the oil treatment re-

lieves the friction of inflamed tissues. To prevent the return of an inflammatory process he gives 1/2 ounce of olive-oil, followed by a glass of hot water, before each meal, for several weeks. Eight cases are reported, all of which have recovered and have done well up to date.

141. **Points in Obstetric Practice.**—Kölischer speaks of the posture of the mother during labor, with special reference to presentation of the anterior vertex, and discusses the diagnosis of the condition. The mother should be placed on the side which corresponds to the fetal occiput, and should remain there until it has completely descended, so that the fontanelle is the lowest point of the fetal skull. Another point mentioned is the management of the bladder, which in cases of strongly anteverted uterus may be still half above the symphysis. It is, therefore, advisable to use the long male elastic catheter and to examine the region for fluctuation, and if this is found, the head is gently pushed back, in order to secure a sufficiently high introduction of the catheter. Another point is the protection of the perineum; and the posture of the mother is of great importance in this respect, as is also the protection of the perineum by the hand in any appropriate way. The anterior hand rests on the fetal skull and crowds it against the symphysis in order to relieve the perineum and at the same time regulate its expulsion. The other hand has to support the perineum directly. Nothing is more erroneous than to suppose that the perineum must be pushed back over the head. It should be pushed upward against the symphysis and the head rolled over it with the least possible degree of distension. If the tension of the perineum is too great, episiotomy should be performed; that is an operation that is not done often enough. The incision has to be made in the lower third of the vulva and directed toward one of the buttocks. The probe-pointed bistoury is the best for this purpose. A laceration may be expected to occur when the perineum becomes exceedingly pale and wax-like in its appearance, when the epidermis is thrown off in tiny scales, when it becomes exceedingly thin, when the lower circumference of the vulva is interrupted by a staple, or when the central part of the perineum bulges out like a balloon. If the anterior margin of the levator ani is felt projecting like a sharp ledge, it may be incised, for if the muscle bursts subcutaneously there is a permanent defect of the pelvic floor which has to be operated on afterward, while the fresh wound of the muscle itself can be repaired at once by suturing. Still another complication is premature rupture of the membranes, which protracts the labor and makes operative interference exceedingly difficult. The colpeurynter is therefore an expedient in such cases, to prevent its breaking under pressure, the bag should not be filled to its full capacity. Its presence inside the uterus produces effective pains, while at the same time it promotes a serous moistening of the cervix. It acts as a substitute for the membrane, and when there is no further use for it, it drops into the vagina. Still another point deserving mention is the use of quinin during labor. It is generally erroneously considered a pain-producing drug, but it has a singular influence on the irregularity of pain, rendering it regular and less severe.

143. **Vaccination.**—Runyon discusses the respective advantages of humanized virus points and tubes. He says that in the presence of an epidemic of smallpox, the tubes are not sufficiently sure and speedy; when it is not possible to see the patient again and watch the result, the vaccin point should be used; but when the subject has been exposed to the infection, either the humanized virus or the point. When there is full control over the subject and vaccination can be done when expedient and there is no urgency, it is well to use the glycerinated virus and follow with the point. He thinks that at least 25 per cent. of those in whom vaccination has been effective have not received full immunity.

FOREIGN.

British Medical Journal, June 2.

Pathology of Acute Yellow Atrophy of the Liver. JOHN W. FINDLAY.—This paper gives the history and post-mortem examination of a case of acute yellow atrophy of the liver. In his discussion of the pathologic conditions, the author concludes that the microscopic appearances make a very

complete picture and justify the reference of the case to yellow atrophy. It shows on how slender a basis the different forms of cirrhosis are classified. He supports the contention of Obrzut, that chronic yellow atrophy is nothing more than acute cirrhosis of the liver, differing from other forms only in quantitative histogenetic changes. In yellow atrophy, the degeneration of the hepatic cell is more extreme than in the ordinary type of cirrhosis, tending more frequently to death than to recovery of the cell. The connective-tissue forms differ little from those found in other cirrhosis, but the degeneration of hepatic tissue, as evidenced by the very numerous columns of hepatic cells, has gone much farther than in ordinary cirrhosis and has even outdone the so-called hypertrophic and biliary cirrhosis in what is regarded by some as its special feature. No cultures were taken from the liver or other organs in this case, but a few large bacilli were seen in the small branch of the portal vein and lying between the hepatic cell and the yellow area, which stained deeply with thionin. It seems most probable that these are the colon bacilli, which have been found by Adami in the liver in cases of cirrhosis as well as in other conditions.

Chronic Brass Poisoning. WM. MURRAY.—This is a type of metallic infection not usually mentioned in the literature and sometimes puzzling to the physician. Nearly all that is known of the disease heretofore is included in Hogben's article in the *Birmingham Medical Review* (1887). One person may be employed for months or years in filing or manipulating brass without contracting the trouble, while another may suffer from the very first. The main feature is anemia, accompanied by excessive debility and nervousness, with neuralgic pains and a green line at the base of the teeth. Later there are emaciation, tremors, cold sweating, cough, extreme weakness. There is also claimed to be a sort of paraplegia that occurs in the later stages. Brass is an alloy of copper and zinc in the proportion of three to one. Murray considers the symptoms due more to the copper than the zinc, and that the severity depends largely on the amount of brass dust inhaled. As a treatment, he first tried iodid of potash, but without much success. Then, knowing that sulphate of copper is an antidote for phosphorus poisoning, it occurred to him that this last might exercise an antagonistic effect; he, therefore, tried phosphorus in 1/30-gr. doses three times a day, with results that exceeded his expectations. Later, for a change, he tried dilute phosphoric acid, 15 minims three times a day, and the effects were still more encouraging.

Treatment of Smallpox by Salol. JOHN BIERNACKI AND P. NAPIER JONES.—The use of salol in smallpox has been advocated by Dr. Charles Begg; and the authors report cases treated according to this recommendation. The salol is administered in doses amounting to about 60 gr. daily, or even more; and in one case, 15 gr. were given every three hours. It appears from the results of these eight cases, which are selected as being uncomplicated by previous vaccination, that salol may directly avert general pustulation and even have a partially abortive effect when given after maturation. It almost always hinders it, so that the pustules form more slowly and are more imperfect in a much higher proportion than is usual. The cutaneous inflammation is slight, and all irritation and unpleasant odor are absent. Scarring is inconsiderable and often nil, but the most remarkable effect of the treatment is that on the secondary fever, which becomes of little importance.

The Lancet, June 2.

Massage in Recent Fractures and Other Common Injuries. WILLIAM H. BENNETT.—The use of massage in fractures is recommended by Bennett, who details the forms in which it can be of special advantage and illustrates some of the methods which are especially beneficial in relation to muscular spasm that is sometimes so troublesome in fracture of the leg. He insists that passive movement should always be preceded by smooth massage, which soothes the irritable muscles so completely that more extensive movements are readily carried out without exciting muscular contraction of a harmful kind. The great advantages of this treatment are given by him as follows: 1. The ease with which the patient is made comfortable by arresting the muscular spasm

and so relieving the pain. 2. The effecting of rapid absorption of effused blood, etc. 3. The prevention of stiffness by obviating the formation of adhesions. 4. The prevention of muscle-wasting and the preservation of the normal nutrition of the limb. 5. The shortening of the time by at least one-half, during which the patient is prevented from resuming the ordinary use of the limb. The only real objections to the plan, he thinks, are: 1. The difficulty which must often arise in carrying it out, as unless a competent masseur or masseuse is available, the time required must be frequently more than the ordinary practitioner can spare. 2. The fact that it is a treatment requiring so much intelligence and discretion in the mode of its application that it may be difficult at all times to find a person to whom it may be entrusted with safety when the practitioner is not prepared to manage the details himself. The objection which has been raised on the ground that movement of the fractured bones must result is of no value if the treatment is properly carried out, as the movement is then practically *nil* and certainly not enough to prevent union in any degree whatever. As far as his experience is concerned, the results are far superior to those obtained in any other way.

Preventive Inoculation Against Typhoid Fever. ALEXANDER G. R. FOULERTON.—In the discussion of this subject Foulerton gives the diagrams of temperature reactions on the rabbit after antityphoid inoculations. He reviews the statistics, as far as they have been acquired in regard to the effect of inoculation of cultures of dead bacilli of this disease, which seem to show that the method is of real value. The exact length of time the protection may last is not known, but if we accept the persistence of agglutinative power as an indication, the immunity lasts for at least two years. The immediate effects of the inoculation may be unpleasant, but they are not permanent, lasting only a few hours, and with never any more serious result than a short period of discomfort. He thinks that the use of this method would be very advantageous to nurses and others who are especially exposed to the disease.

Medical Press and Circular, May 30.

Indications for Removal of Uterine Appendages. J. MACPIERSON LAWRIE.—This author sums up the views expressed in his paper by saying that the ovaries and tubes require to be removed in the following condition: Chronic ovaritis, salpingitis, and cystic disease of the ovaries, when palliative methods have failed to afford relief; suppurative disease of the ovaries and tubes, i. e., pyosalpinx, tubo-ovarian and ovarian abscess; fibromyoma of the uterus of moderate size, either when the ovaries are diseased, or when the patient has been so debilitated by prolonged hemorrhage that hysterectomy would be especially dangerous; and tubal pregnancy. Mere neurosis, apart from organic disease, is not to be regarded as an indication for oöphorectomy under any circumstances. Further, he believes that mere puncture and resection of the ovaries and tubes is, in most cases, inefficient and satisfactory, and that for pyosalpinx, the abdominal route is usually preferable to the vaginal.

Indian Medical Gazette (Calcutta), May.

Serum Treatment of Leprosy. W. A. LEE.—After noticing the apparent good results claimed by Carrasquilla and Laverde, Lee reports his own experience with the Carrasquilla serum. He claims that it has been remarkably efficient in malignant cases of tuberculous leprosy where fresh nodular eruptions appear at frequent intervals and grow luxuriantly, forming diffuse, smooth, shiny infiltrations on the face and ears, the eruption being attended with a temperature ranging from 102 to 104 F. Only two such cases have been met with in the past six months at the Government Leprosy Hospital at Madras, of which he is superintendent, and each was injected with the contents of a vial of Carrasquilla serum equal to 9 c.c., with the result that fever quickly abated and the tubercular infiltration in the more severe case rapidly disappeared, leaving the skin shrunken and flabby. This patient has maintained improvement for three months with gain in weight and strength. In the milder case, the changes were less notable, though improvement was also observed. He admits that the advantages claimed for the serum may possibly be equally well

obtained from the use of other albumin derivatives; for example, the watery extract of pure culture of bacillus pyocyaneus, injections of which excited marked febrile reaction in tuberculous and leprosy patients. In an experiment made with Haffkine's prophylactic serum, on a nodular leper child, the usual reaction followed and no fresh tubercles have appeared for nearly two years. His observations show, however, that a febrile reaction is not necessary for the good effects of the Carrasquilla serum.

Metamorphosis of Filaria Nocturna in Mosquitoes of Anopheles Genus.—S. P. JAMES.—The purpose of James' article is to point out that the mosquitoes of the Anopheles type are hosts of the *Filaria nocturna*. His reasons for thinking that this, rather than the *Culex*, is the efficient host, are as follows: 1. Anopheles mosquitoes do not bite during the daytime—as their meals of blood are practically always taken during the night, i. e., when the filarial embryos are circulating in the blood—while *Culex* mosquitoes will feed at any time. 2. Anopheles mosquitoes collect many more embryos in the blood which they extract than do *Culex* mosquitoes. 3. The filaria appear to undergo their metamorphosis with more ease and at a quicker rate in Anopheles than in *Culex*. This is evidenced by the fact that at no time during their development in Anopheles is motion suspended in the filaria, and, in this climate, their metamorphosis in this genus of mosquito is complete in from twelve to fourteen days. 4. In the places in Southern India where filariasis is most common—Shertully, Alleppey, Cochin and other places in Travancore—the Anopheles genus of mosquito is more common in houses than is the *Culex*. The food of Anopheles appears to consist principally, if not entirely, of blood, as he has not been able to keep them alive on bananas or other vegetable food for any length of time, as can be done with *Culex*. 6. In two species of Anopheles with which he experimented, both were found to be efficient hosts, and it seems not improbable that other species of this genus would be also. He had considerable difficulty in breeding the Anopheles, but finally succeeded. He does not consider this method of infection by Anopheles as frequent, since a man, under his observation, infected with filariasis, had lived for ten years with his wife and two children in a small one-room hut that was also the home of numerous mosquitoes, but neither the wife nor children have filaria in their blood.

Bulletin de l'Academie de Medecine (Paris), May 22.

Filariasis Inoculated by Mosquito Bites. P. MANSON.—This first communication from the newly-elected foreign correspondent of the Académie announces that man is inoculated with the filaria sanguinis by the bite of the mosquito. Manson incriminated the mosquito twenty years ago, but it was assumed that the insect sucked the embryos from man, and dying as it deposited its eggs in the water, the larvae were liberated and ingested by man in drinking-water. His recent research shows that the embryos sucked with human blood as the insect bites migrate in its body to the most fully developed muscles, which are those of the neck and thorax, and pass thence into the prothoracic, in which they are accumulated by the twentieth day, and are then transferred to man as the insect bites. Grassi has established that the mosquito does not necessarily die, but may survive after laying her eggs. The larvae are deposited thus in the skin or lymphatics, where they complete their sexual evolution and mate. The resulting embryos are swept away by the lymph into the blood. This explains the primary localization of filariasis in the skin, the variability of the site, the elephantiasis lesions, and the appearance of the young forms in the blood. Several hundred mosquitoes were collected for Manson by Dr. T. L. Baneroft, in Australia—the ordinary "house mosquito," *Culex ciliaris*, supposed to be identical with our own *Pipiens*. They had been allowed to bite a patient with numerous filaria nocturna in his blood, and were kept alive until killed with fumes of cyanid or chloroform at intervals of from one hour to twenty-five days. They were then admirably preserved in pure glycerin and dissected by Manson and Low at the London School of Tropical Medicine.

Echo Medicale du Nord (Lille), May 27.

Varnish for Surgeons' Hands. MARIAU.—Numerous and comprehensive tests have shown that a varnish, composed of

alcohol, lac and resin, forms an impermeable covering for the hands, preserving them from contact with septic matters in operating, and also ensuring asepsis—as far as the hands are concerned—in aseptic operations. Mariau's varnish is extremely adhesive and supple, does not break from any movements of the hands, and does not interfere in the least with the sense of touch.

Presse Medicale (Paris), May 26.

Osmocoeivity. LESNÉ and BOUSQUET.—This term represents the sum-total of the toxicity and lack of isotony between fluids, referring more particularly to the effect of human urine in experimental research. The writers claim that determining the toxicity of the urine alone, regardless of the isotony, leads to erroneous conclusions. They also insist that in deciding the toxicity of the urine, it is impossible to estimate in simple and general formulae the complex biologic phenomena manifested in the death or survival of the animal. It may be possible, perhaps, to represent the osmocoeivity of a simple solution with a given figure, but not of the urine, which contains multiple toxins in various amounts, with some of which we are not yet acquainted. Even isotonic correction can not apply with mathematical accuracy to a fluid as complex as the urine, and we must not expect too much from it.

Progres Medical (Paris), May 26.

Sclerosis in Patches Commencing in Childhood. BOURNEVILLE.—Only four cases of this affection commencing in childhood have been observed at Bicêtre during the last twenty years. One is described in full in this communication. The child was normal until his third year, although the father was a drinking man and the mother nervous. A fright at this time was followed fifteen days later by a severe attack of convulsions, lasting thirteen hours, then torpor for twelve days, and symptoms of pronounced cerebrospinal insular sclerosis developed, with moderate imbecility and epileptoid seizures. In Bourneville's experience, sclerosis of this kind commencing in childhood has a much slower course than when it appears later in life, and it may be accompanied by spasmodic paraplegia. A peculiarity of the present case is the predominance of the tremor and paralysis on the right side. Medico-pedagogic treatment produced much improvement and remissions were frequent. Arrived at manhood, the patient applied for military service, but a recurrence of symptoms, from lack of the douches, etc., to which he had been accustomed, resulted in his discharge in three months, and he is now in the incurable ward at Bicêtre. Bourneville urges that special regulations should be decreed for incurable imbeciles, allowing them only partial liberty, even during remissions, to prevent their becoming tramps or the tools of criminals.

Semaine Medicale (Paris), May 23.

Bruit de Galop. POTAIN.—The absence of the *bruit de galop* in normal conditions is due to the elasticity of the walls of the aorta. When the artery becomes less resistant, from atheroma, or loses its tone, as in typhoid fever, the wall either stretches too quickly or resists too soon, arresting the expansion of the artery and producing the *bruit de galop*. When the sound is very distinct on the left side, it is almost always connected with a dilatation of the heart, accompanying the generalized capillary arterial sclerosis of Bright's disease. Less distinct *bruit de galop* is noted in many febrile affections, particularly in typhoid fever. It indicates a certain degree of atony of the heart. When the sound is heard on the right side, it is a sign of dilatation of the right ventricle, frequent in dyspepsia from any cause. When noted with uræmic dyspepsia accompanying a catarrhal nephritis, it is important to distinguish it from the same sound heard on the left side, which would indicate arterial sclerosis and concomitant interstitial nephritis, with an entirely different prognosis. In the same way, it makes a great difference to a chlorotic patient whether the *bruit* indicates merely a dyspepsia usually curable, when heard on the right side, or on the left, an interstitial nephritis which renders the prognosis much more serious. The *galop* of pericarditis must also be distinguished, as the participation of the myocardium in the pericardial lesion indicates future danger. When the *choc* and the *galop* are heard in pericarditis, they indicate dilatation of the right cavities, especially deplorable when there is a tendency to symphysis, as without dilatation

the symphysis may remain latent from the functional point of view. The systolic arterial *bruit de galop* is an element in the prognosis of the existing affection. In order to deduce these conclusions, the *bruit* must be carefully studied and, above all, not be confounded with the various double sounds.

Muenchener Medicinische Wochenschrift, May 22.

Intracranial Complications of Acute Otitis. BEZOLD.—Three observations are described, showing the severity of the intracranial complications which may occur insidiously in the most apparently harmless acute suppurative otitis media. They also impose the necessity of a close watch for the slightest ominous symptom, such as retarded pulse, optic neuritis, vertigo, etc., that surgical intervention may not be too late. This liability to serious complications is due to the anatomy of the parts, especially the variable development of the pneumatic cells, which in some persons honeycomb the temporal bone, while altogether absent in others, except the mastoid cells proper. It is impossible for us to determine positively during life the existence of extensive cells, but we can surmise their presence when an acute otitis persists an unusual time, and especially when the hearing returns nearly to normal in spite of the continuous discharge. A large cell of this kind in the floor of the mastoid portion, in front of or behind the digastric fossa, is the cause of the deep abscesses in the neck, below the mastoid process, as the pus descends by gravity. In the first observation, the symptoms appeared suddenly in the fourth week of an otitis affecting a hitherto sound ear, and indicated sinus phlebitis, pyæmia and metastatic foci in the lungs. The lateral sinus was found filled with fluid pus and thrombi as far as the jugular bulb. In the second observation, a putrid abscess in the soft parts of the neck complicated an acute otitis media consecutive to erysipelas. In the third an abscess in the posterior portion of the temporal lobe communicated with a fistula inside the dura, which allowed the passage of pus through the mastoid-parietal suture, resulting in the formation of an external subperiosteal abscess 1 cm. behind the auricle. The primary temporal abscess probably originated from perforation of the tegmen tympani. The three patients promptly recovered after surgical intervention. The jugular vein was ligated in the first two cases. Bezold considers this a harmless measure in practiced hands, and one necessary to prevent further infection from this source.

Wiener Klinische Wochenschrift, May 3, 10 and 17.

Sacral Extirpation of Carcinoma of the Rectum. J. HOCHENEGG.—Nearly thirteen years have passed since Hochennegg first removed carcinomata of the rectum through the sacrum. He has now an experience of 121 cases thus treated, and 50 similar operations for other lesions. Excluding 4 deaths from embolism of the brain, bronchitis or some other cause not connected with the operation, his mortality has been less than 5 per cent., and 21 out of 62 patients survived more than three years. The first patient, operated on in 1887, is still in good health. There have never been any injurious results from the sacral operation, and one patient has since borne two healthy children. The operation does not require any preliminary purging; he found that formed feces were less detrimental to the wound than artificially softened discharges. He operates in cases farther advanced than others consider practicable. In two, that seemed absolutely hopeless he obtained a permanent cure. In three others he was compelled to refrain from extirpation and conclude with a palliative procedure, after opening up the neoplasm. Internal metastases, rigid carcinomatous fixation in the pelvic cellular tissue and extensive glandular involvement are the only limits he imposes. Adhesion to prostate and bladder, or to vagina and uterus is no counterindication, as he merely resects the involved portion of the secondarily-affected organ if the removal of the neoplasm can be done technically, without injuring the function of the remaining pelvic organs. He enucleates the coccyx under all circumstances, and resects more or less of the sacrum as required, sparing the lateral insertions of the ligaments as much as possible. When the rectum is resected, the two stumps are sutured together with the sphincter intact, as in operation on other portions of the intestines, which is the ideal operation, as normal continence is retained. If this can

not be accomplished the proximal stump is brought through the sacral wound and an artificial anus is established, or through the natural anus and sutured to the skin outside. The peritoneum has to be opened to mobilize the rectum for these maneuvers. The slit is closed at once with silk stitches, and not until this has been done is the carcinomatous portion resected.

Descendants of Hereditary Syphilitics. E. FINGER.—This comprehensive article was prepared at the request of the committee of organization of the approaching international congress of dermatology and syphilology. The author admits that it is theoretically possible for the first, second and even later generations to present manifestations of hereditary syphilis in the form of: 1, true, virulent syphilis; 2, syphilitic, dystrophic disturbances; or 3, immunity; and that they may exist independently or associated. But, in respect to the inheritance of true, virulent syphilis in the third generation, none of the twenty-four cases on record is absolutely unimpeachable. For this, three conditions are indispensable: hereditary syphilis in one of the parents, absolute exclusion of acquired syphilis in the second generation, and the unmistakable hereditary nature of the syphilis in the third. None of the cases on record combines all these conditions, although several are very remarkable. Only a case like the following would be absolutely conclusive: for a hereditarily syphilitic mother to bear a hereditarily syphilitic child and soon after its birth the father of the child to become infected with syphilis outside of the family. The question of hereditary dystrophic disturbances is still more unsettled, as they have no specific syphilitic character, and analogous disturbances occur in families free from any taint of syphilis, tuberculosis, alcoholism and lead poisoning. They are also less frequent in children with true inherited syphilis than in those without. General nutritional disturbances, defective vitality, debility, infantilism, etc., undoubtedly occur as the result of syphilitic influences affecting the children of syphilitic parents, and also the rarer partial "dystrophies," but in the latter case the question whether they might not have happened without syphilis on the part of the parent arises. Dystrophic disturbances have also been known to occur as the result of syphilis acquired early in life. A conclusive case would be one in which hereditary syphilis was established in the second generation, while the acquired was absolutely excluded, either from infection of the sound or reinfection of the syphilitic. Syphilis acquired early in the third generation would also have to be rigorously excluded. From this standpoint the thirty-one cases on record are worthy of consideration, but are not absolutely convincing. The weak link is the exclusion of acquired syphilis in the second generation. In respect to the transmission of syphilitic, dystrophic anomalies, the evidence shows that they become less frequent and milder in succeeding generations. On the other hand, the polythality, the procreation of non-viable offspring, continues practically undiminished throughout the second and third generations, indicating that syphilis in its effect on successive generations entails decimation rather than degeneration of the race. In respect to the generally accepted doctrines of immunity, critical analysis shows that they are based more on tradition than on scientifically established facts, and that they need comprehensive revision. Our present assumptions in regard to immunity are contradicted by the comparatively brief duration of immunity even with acquired syphilis, the reinfections which come under our observation, and the reflection that such reinfections would be more common than they are if social and other factors did not combine to prevent them, such as prudence, routine, marriage, age and impotence. There are 14 cases on record in which syphilis was acquired by heredo-syphilitics; in 137 by syphilo-dystrophies, and in 29 by the sound children of syphilitic parents. The reports show that the acquired infection in their case was no milder than usual. The fact that so many children of syphilitic parents have lost their immunity by the age of puberty, if it ever existed, is a proof that this immunity can not be transmitted to their descendants. Finger questions whether we are justified in affirming unlimited, i. e., life-long, immunity even after acquired syphilis, and still less, the transmission of immunity to the children.

Resuscitation an Hour After Apparent Death from Suffocation. J. PRUS.—Large numbers of dogs were revived by maneuvers commenced from a few minutes to an hour after death from suffocation, chloroform intoxication or an electric shock. Prus believes that the same method applied to man promises equally favorable results. The circulation was artificially re-established by direct massage of the heart, exposed for the purpose through an opening in the thorax, supplemented by injection of salt solution in the centripetal end of the femoral artery. Respiration was re-established by means of a bellows communicating with the trachea. Regular, energetic action of the heart was restored after an hour's work, and during the third hour after death, the cutaneous and corneal reflexes returned and also spontaneous movements. Of 44 dogs killed by suffocation, 83.33 per cent. were thus resuscitated. One is still alive, a year later; the rest either succumbed to infection after a few days or were killed for purposes of research. The 21 animals killed with chloroform were treated in the same way, with successful resuscitation of 76 per cent.; the manipulations commenced after a maximum interval of an hour. The experiments with animals killed by electricity were less favorable. A paralysis of the heart seemed to have been induced, that was impossible to overcome, except in 14 per cent. The only experience with man was with a suicide by hanging. When first seen, about an hour had elapsed since death, but massage of the heart through an opening in the thorax restored independent rhythmic contractions of the auricles, and systole in the form of a wave propagated from the limits between the auricle and ventricle toward the auricular appendage. Suitable apparatus for artificial respiration could not be procured. The contractions of the heart became weaker and the signs of life gradually subsided after establishing the important fact that it is possible to stimulate the human heart to independent action two hours after apparent death.

Thyroid Treatment of Cretinism. W. VON JAUREGG.—The benefits from thyroid treatment of cretinism are no longer questioned. Nothing remains now but to determine the degree of improvement possible to be attained with it. The treatment must be kept up indefinitely, as its aim is to supply the missing function of the thyroid gland, and consequently it should be taken all through life, although less frequently after the first months. The results are more satisfactory the earlier treatment is commenced, and it should be instituted on the first suspicion of cretinism. Every child who seems unusually backward should be put on thyroid medication for a few months. If he makes marked progress the necessity for its continuance is indicated. Among the effects of thyroid treatment of cretinism the most striking is the improvement in the psychic and nervous functions. The reported cases show that the patients increase in height; the myxedema disappears; the fontanelles close; the teeth develop; the genital organs and menstruation tend to become normal; the distended abdomen recedes, and with it the umbilical hernia; the stiff, cretin hair falls out and soft hair grows in its place. The body temperature becomes normal, and the patient is transformed into a lively, interested and even talkative child or adult. The intelligence is improved, but sufficient time has not yet elapsed to determine the full effect of thyroid treatment on the development of a brain stunted by years of defective thyroid functioning.

Wedge Osteotomy of the Tibia. L. LUKSCH.—The Meyer-Schede wedge-shaped excision of the tibia and fibula in the treatment of genu valgum is more extensive than need be. Luksch points out that after excision of the wedge from the tibia—the point toward the fibula—the cut edges fit together perfectly, and the fibula adapts itself to the new position without requiring to be shortened, and affords a desirable support for the tibia. In case of genu varum, the wedge is turned with the broad end toward the fibula, which therefore has to be shortened. But, instead of resecting it at the weak point of the excision of the tibia, Luksch proposes oblique osteotomy farther down, between the middle and lower thirds. The sloping edges can be slipped along on each other until the bone is sufficiently shortened.

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ABDOMINAL VS. VAGINAL HYSTERECTOMY FOR UTERINE CARCINOMA.

BY JOHN B. DEEVER, M.D.

SURGEON IN CHIEF OF THE GERMAN HOSPITAL.
PHILADELPHIA.

The choice of routes for hysterectomy must be selected for each case. It is my desire to present a concise résumé of the reasons for each route, and the advantages which it offers in the cases to which it is applicable.

The views laid down are those of a general surgeon, and are based upon an experience in this work that justifies him, I think, in offering an opinion.

It has been claimed that vaginal hysterectomy is an operation that requires special training, and such an attention to detail and technique as can be acquired by the specialist alone. I can not, however, allow this statement to go unchallenged, for I believe that the general surgeon, with his larger field and constant application to detailed technique is, at least, equally as well equipped to perform every operation of gynecology as is the specialist himself.

What surgeon to-day, except in extraordinary instances, does dream of amputating a carcinomatous mammary gland leaving *in situ* the axillary chains of lymphatics whether they are macroscopically infected or not? Yet, how many of the leaders of gynecology recommend or themselves perform the complete operation for carcinoma of the uterus? Carcinoma of the uterus is a very common disease, not more so to-day than formerly, but with increased knowledge and diagnostic skill we are able to discover and remove in good time, uteri that otherwise would soon end in the destruction of the patient.

The synopsis of this paper shows the position I take upon this most important subject. I favor and perform abdominal hysterectomy for the great majority of cases of uterine carcinoma, although I grant there are cases where the vaginal operation may be the better. That the vaginal operation offers any advantages over the abdominal route is with me a question. I know of no condition supposed to indicate vaginal hysterectomy which can not possibly be better dealt with by the abdominal route.

For the sake of clearness and logical reasoning I propose to take up the different points for discussion in the order laid down in the synopsis.

THE REMOVAL OF THE PELVIC GLANDS.

For the purpose of refreshing our memory I give a brief account of the lymphatic glands and their connecting channels which are involved in the morbid processes

of the uterus: The superficial lymphatics of the uterus, together with those of the ovaries and Fallopian tubes, empty into the lumbar glands. They lie beneath the peritoneum and are joined by those from the substance of the fundus and upper portion of the body of the organ; together they run outward in the broad ligament, where they are joined by the lymphatics from the ovaries, Fallopian tubes and vagina, whence they pass up, with the ovarian vessels, to the lumbar glands. The lymphatics of the lower part of the uterus and from the cervix of the uterus run with most of the lymphatics of the vagina along the course of the uterine and vaginal vessels, and terminate in the internal iliac glands. The lymphatics from the lower part of the vagina join the superficial inguinal glands.

We therefore have two chains of lymphatics in each median half of the uterus to consider, and while the chains nearest the disease are probably engaged in draining the part, it is not unusual to have both the upper and lower chains on one or both sides involved necessitating their removal if we wish to give the patient the only possible hope of recovery.

In late carcinoma, or even in the early stage of rapidly advancing disease, if there is, macroscopically, involvement of the broad ligament, any operation short of total extirpation of the lymphatics of the pelvic organ would better not be attempted. The abdominal operation offers the only way by which we can perform such a complete hysterectomy. The incision must be a long one; the intestines and omentum must be kept away from the field of operation by gauze packing; the wound must be widely retracted, and the light should be good, in order to perform so delicate and intricate an operation.

BETTER AREA FOR COMPLETE EXTIRPATION OF CARCINOMATOUS TISSUE.

The reasons given for the first heading hold good for the second. I can not conceive of skill so great as would make a dissection of a carcinomatous broad ligament as easy or as complete through the vagina as by the abdominal route.

LESSENED DANGER TO URETERS.

The weak spot of vaginal hysterectomy has always been the danger of injury to the ureters. As a matter of fact, the ureters are in danger of injury by either route; but it seems to me that the danger is less by the abdominal route, for the evident reason that one can see what he is doing, and is therefore enabled to protect these important structures. Granting that either ureter has been torn in removal of the carcinomatous uterus, the repairing must be done through an abdominal incision, and if it has happened in the course of a vaginal hysterectomy the abdomen must then be opened.

CATHETERIZATION OF URETERS UNNECESSARY.

It has been recommended by some of the advocates of vaginal hysterectomy that the ureters should be catheterized as a preliminary step. If for no other reason than this I prefer the abdominal route. From unpublished evidence which I have been able to collect, this step—catheterization of ureters—of the operation is almost as frequently a failure as a success. This uncertainty, combined with the actual danger of kidney infection and the injury to the urethra from overstretching, is a strong argument with me against the vaginal route. I can not, however, grant that catheterization of the ureters is an essential part of vaginal hysterectomy. Where the broad ligaments are involved in the carcinomatous process, if only to the degree of being slightly rigid, it is extremely difficult if not impossible to make out the ureters. Under these circumstances catheterization would be wise were it not for the fact that such cases if not attacked through the abdomen would better be left alone, as incomplete operation offers nothing to the patient, in fact hastens the progress of the disease.

LESSENER DANGER OF HEMORRHAGE.

There is undoubtedly greater danger of hemorrhage in vaginal hysterectomy for carcinoma of the uterus; although hemorrhage is liable to occur in either operation, on account of distorted, displaced or degenerated vessels. It is simply the increased facility for seeing the locality of hemorrhage that gives the advantage to the abdominal method. In vaginal hysterectomy we are working at the bottom of a dark passageway; and when, in addition to this, the field of operation is covered with blood, accuracy in manipulation is out of the question. Ligation of the ovarian and uterine arteries is a very simple matter in abdominal hysterectomy, on account of the ease with which the site of operation can be exposed.

SUBSEQUENT HEMORRHAGE LESS LIABLE TO OCCUR.

The better command of the field of operation secured by the abdominal route makes the placing of the ligatures on the vessels so much more accurate and secure that subsequent hemorrhage is not only less liable to occur but as a matter of fact is a very rare accident. When it does occur we can, with good reason, suspect the ligature material or carelessness.

DANGER OF INFECTING PERITONEUM LESS.

The use of the Trendelenburg position with occlusion of the general peritoneal cavity and its contents by gauze packing minimizes the risk of infection. In vaginal hysterectomy the intestines are liable to come in contact with fingers, instruments, ligatures, etc., that have traversed the vagina, which, in cases of carcinoma or in any inflammatory or infectious disease, is never rendered sterile. In fact I have very serious doubts as to the sterilization of any vagina. It is claimed that the upper portion is normally sterile, but a vagina which is patulous and which is not virgin, is, as far as I know, a fertile soil for pathologic organisms, although they remain inactive, pathologically speaking, until circumstances arise favoring active life.

Under this heading comes the question of drainage. I believe that most of the cases of abdominal hysterectomy should not be drained. When, however, drainage is needed it should be supravaginal. Vaginal hysterectomies call for gauze drainage in all cases.

In total removal of the uterus whether by the vaginal or abdominal route, there is danger of prolapsing bowel; but by the more perfect closure of the peritoneum from above the danger is lessened in the latter method. The abdominal incision makes a subsequent ventral hernia a possibility to be considered; but with the layer-to-layer suture and careful approximation of muscle to muscle and muscle-sheath to muscle-sheath, the danger is practically nil.

Vaginal hysterectomy is an operation which presents no special difficulties in the class of cases to which it is applicable. It is applicable only in those cases where the carcinomatous process is confined strictly to the vaginal portion of the cervix, the cervical or uterine canal, and where the uterus is freely movable. In cases where there are adhesions fixing the organ, or where there is or has been inflammation or fixation of the appendages, the abdominal operation is safer, easier and a more rational procedure. Any enlargement of the uterus vastly increases the difficulties of the operation and offers another objection to vaginal hysterectomy.

1634 Walnut Street.

INTRACRANIAL PRESSURE.

RELIEF IN NON-TRAUMATIC CASES WITHOUT LOCALIZING SYMPTOMS.

BY WILLIAM N. BULLARD, M.D.

BOSTON.

Trephining of the cranium in cases of injury has now become so common that the general indications are fairly well known. The number of head injuries which now demand operation has increased greatly in the last few years, before which time only compound depressed fractures were so treated.

I wish to call attention to certain non-traumatic conditions in which operation is useful. It has long been known that in cases of increased intracranial pressure due to tumors, trephining, especially when combined with opening of the dura, may afford great relief from pain and general pressure symptoms.

I do not think, however, that it has been made sufficiently plain that this treatment—trephining with such additional operation as may be needed—is often advisable in cases of increased intracranial pressure when the cause of the increase is uncertain. In cases of intracranial tumor, the trephining has usually been done to relieve pain. In trephining in such cases, however, we should consider that we are relieving an excessive intracranial pressure of which pain is only one symptom.

In most cases of intracranial tumor, where the opening is not undertaken with the hope or expectation of removal of the growth, but merely to relieve the intracranial pressure, it is well understood that this relief is likely to be but temporary. There are, however, other cases of excessive brain-pressure, in which we have no evidence or insufficient evidence of the presence of new growths, in which the relief of this pressure by operative procedure is indicated and without necessarily temporary results. In those cases in which the cause of the excessive intracranial pressure is not apparent and in which a slow-growing intracranial tumor may be present, we can not say that the increased brain pressure may not recur, but we know that in some cases it does not return for a considerable length of time.

The case I am about to report is very unusual. There is no evidence of any new growth, and the relief has been complete up to the present time.

The patient was referred to me by Dr. W. M. Conant, of Boston, Jan. 14, 1898. She had already been to several other specialists without relief. She wished to have an operation performed upon her head because her present condition was insupportable and she could obtain no help from internal remedies. In other words, she was desperate. Her history was as follows: She was a married woman, American, 38 years old. Her mother is a nervous invalid, and eighteen years ago was insane for several weeks, but wholly recovered. The patient has never been strong. She had scarlet fever, whooping-cough and varicella when a child. When 13 years of age she had acute articular rheumatism for three months. About this time she was hysterical and weak. She had a cough for a year, but no hemoptysis and has been subject to cough ever since. Catamenia began at 14 years, and were very irregular until marriage, at 28. She fell on the back of her head on the ice when 8 or 9 years old, was not unconscious, but was confused for several days later. After this she had diplopia, which still continues. Her eyes troubled her much when 14 years old, and when she was 17 or 18 she was forced to leave school on this account. When 20 she again fell, striking the back of her head on a rock, and was unconscious for a few minutes. After this she was subject to severe pain in the eyes until she was 25, after which the pain became more diffused over the whole head; of late, however, the pain has been less. In January, 1896, she had an ovarian cyst on the right side and the right Fallopian tube removed. She was admitted to Adams' Nervine Asylum, June, 1896, but after twelve weeks was discharged not essentially improved.

For several years she has had, at times, a sensation in the head as if her brain were pressed upon, "crowded" and as if she were "being smothered," together with a "terrible feeling" in her head, as if she had committed some crime; but there were no delusions. During such attacks she loses all control of herself, does and says the most unreasonable things, can not keep still, walks the floor, throws herself against the side of the room, bites her arm, sometimes sobs violently; no convulsions; no loss of consciousness. She does not keep a servant, because of these attacks. They have increased in severity and frequency this winter, and now vary from once in two weeks to every day. Lately they have been especially severe during or just after menstruation. During menstruation she is apt to vomit dejections, and is subject to nausea and distress in the stomach. She takes neither tea or coffee. The bowels have been regular for six weeks, but were previously constipated.

On examination, she presented no evidence of any mental affection, was perfectly intelligent and clear-minded and showed no delusions or hallucinations. The physical examination was negative. The head was normal in size and shape, and presented no cicatrices or other evidences of injury or disease. There were no focal signs of intracranial affection. The patient was referred for examination of the eyes to Dr. Kilburn, who reported that there was some evidence of eye-strain, but no affection of the optic nerve or retina.

After careful consideration, and having convinced myself that internal treatment was of no avail, I advised exploratory operation. This was performed February 10, by Dr. Conant.

The cranium was trephined on the right side, just in front of the coronal, and about an inch from the sagittal, suture, and the button removed. The dura was very tense, and bulged, but did not pulsate. The cranial opening was enlarged and the dura incised. The brain, which was very blue, protruded an inch or more beyond the cranial opening, suggesting very marked intracranial pressure. The protruding portion of the brain, which was three inches long, two broad, and an inch or more in thickness, was cut off and the wound closed without stitching the dura. The patient made an uninterrupted recovery and since the operation has had no further trouble, except slight headache.

In March, 1899, I received a grateful letter from her husband, which stated that she was still quite well and had just

become the mother of a healthy child, her first, although she had been married more than ten years. In December, 1899, I saw the patient again and she was still free from all the former trouble.

In this case I have never been able to satisfy myself as to the exact cause of the excessive intracranial pressure. There was not the slightest evidence of tumor, either from symptoms or from the findings of the operation. Moreover, the duration of the affection and its essential cure, at least for the time, would exclude any rapidly growing neoplasm. Conditions such as this, while not common, are not so rare as might be supposed, and I feel sure that some are occasionally overlooked and classed under neurasthenia.

I have had another case in which the symptoms of intracranial pressure were such as rather to suggest the existence of a tumor, and, while none was found during the operation, it is quite possible that one may exist.

The patient was a Sister of Charity, 22 years old, whom I saw in consultation with her physician, Dr. J. J. Thomas.

The family history was negative, except that one brother had tuberculosis. The patient had been fairly well until about a year ago, though previous to this she had had occasional frontal headache, with some sense of pressure on the vertex. For a year she has been subject to severe throbbing headaches in the top of the head and in both temples, more severe on the right side, about twice a week. For five or six weeks there has been daily headache, but no confusion of mind. Her sight has been gradually failing since June. August 31, she consulted Dr. Kilburn, who found optic neuritis. Since then, her sight has grown worse and she has attacks of dizziness in which objects move back and forth. In the beginning of her eye trouble she had chromatopsia, objects looked red and gray. For the past three weeks intermittent diplopia has been present. She has had nausea for three or four months but no vomiting.

On November 21, she woke in the night and found her left upper extremity numb and the fourth finger stiff, so that she could not flex it. For two or three days after this the extremity felt sore and the finger was stiff. During the last week the headaches have been worse, with more pressure and sudden, sharp pain in the vertex. There is a sense of pressure of the right eye inward.

Dr. Kilburn's records are as follows: Aug. 31, 1896. Right nerve-head somewhat swollen—about 1.5 D. projection. Near nasal border of disc a small patch of choroidal atrophy over which a retinal vessel passes unchanged. Oct. 24: Right nerve-head a little more swollen. V. O. U. as before, but patient says letters are not as distinct as before. November 7: V. O. D. = 6/18; monocular vertical diplopia O. D.; field normal. November 21: V. O. D. = 6/24; field normal.

The urine was essentially negative.

November 27, physical examination showed tenderness over the head on percussion, most marked on the left side; no definite paralysis of face or limbs; sensation somewhat diminished to touch and pain over left upper extremity, doubtful over left lower extremity; heart negative; spine normal; kneejerks good.

December-18, headaches were rather worse, and optic neuritis worse. Physical examination as above, except that the right side of the head was more tender to-day; no ankle clonus; sensation in left lower extremity is not definitely diminished.

December 20, operation by Dr. Munro: Patient was anesthetized with ether; a U-shaped flap was made on the right side, a little posterior to the fissure of Rolando, so that the anterior edge of the trephine hole was probably just posterior to the arm center. The dura was tense and without pulsation. The opening was enlarged backward and downward, and later toward the median line. On opening the dura the brain appeared edematous, rather dark and engorged and markedly bulging. Posterior and toward the median line there was

apparently a little more resistance, the resistant area being about three-quarters of an inch from the surface.

As it was doubtful whether or not the resistance was due to tumor, and as it was too deep and not sufficiently defined to warrant further search, the lateral ventricle was tapped and several drams of fluid removed. The cerebral tension was much relieved, and pulsation returned at once.

The patient left the hospital much improved, but later the headaches resumed, and in May, 1897, the vision was the same as in February last.

Aug. 16, 1897, the patient was seen again with reference to further operation. She had never been free from headache. After leaving the hospital she was worse for three or four weeks, then general improvement took place until three weeks before, when headaches became worse, and a week later they became severe. She was advised to re-enter the hospital if this condition did not improve.

Seen again in November, 1897, the headaches had been less severe for some weeks after August, but finally became again very severe, and she entered the hospital in October. A second operation was performed by Dr. Munro; the old wound was reopened and fluid evacuated. The pressure was not so great as at the first operation and there was no evidence of neoplasia.

Operation for the relief of intracranial pressure in cases of optic neuritis of unknown origin, apparently not organic, has been performed for me once with excellent success as regards the neuritis. The question to be determined in such cases is, what chance of recovery the patient has without operation.

CONCLUSIONS.

1. There exist certain non-traumatic cases of increased intracranial pressure of unknown or doubtful origin.

2. Whenever such an excess of intracranial pressure exists as to cause serious symptoms, the question of its relief by opening the cranium and cutting the dura should always be considered.

3. In certain non-traumatic cases of excessive intracranial pressure, more or less permanent relief—or even cure—may be obtained by proper surgical interference.

4. In cases of acute severe optic neuritis of unknown origin, the question of opening the cranium and relieving the excessive intracranial pressure should be considered.

89 Marlboro Street.

TYPHOID FEVER.*

BY J. H. SACKRIDER, M.D.

EAST RANDOLPH, N. Y.

It is not to be supposed that the indications for the treatment of typhoid fever could be in all cases exactly alike, yet every case requires absolute rest, perfect ventilation, good nursing and as far as possible, the avoidance of noise. The covering of the bed should be light; the sheets and pillow cases should be changed at least every day; cleaning the patient's mouth and teeth should be attended to three or four times a day, and the most perfect cleanliness of the patient and his bed should be maintained. Fluids ought to be administered freely. Nourishment should be fluid and given often but in small quantities. It is desirable not to overfeed the patient but to give the maximum amount of proper food that can be assimilated. If the fever should be of a mild nature, this may be all or nearly all that is required. If, however, the toxin is virulent, then complications will arise that require remedies to meet them.

The most important of these complications are hyperpyrexia, diarrhea, hemorrhage, pneumonia or bronchitis, perforation, peritonitis, heart failure, sleeplessness and delirium. Of these the most important is the hyperpyrexia; if this can be controlled without depressing the heart and general system, the other complications are not as severe and, as a rule, are more amenable to treatment.

The best treatment for hyperpyrexia is still a debatable question. If it is allowed to continue, malnutrition and heart degeneration are sure to follow. Water has been the best antipyretic for me to use. Since 1897 I have used cold water internally as an enema to reduce the temperature, at the same time giving sponge baths when the skin felt hot and dry, never allowing the temperature to rise above 102 F. without using the enema. The temperature of the water varies from ice-cold to 70 F., as the condition of the patient may require. The quantity varies from four ounces to three pints at each injection. This may have to be repeated four or five times a day in severe cases, but in mild cases once or twice has been sufficient to keep the temperature 99.5 to 100 F. I have a complete clinical record of eight cases that were treated with the cold-water enema and the sponge bath as the antipyretics. I will briefly give an account of two of these:

CASE 1.—I was called Feb. 24, 1898, to see Miss B., aged 40, American. She had been nursing a case of typhoid fever for six weeks in a neighboring county, and had been feeling badly for ten days previous to coming home. She had headache, slight diarrhea, general malaise, epistaxis, nausea, disturbed sleep and tenderness and gurgling in the right iliac fossa on pressure. About two hours before I saw her she had a severe chill. Her temperature at 2 p.m. was 103.4, and her pulse was 130. I gave 1/10 gr. mercuric chlorid every two hours until five powders were taken, and ordered an enema of one pint of water at a temperature of 45 F., which was retained. At 5 p.m. the same day the temperature under the tongue registered 101 F. At 10 p.m. it had gradually gone up to 102 F., and the nurse then gave another enema of water at 45 F. At midnight the temperature reached 100 F., but did not go above that until 11 a.m. of February 25, when it began to rise. The bowels were distended with gas, but the application of very warm turpentine stupes gave some relief. At 3 p.m. the same day, I gave another enema, of one quart of water at 40 F. I also gave 5 gr. of salol every six hours, pepsin 5 gr. and subnitrate of bismuth 10 gr. every four hours. The sponge bath of cold water was used freely every half hour or hour if the temperature began to rise. Nourishment consisted of milk, rice water, crust coffee and meat juice.

It will not be necessary to describe in detail the progress of this case, as each day was nearly a repetition of the preceding day, with the exception that the enemata were not needed as often toward the close of the disease, so that one enema a day—with the cold water sponging—was all that was necessary to keep the temperature at 100 or below. At any time when it was nearing 102 the cold enema was given with prompt and decided relief. This case made a good recovery and the patient was discharged on March 24.

CASE 2.—I was called July, 1898, to see Mrs. L., who had been feeling ill for about a week. She had been away from home on a visit, and typhoid fever having made its appearance in the family where she had been visiting, she came home with the following symptoms; severe diarrhea, almost unbearable, frontal headache, acute bronchitis with dry harsh cough, sick at the stomach, delirious tongue dry and brown, pulse 140, and at 9 a.m., July 1, a temperature of 104 F. I ordered hot application of flaxseed to the chest, and a cold-water injection; the latter was not retained. An enema of one

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teaspoonful of starch-water with 15 drops of tincture of opium was given; and in one hour the cold-water enema (one pint) was repeated; this time it was retained. At 4:30 p.m. the same day the temperature was 102 F., and the patient was resting quietly. At 10 p.m. an enema of nearly one quart of water at 40 F. was given. Applications to the chest were continued, and 1.5 gr. of codein was given every four or five hours. At midnight the temperature was 100 and the pulse 110. During the remainder of the night the patient slept fairly well, something she had not done—she said—for more than a week.

On July 2, at 9 a.m., I found the patient quiet and resting, the delirium gone, the cough relieved, expectoration free, the temperature 100.5, and the pulse 100. A cotton-battling jacket was ordered in place of the poultices. Pepsin, 5 gr., and bismuth, 10 gr., were given every four hours, and salol 5 gr. every four hours. The bowels were very loose, but were kept under control by using, when necessary, 10 to 25 drops of the tincture of opium, in thin starch-water.

In looking over the nurse's notes I find that this patient received on an average of two enemas of cold water a day for seventeen days, with the most beneficial results. The temperature was always kept below 102 by means of cold water. This patient also made a good recovery and was discharged August 13.

The six other cases I would speak of briefly as a whole: One was a child of 6 years; one a woman of 60, and the others were of middle age. They were all treated with the cold or tepid sponge bath, whichever gave them the least discomfort; and all were given the cold-water enema. No bad results came from its use. One case of hemorrhage was promptly relieved by the enema of ice-cold water. Where the diarrhea was persistent it was controlled by the starch-water and tincture of opium. A little brandy was used in one case only, for the relief of temporary heart failure, while strychnia was used in several.

I wish to speak in particular of sleeplessness accompanied with restlessness and a tendency to exhaustion and delirium. The cold enema relieves this condition quickly and completely.

In closing these few remarks, I desire to say that early antiseptics of the gastrointestinal tract is greatly to be desired. A few doses of chlorid of mercury were used in all of these cases, followed by salol, for a longer or shorter period of time.

Whether the cold-water enema has an antiseptic action on the typhoid bacillus I can not say, but I do know that its use is followed by a rapid decrease of temperature and great comfort to the patient.

SHOULD THE DENTAL STUDENT BE EDUCATED INDEPENDENTLY OF GENERAL

MEDICINE?*

BY G. V. I. BROWN, M.D., D.D.S.
MILWAUKEE, WIS.

Only yesterday one commonly heard the statements: "These dental college graduates don't amount to anything, they are too theoretical; it is the practical man who learned in an office and never went to college that can fill teeth." "What's the use of a dentist studying anatomy and physiology and such things? He wants to learn to extract and make plates and put in fillings and not waste time on studying theory." A brief day finds all this passed away, profession and laity both de-

manding the degree of Doctor of Dental Surgery, as at least a certificate of proper study and attainment.

Again we note the same old spirit giving out the idea that too much study of medical branches makes a less efficient operator, that such work must be curtailed in order that more time may be devoted to purely technical training, and every consideration subordinated to development of the mechanical side of the subject. But the tide of advancement is even now setting in and with the weight of accumulating information is forcing the need of broader dental education along the line of general medicine. Already the layman of the better class looks for the M.D. to add assurance of reliability that to him the D.D.S. unattended does not represent. To claim that the dentist needs a knowledge of anatomy, but that his knowledge should stop at a given point, because he does not require a more extended study of the subject, and is in fact better without it, would seem to be strange logic, and yet—ridiculous as is this proposition, contemplating, as it does, the isolation in treatment of a limited part of that wonderful anatomic structure, the human body, from all its other portions, when its very fundamental principle is the harmonious co-operation of every division, whether great or small, with each and every other one—this is exactly what the advocates of dental, to the exclusion of medical, education for students of dentistry are, wittingly or unwittingly, undertaking to do.

It ought to be a matter of surprise that a paper having the title of this one should be called for by members of the dental and medical professions, so-called—for we know that these two, which at most ought only to be recognized as distinct factions of the same professional body, are not commonly so understood. While the current stirred by the movement of vastly increasing realization of the importance of anatomic, physiologic, clinical, histologic, pathologic, bacteriologic and therapeutic considerations in relation to the oral cavity and to even the simplest of those operations which contemplate the preservation of teeth and other organs associated with the mouth, the relative interdependence of other organs, or even the entire human organism, on the healthful condition of these special ones in the performance of their proper functions, has done much to broaden the dentist's field of operation, yet there is in some quarters a decided tendency to limit it, despite the very apparent need of its extension.

The colleges that have been conducted independently of medical colleges point with pride to the record of their achievements. They can and do truly say, "we have been the chief factors in making dentistry and the dentists of America the best in all the world." Grant this, and still may it not be possible that, in the evolution of the educational system of a great profession, the time has come for something better, for a curriculum which, embodying all that the specialization and technical training has beneficially accomplished, shall yet become so broadened as to include the scientific study that a thorough knowledge of medicine demands and which has become imperative to dentistry in view of the requirements of an educated public?

Notwithstanding all contrary efforts, several factors are working to this end. The education of medical and dental students together, as in the departments of universities and medical schools, is perhaps first among these influences. The advantage of future consultation

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becomes apparent, as daily the common relationship of diseases of the mouth to general disorders of the system is shown in the dispensary and infirmary work, and each student becomes impressed with the idea of the futility of treatment without due consideration of this fact in a large proportion of cases. Friendships and mutual respect thus born make easier the practice of this principle. The division of expense makes possible a better class of teachers and better instruction for a limited number of dental students.

Last, but by no means least, the public, being educated through the press and otherwise, are now more and more concerned with the grave character of pathologic oral conditions, and seek rather one who deals with such than an artisan who rivals the jeweler in his accomplishments, to the exclusion of such considerations.

Time and inclination are, after all, the essential points. The former must be gained by lengthening of required periods of study before graduation, the latter is an outcome of natural development stimulated by such influences as may be brought to bear upon the colleges, students, profession and laity. In my paper read before the National Association of Dental Technicians, the actual number of hours possible to be devoted to each branch of study was estimated under the seven-month term, and it was clearly shown that only a bare smattering was practicable, and that the need of a longer period of study was most urgent.

The plan of having a four years' medical course precede the study of dental branches is impracticable; the age of the student, after allowing for the necessary years of preliminary study, would in most instances be such as to make the matter of manual training and the acquirement of sufficient technical dexterity much more difficult and uncertain than at an earlier age, whereas on the other hand, the more matured mind is better able to understand the science of medicine.

Dentistry, while a special branch of medicine, just as the eye, ear, gynecology, or any other of the recognized divisions, differs from each, and the overruling of this fact must surely tend to its disadvantage, but there is no good reason why the study of medicine during the first two years can not be supplemented by a thorough training in operative and prosthetic technics, or general anatomy by special dental anatomy. Nor can there be any objection to continuing, during the summer months, practical operations in the mouths of patients under the direction of demonstrators in the college infirmary, where the student can be steadily employed in filling teeth, constructing crowns, bridges and dentures and in performing all the operations of dental practice in order that he may, during the winter session, devote more time to the studies of his third year in medicine, without interfering with the regular requirements for dental graduation, and the following year receive a degree in medicine. Such a student, although completing the work in four years, has had seven full courses of instruction, and therefore, much more practical experience and study than could be possible during the regular winter sessions alone; at the same time his study of medicine is exactly the same as though he were to be a general practitioner, and he is in all respects an equal in mental equipment.

The practical benefit of such a course of instruction seems to be borne out by the results obtained in the Dental Department of the Milwaukee Medical College,

where for students undertaking this double work, eleven full months of attendance in each year are required. The men ambitious and able to undertake and carry on this course faithfully have proved themselves to be in every way more fit and capable than those whose desire is to slip along with less effort in the way of study and attendance; are better operators, more skillful in mechanical ability and far more to be depended on to deal with surgical and other measures in the treatment of pathologic conditions than they could possibly be with only three seven-months terms of special dental instruction.

Perhaps one of the most perfect systems for educational development that has ever been brought forward is the Froebel kindergarten. Its practical utility in developing the powers of the growing child, of forming character, in pointing to his special traits and in leading on to the future selection of an occupation such as Nature's bestowment of talent has best fitted him for, all through the delightful agency of plays, songs and entirely happy occupation is simply marvelous, yet its general application to public school methods for large numbers of children, where so much of the significance of each part is necessarily lost and only that which is purely mechanical remains, is undoubtedly proving itself anything but the benefit that it really ought to be; so in the matter of giving instruction in operative and prosthetic technics in our dental colleges while the conception and value of such work in preparing the student by training the hand, the eye and the mind to act together with a just appreciation of the requirements for operations on the mouth and teeth, by laboratory instruction, beyond doubt mark a mile-stone in the progress of dental education, yet when such methods are applied to the instruction of numbers of students far greater than should be undertaken at one time—where actual work on the patient was required and where instead of the individual student being brought in closer touch with actual conditions of the mouth he is kept away from them and thus longer removed from the time when he shall operate on the living subject—then like the kindergarten under similar conditions, they cease to be the thing of benefit that they should be, and become a menace to that high development for which they were originally instituted.

Unfortunately, the fact is not generally recognized professionally, socially or otherwise, that the mental and physical requirements of the practitioner of dentistry cover a wide field, even greater than the exactions for rhinology, laryngology, otology or ophthalmology. His need of medical science is quite as great; his special part in its relation to general disease or to pathologic conditions in other parts is fully as significant as theirs; and beside all this he must have the eye and the subtle appreciation of cosmic effects that the artist has, as well as the delicacy of touch and manual dexterity of those whose occupation fits them to manipulate the delicate hair-springs of the finest watches. It is because the breadth, the scope, and the wonderful possibilities of individual and collective effort, if directed toward the development of the powers of future dental practitioners as a benefit to humanity, are not fully understood.

Consider for a moment that the mouth is the beginning of the digestive tract, the functions of which are as much dependent on its co-operation as any other portion, and that its impairment through disease can at once extend an influence throughout the entire economy.

disastrously affecting digestion, assimilation and metabolic changes without which a general condition of health is impossible. Remember that its lining membrane extends to the nose and throat, and any of its diseases are thus afforded easy transit to more remote parts; also that with heat, moisture, accessibility to the outer air, what a wonderful incubator it provides with culture-media ready to cater to the appetites of every variety of germ; and bear in mind that it commonly harbors the bacilli of tuberculosis, diphtheria, typhoid fever, the pneumococcus, the streptococcus of erysipelas, and the various germs that are known to be concerned in suppurative processes. Think again of the network of large vessels capable of carrying infectious products directly to the brain and the intricate network of nerves, irritation of which can easily cause pain, paralysis, anesthesia, hyperesthesia of different parts, or through their ganglionic associates, send messages to different portions of the body, which shall in their turn give rise to conditions such as neurasthenia, epilepsy, chorea, etc. Furthermore, let your mind dwell on the possibility of anemia, septicemia, pyemia, or tetanus through the agency of disturbances in this single part, and then let question who will the need of medical knowledge for those on whom all these considerations must depend.

In the U. S. Educational Report it is noticed that dentistry is a branch of minor surgery, specialized and quite apart from medicine or even general surgery. Is the practice of dentistry more of the nature of minor surgery or are the operations performed by the dentist in treatment of diseases of the mouth less grave or more fitly termed minor than the majority of those performed by practitioners of those other specialties, and is not the fitting of glasses quite as mechanical in its nature as the fitting of dentures?

In parts of Europe there has long been a distinction between the dentist of limited degree and him who, through having had sufficient education, is entitled to be called "Doctor." The Belgian government has in contemplation the suppression of the diploma in dentistry with the right to practice dentistry to be conferred only on the physician, the same as the other specialties of medicine.

While it seems altogether unlikely that America will follow the lead of European nations in regard to any matter pertaining to dentistry, the fact nevertheless remains that, having taken longer and more expensive courses in both medicine and dentistry, it is but natural that some benefits should accrue to the individual aside from his own self-consciousness in being better equipped for the practice of his chosen profession. This can only be through closer relations with the medical profession and the recognition as a member of that profession by the public generally, hence the tendency already noticed on the part of a steadily increasing number of individuals to hold aloof from purely dental conventions and interests. This condition of things is greatly to be deplored; it is just the leaven of the influence of such men that the upraising of the dental standard requires most urgently now as ever; and above all things the work of this Section should be to bring all into the great medical fold.

The time has come, it would seem, for the dentist who would be also a surgeon to be one in fact as well as in name—to have his degree in medicine and also that which certifies to his special training as a dentist. If

he chooses to ignore the medical aspect of his calling then he should, with due regard for consistency, leave out the word surgeon, and call himself doctor of dentistry, not doctor of dental surgery or doctor of dental medicine, since he elects to ignore the profession which these terms represent, and to be simply the doctor of dentistry, in other words, a teacher of the methods of filling teeth, shorn of the medical, pathologic, bacteriologic, the surgical, and in short, the entire medico-scientific aspect. The very individuals who so loudly proclaim the fact that a dentist should be distinct from the medical profession, and freely ignore the right to recognition in that direction, would be the very first to protest against the withdrawal of all those portions of the educational and practical branches of his profession, which belong by right of fact, custom, priority and inheritance to the older profession from which they wish to separate themselves.

It seems the height of absurdity to speak of the "passing of the dental college" at the moment when the number of recent graduates eclipses all former records, yet, just as the lengthening shadows betoken the coming sunset, so must follow as "night the day" a restoration to medicine unconditionally of her wayward but promising child, dentistry.

THE PRACTICAL VALUE OF A MEDICAL EDUCATION TO THE STUDENT OF DENTISTRY.*

BY WARREN BROWN HILL, M.D.

Professor Materia Medica and Therapeutics, Milwaukee Medical College, Medical Department; Professor of Therapeutics in the Milwaukee Medical College, Dental Department.

MILWAUKEE, WIS.

Much has been said as to the necessity of a broad educational foundation for dental students from a theoretic or scientific point of view. That an educational superstructure can be raised only to a height correlative to the breadth of its scientific foundation will be gainsaid by none; but I would speak of the value of a broad medical education in the everyday practice of the student of dentistry when he has taken upon himself his life-work as a practitioner. There exists too broad a gap between the practice of medicine and dentistry; a field of practice uncultivated by either doctor or dentist; one which can not be reached by either so long as present conditions remain. The doctor fails to recognize the mouth as a cavity in which neural irritations, productive of remote manifestations are developed, but treats it rather as a cavity for dentists to work in. The infection of the alimentary tract is a matter of great interest to the practitioner of medicine, but the oral cavity, with its abundance of microbes and its deep recesses for their propagation, has been abandoned by them to the dentist.

The patient is referred to the dentist with the expectation that he will assume the full responsibility of the care of the mouth, a responsibility which he may not assume if his knowledge of medicine is not sufficient to trace from cause to effect and from effect back to cause again any of the pathologic conditions to be found there. In our present condition of practice a large percentage of the diseases of oral origin go unrecognized by dentist

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and doctor alike; the doctor unskilled in locating abnormal conditions of the mouth, the dentist uninterested in the remote manifestations in the body of the patient. That humanity should so unnecessarily suffer from the maladjustment of medical and dental education is a serious reflection upon the intelligence of these professions.

Medicine and dentistry should no longer be divorced. Dentistry should at once take its place as a part of the science and art of medicine and should be practiced as a specialty. The intelligent consultation of doctor and dentist would remedy the evil; but no consultation can be intelligent until those consulting have a common ground on which to stand—a medical education.

The ideal dentist should be not only a graduate in medicine but one of hospital or practical experience extending over one or two years before actively engaging in the special work of his profession. He should have become familiar with pathologic conditions, not only in the mouth but in the body generally. His clinical training should be such that he can discern the effects of reflex irritations on the system as well as the results of infections on the patient generally. In fact he should have so comprehensive a knowledge of practical medicine that he can diagnose disease with sufficient accuracy to refer his work to its proper field in medicine, and then by his consultation and co-operation contribute materially to the welfare of his patient. But ideals are not easily attained. Still, we may always aim high, and while waiting for the advent of ideal education, may encourage the coeducation of doctors and dentists by bringing together medical and dental students in one institution and requiring the same course of instruction in the fundamental branches. We may offer the dental students the advantages of attendance upon medical and surgical clinics and gradually weave into their course those studies of the medical curriculum best adapted to broaden their education, until finally we may evolve the ideal dentist, the peer of any specialist in medicine.

802 Third Street.

IS MEDICAL EDUCATION A NECESSARY QUALIFICATION FOR DENTAL PRACTICE?*

BY R. R. ANDREWS, D.D.S.
CAMBRIDGE, MASS.

At the dental section meeting of the AMERICAN MEDICAL ASSOCIATION, in Baltimore, some years ago, while speaking on the subject of dental education, I strongly advocated the formation of a medical university, an institution that should educate men in medicine, and have all the chairs necessary to thoroughly teach any specialty that the student should elect; and that there should be taught those principles which should give to each of its graduates the old and honored degree, M.D. I can conceive of no reason why this idea might not become a reality in the presence of a noble enthusiasm for real progress. An undergraduate from Harvard elects his necessary eighteen courses, with the exception of the few required, distinctly different from another man in the same class, and yet both receive the same degree, that of A.B. This is practically true in the department of science, where he receives the degree of S.B., yet he may have specialized in chemistry, in engineering, or in

electricity, and it is also true in the medical department, where men specialize in the eye, the ear, in surgery and in other special studies. So far as I am aware, dentistry is the only specialty having separate schools, and giving a separate special degree. Dr. Chapen A. Harris, the father of American dentistry, who realized that the dentist should be medically educated, endeavored to establish a professorship of dental surgery in the medical department of the University of Maryland. The authorities of the university, not having a very exalted opinion of dentistry as it existed at that time, would not agree to this, and Harris, with his friends, founded the Baltimore College of Dentistry.

This was the reason for its separation; can we rectify the mistake? Does the oculist, the aurist, or the dermatologist have any better claim to be known in medicine as a specialist than the dentist? A decided advance in educational matters lies in the fact that our professional schools are demanding as an entrance condition, that men who are to become scientists, physicians, lawyers, or clergymen must have received a degree in letters from one of the recognized colleges. The high standard of our professional schools demands this. Is there any reason why we should not demand as much from the man who is to become a dentist? I do not believe that there is at present an independent dental school that could exist if the requirement for entrance were a degree in letters. Let the few then who have such qualifications acquire the medical education, and thus take a higher stand. The managers of some of our large dental schools in the past, partly in the mercenary spirit of competition, and partly from the low standard they have adopted for entrance examinations, are largely responsible for swelling the vast army of matriculants from year to year, graduating many improperly prepared men, who are not fitted for a professional life, men who have no educational, ethical, or professional standard.

This has been going on at an unprecedented rate; can we wonder at the consequence? We realize it on all sides. The number of well-advertised dental parlors, dental institutes, and dental departments of the department stores is greater than ever. These places are managed by men having a degree from one of these dental colleges, and they have under their charge young graduates or sometimes men who have not yet graduated. Many of them set at naught all tradition and sentiment, and resort to means or methods calculated to fill their purses at the expense of their patients. For this condition, dental colleges as conducted in the past are in part responsible; it is a pathologic condition of our profession, and should have a remedy—what shall that remedy be?

"Is medical education a necessary qualification for dental practice?" Most of the professions are older than dentistry, and in the main they will always be above the ordinary; the legal profession dares not stoop to pettifoggery, the clergy must keep up the standard of its sacred calling, physicians must not stoop to quackery: such an action would bring disaster and disgrace. I believe that it was the lack of ethical and professional training in the past that is largely responsible for the perverters of our profession. I am not unmindful of the great work that our dental colleges of the better class have done, or of the wonderful progress that dentistry has made under them. And this I believe is the very thing which is leading up to what we advocate—the ne-

*Presented in a Symposium on Dental Education, before the Section on Stomatology, at the Fifty-first Annual Meeting of the AMERICAN MEDICAL ASSOCIATION, held at Atlantic City, N. J., June 3-8, 1900.

cessity for the old and honored degree of Doctor of Medicine. This degree would give to the dentist a broader education; would improve his social and professional status; would give a large and general knowledge of the scientific principles involved; a more specialized knowledge of the interrelations of general disease and local manifestations, and a greater familiarity with bacteriology as specially associated with the mouth. Then the mental training which would result from such a course in the higher qualifications must be of vast service to him in his practice in after life. It has been held by some that we are likely to lose our manual skill attending to studies so largely theoretic, but do they not forget how much practical work is required for a degree in medicine? In physiology, chemistry, physics, and at the dissecting-table one gains a very large amount of manual skill, and also gains a very decided mental training which must result in a distinct advance when combined with the full special technical training of his chosen profession. This advance is meant in no way to be antagonistic to the standing of the degreed man of to-day.

The demand of the time is for a higher standard; the salvation of our profession is to be achieved through higher educational attainment, high enough to eliminate ignorance and incompetency. In the highest sense, dentistry is a specialty in medicine, and more time should be given in our special training to dealing with the abstruse problems in medicine which have to do with remote influences on the mouth and its diseases. All those remedies affecting nutrition and assimilation have a direct interest to the dentist; the art of prescribing the proper remedies should be known, and not neglected, as it is by the majority of dentists at present. We should know the human system thoroughly, and should know enough of medicine to be prepared to treat intelligently those general pathologic conditions that affect the organs which are our especial care. The surgeon not only understands the way to operate, but he knows as well the proper remedies. All must admit that the dentist should know enough of the human system to be thoroughly prepared in his special education. I believe that this can be better done in the medical school with a special dental training. We are now in a position to demand a higher standard, and the question comes to us, how can we better our profession in ethical and professional ways?

"Is medical education a necessary qualification for dental practice?" I think that the time has come when a medical education is necessary, and for the following reasons: We must admit that it is essential that the training during our college course should be full and complete. This century is pre-eminently an age of progress, and the more intelligently we prepare ourselves the better can we apply this acquired knowledge to the advancement, the elevation, and the wellbeing of humanity.

To me there is no question as to the desirability of the establishment of our profession on a medical basis. There will be opposition, but we must work to overcome it. It is full time to act on this important question, and to act like sensible men to raise the dental profession above some of the present questionable methods. The problem of medical education for a dentist is too pregnant with possibilities to act lightly; we must give it full and deep thought and discussion, and then act for

the true interests of our profession. A change must come, if not this year then the next, or the next. The best and truest friends in our profession should lend a hand to bring about this result. It is a result which must add greatly to our status as professional men. The question confronts us whether ours shall be a profession or a business? What is our remedy? Our leaders are thinking; as a result, our dental schools are fast becoming allied to universities having medical departments. The trend of dental education is certainly toward the medical, and the tone from the graduates of these schools is more ethical; here it seems to me lies our opportunity. We must give an ethical, professional, and technical education to the average graduate. We can not advance a profession faster than its average graduate. Let us urge the educators of universities to blend the dental with the medical, adding such chairs in the special dental courses as shall give a complete technical training. I, myself, have no doubt that this is coming, and present indications confirm my belief.

Harvard University is preparing to erect a medical university and will take in under one care all of its medical specialties, including the dental. With the proper application of influence, we may look for the same degree which is now given to the oculist, the aurist, the surgeon and the dermatologist. Can this be brought about? In answer let me quote a sentiment from Dr. J. Leon Williams, in his paper, "Which Shall It Be, the Empirical, or the Scientific Method?" "*Anything can be*, that has the support of twelve or even six men . . . who have faith in themselves. It would be highly gratifying to me if these six wise and earnest men could be found in this society. The influence of this organization is world-wide, and it contains men of sufficient executive ability to carry this or almost any other movement into which they put their whole hearts, to a successful issue."

[The discussion on the Symposium on Dental Education will appear in next week's JOURNAL.—ED.]

HEMORRHAGE AFTER CONFINEMENT AND ITS TREATMENT.*

BY HERMAN E. HAYD, M.D., M.R.C.S., ENG.

BUFFALO, N. Y.

Hemorrhages at all times and under all conditions are matters of serious import; they signify responsibilities more or less grave, according to the organs involved and the amount of blood actually lost. Mere loss of blood, however, as measured and interpreted by ounces, does not necessarily indicate serious involvement of structure or function; and if not sudden and overwhelming in amount, this loss is in many individuals without apparent effect upon the economy, so quickly is the lost amount replaced by a new supply. At the same time, it is often surprising to see what inroads are made upon the system by small and repeated losses of blood continued only for a short period of time.

Hemorrhage after confinement presents itself in many interesting and important forms; and often demands the greatest skill and the best resources of the most accomplished medical man. Indeed, I can imagine no condition more terrible; none which is fraught with greater danger, which requires more coolness, more judgment and more surgical resource than a case of active post-

*Read before the Fourth District Branch of the N. Y. Medical Association, Buffalo, May 8, 1900.

partum hemorrhage. Fortunately, it is largely a preventable accident, and if proper care be exercised in the management of the third stage of labor it will seldom occur. When seen it will be best controlled if we have the knowledge of the usual causes of its production.

Uterine inertia is responsible for most cases, and this is occasioned by the exhaustion consequent upon long and repeated muscular efforts at delivery; by the weakening of the uterine muscle-fiber, due to overdistension from excessive liquor amnii, or twin pregnancies; or by frequent child-bearing, or sometimes by an overloaded bladder.

Irregular uterine contractions, or what is commonly called hour-glass contraction, produced often by unnecessary traction upon the cord and placenta, is a frequent cause of postpartum hemorrhage.

Placental adhesions, usually only slight, are often accompanied by profuse bleeding, by interfering with the proper uterine contractions and expulsion of the placenta and its membranes. If we add to these conditions that constitutional tendency to bleeding seen in the so-called hemophilic, we shall have noted the usual causes of early postpartum hemorrhage.

Occasionally careless rolling in bed before the binder is applied, and too early assumption of the sitting posture, for the functions of micturition and defecation, cause sudden and alarming hemorrhage. These are practices to be strongly deprecated, notwithstanding the fact that many accoucheurs sanction and advise such liberty. I saw almost a fatal hemorrhage, in a woman who showed no evidence for anxiety, brought on, I am satisfied, by permitting her to roll over to the other side of the bed to enable the nurse more easily to arrange the bed-linen. And here let me refer to a frequent cause of concealed hemorrhage: The binder is often applied before the uterus remains in firm contraction; then when least expected the organ relaxes and very alarming symptoms soon follow.

The treatment of this class of cases, where the hemorrhage has occurred early, is to adopt such means as will rapidly and effectively produce strong uterine contractions. The uterus should be held firmly in the grasp of the hand, and the placenta, if not expelled, should be expressed at once by the *Crédé* method. The uterine contractions should be stimulated by manual pressure, and if it contains clots or a piece of membrane or placenta, these should be pushed out either by pressure from without or by careful introduction of the hand into the uterus. Ergot should be given either alone or in combination with belladonna or atropia, or ergotin should be given hypodermically. Stimulants should be administered either by the mouth or hypodermically; strychnia, digitalis, and such remedies as are ordinarily employed to relieve shock should be given; warmth must be applied to the body, etc.

Sometimes a hypodermic injection of sulphuric ether in teaspoonful doses acts well. The limbs should be bandaged from the feet up and the foot of the bed elevated. Large saline injections should be introduced into the bowel or under the skin or into the submammary tissues. A pint or more can be injected under the breast; in fact the breasts can be distended until the fluid exudes through the nipples. The uterus should be further excited to contraction as much as possible; sometimes the intrauterine injection of very hot water is a powerful excitant, as is also the copious application of ordinary hot

vinegar; or a piece of ice may be introduced into the vagina up against the os uteri, or even into the uterus. The abdominal aorta should be firmly compressed if the bleeding is alarming. If these means fail, the uterus should be packed with large, broad strips of iodoform gauze—about 5 per cent. iodoform—and the vagina tamponed with the same material. Attention should be given the bladder, which should always be empty, as a moderately distended organ will encourage, if not actually produce, postpartum hemorrhage in subjects predisposed to bleeding.

It must be understood, however, that packing of the uterus with iodoform gauze must be done carefully and with due regard to every antiseptic and aseptic precaution. It is a well-recognized form of treatment and is a valuable addition to our armamentarium, but is only to be used when the uterus fails to substantially respond to the other more quickly applied measures.

Hemorrhage after delivery is very often due to laceration of the soft parts, and particularly the cervix. In these cases, the tear usually extends to the fornix, and involves the circular artery. It can be controlled at once if the patient be placed upon the table and the parts exposed with the assistance of a good light. A speculum is not necessary, because the uterus can be seized with a tenaculum or vulsella forceps, pulled down through the introitus and the tear sewed up. Catgut is to be preferred. Usually excellent union takes place. In two cases I have had gratifying results in the immediate repair of cervical lacerations.

Tears in the vagina often cause great loss of blood. These are often overlooked or not suspected because the skin perineum seems to be intact. This experience I have often had, and with the assistance of a nurse who gently separated the lips of the vulva, a tear high up in the posterior wall has been brought together by a few stitches and the bleeding stopped at once.

Tears often take place anteriorly along the side of the urethra and through the labia to the pubes. I am satisfied that these anterior tears are much more frequent since we have been paying so much attention to the perineum and, in our desire to save it by lateral incisions or carefully directed efforts, the force of the approaching head is made to expend itself forward until these soft structures give way. They should be repaired immediately, and in fact, if all tears of the soft parts were at once brought together, much future suffering would be spared our child-bearing women.

I have heard men in medical societies, in discussion, say that they never have torn perinei, and very seldom see occasion for suturing the soft parts. These men are the most dangerous practitioners we have, because they are either too ignorant or too careless to detect lacerations, or too cowardly to assume the responsibility of them and the necessary pain occasioned by bringing them together. Such excuses as the tear does not amount to anything will not be accepted by qualified men to-day, as good practice, when an ordinary cambric needle, threaded with common linen thread is all that is necessary for their repair.

Sometimes very decided bleeding takes place from a ruptured varicose vein, or from incipient malignant disease of the cervix; the former is usually controlled by pressure with a piece of gauze, while the latter must be met by general surgical principles.

Hemorrhages which occur some days after labor are often due to retained pieces of placenta or secundines. A little oozing takes place and the blood collects around these retained products until the uterus relaxes, when a sudden and often alarming rush of blood takes place. Then the bleeding often ceases for some hours or even days, and again manifests itself by a sudden and perhaps overwhelming discharge of bright-red blood. I have had in my own practice three such cases, and have seen quite a number in consultation with other men; I have found the patients often moribund, cold and pulseless, even so late as in the third or fourth week.

Submucous and intramural fibroid tumors often cause alarming hemorrhages and are not easily diagnosed unless the patient be placed on a table, the uterus pushed well down into the vagina, the finger carried through the cervix, and the body of the uterus thoroughly explored by bimanual palpation. Unfortunately, we keep temporizing in these cases of hemorrhage, and do not take the trouble to examine our patients carefully enough, or the cause would be more often detected. It is a mistake to try to make a careful examination in bed, because it is impossible; and it is the grossest carelessness to let these cases go on bleeding from day to day without finding the source.

Another frequent cause of prolonged loss of blood, and particularly that bleeding which comes after the tenth day into the second and third week, is a retroverted uterus. In fact, I am beginning to believe that this is more often responsible for profuse, bloody lochial discharges and late losses of blood than anything else. This condition is quickly relieved by the insertion of a proper-fitting pessary after the uterus has been first lifted into position.

Sometimes an old endometritis, or a recent septic endometritis, or still more frequently a gonorrhoeal endometritis is associated with much loss of blood, and is responsible for the subsequent subinvolution and tubal and ovarian diseases, which occur so frequently in puerperal cases.

A very interesting and somewhat rare form of hemorrhage, although not so serious in so far as the mere loss of blood is concerned, but of great importance from a surgical standpoint, is hematoma of the labia. This form of bleeding is concealed and only makes its presence known, perhaps a few hours after delivery, by great pain running down the course of the sciatic nerve into the calf or the heel. Then a swelling begins to manifest itself in one or the other labium, gradually increasing in size until it distends the tissues enormously, filling up the soft parts between the vagina and the hip joint. It soon becomes black and very hard. The pain at the same time is excruciating. I have seen two such cases; one which was operated on by Dr. Frederick in the Woman's Hospital; the other occurred in my own practice and was operated on by myself. Both cases did well under surgical interference and made a rapid and perfect recovery. There seems to be some doubt as to the proper course to pursue in this condition, but I am satisfied that the accident is not nearly so serious as our older authors seemed to think it was. With our improved surgical technique, the patients ought all to receive operative attention, and to my mind, all should get well. A history of my case and the course which was pursued will, perhaps, be interesting; the latter, I am sure, will meet the approval of the surgeon of to-day.

The woman—Mrs. D., aged 35, a primipara—was delivered of a female child weighing $7\frac{1}{2}$ pounds, breech presentation. The labor was tolerably easy and quite rapid. After the placenta was expressed and the bandage applied, she began to complain of great pain down the left leg. Soon this became excruciating in the calf and heel. Nothing could be seen to account for this condition, so an injection of morphia hypodermically was given. This soon had to be repeated, and instructions were left with the nurse to meet the pain, when severe, by the morphia. In the morning, quite a marked swelling appeared in the soft parts between the external labium and the inner side of the thigh, and extended high up in the vagina to the cervix, filling up the whole left pelvis. A diagnosis was now easily made, and ice was applied externally for forty-eight hours over the hard, dark, swollen mass. The patient was then anesthetized, and the parts prepared for operation; a good incision was made through the most dependent part on the outside, and at least a quart of black clots removed. The cavity was then gently irrigated and packed with iodoform gauze. There was no subsequent temperature. The wound was dressed on the third day, when a lot of old clots which had separated were washed away, and the wound was again packed with gauze. In three weeks the cavity had disappeared and the patient was permitted to sit up. The danger in connection with the early operation is the continuation of the bleeding, but after forty-eight hours the ruptured vessel has had time to close, and if the clots are removed carefully and not followed by too much irrigation, there is but very slight danger of the hemorrhage recurring. If it does, however, the vessel must be found if possible, but failing in this, the cavity is to be firmly packed with gauze.

Lastly I shall but call your attention to the hemorrhage due to subinvolution of the uterus, owing to an old unrepaired cervical laceration. In this case the hemorrhage will be kept up until a properly performed trachelorrhaphy is instituted. It comes on late, but the continued loss of blood shows itself in the profoundest anemia and physical weakness, either by hemorrhages during the periods—metrorrhagia—or excessive loss at the periods—menorrhagia. Tonics, good food, careful hygiene, open-air life but not too much exercise, avoidance of physical exertion and unnecessary assumption of the erect posture, are the indications. Tampons may be used; the bowels should be open every day; and combinations of ergot and mineral acids, and ergot and iron administered *pro re nata*.

Electricity is a most valuable remedy to bring about tonic contractions of the uterus and, in the form of faradization, is a very effective uterine stimulant. The coarse coil should be employed and the vibrator should make slow interruptions.

I am satisfied it is good practice to have every woman who has been confined get into the knee-elbow position after the eighth day, twice a day for three minutes, and also to occasionally turn herself over on her abdomen, so as to favor a natural anteflexion position. The knee-elbow posture encourages anteflexion, promotes rapid involution and prevents subsequent retrodisplacements. The time at which a woman may be permitted to assume the erect position and put on her clothing is not to be arbitrarily estimated in days; one woman may with perfect safety get up on the tenth day, while another should be kept recumbent for three times ten or longer. If the

uterus is well contracted and remains so and there is no loss of blood, one patient may even get up on the eighth day without doing herself any special harm, while another with relaxed uterus and tendency to flowing and with slight prolapsus might sow the seeds for much suffering and future chronic invalidism. It is in the line of preventive medicine that the future well-being of womankind is to have its protection, and the perpetuity of our race depends upon our careful and anxious solicitude.

493 Delaware Avenue.

IRITIS SENUM.*

BY ALBERT B. HALE, M.D.
CHICAGO.

Although the study of the iris, in its normal and pathologic conditions is a well-developed field, I have lately had some experiences by which a few new phases in the action of that tissue have been brought out, and the lessons learned therefrom have been so valuable that they deserve special notice, particularly as there seems to be a lack of direct mention of them in text-books which may be considered exhaustive. The outline of a case may well illustrate the point I wish to emphasize.

One day last winter I was called to see an old lady of 86, who had caught cold in the eyes the day before. Examination revealed catarrhal conjunctivitis and the patient said that the lids were stuck together in the morning. The left eye seemed to be slightly more involved than the right. There was some annoying pain, but vision was not noticeably affected, nor was tension raised. The iris in each eye acted normally, was not discolored, nor was the pupil in the least contracted beyond what may be expected in old people. The treatment for a simple catarrh of the conjunctiva was at first successful; the right eye soon recovered its usual clearness and activity, but the left eye, while much improved, was not yet well. There was some pain, especially at night. Pressure over the ciliary region caused pain; the conjunctiva was pinkish but the iris was not immobile nor discolored. As I feared I might have overlooked some threatenings of glaucoma, I employed a weak solution of eserine, but although it did not aggravate the symptoms, it produced no benefit.

I now determined to ascertain the intraocular condition even at the risk of provoking glaucoma. I therefore began the use of atropin, 1 per cent. solution, but watched it closely. During the first twenty-four hours the pain slowly diminished, the conjunctiva grew less red, and the tension was not raised. The pupil, however, though it still remained symmetrical, was smaller than normal, and I thought I could detect some irregularities at the region of the sphincter muscle. As I was not satisfied, I used a granule of pure atropin sulphate, guarded by cocaine, followed by a 2 per cent. solution at short intervals. The effect was magical. Within twenty-four hours the pupil was dilated *ad maximum* except at one or two places where adhesions still bound it to the capsule; but these adhesions had not been found at the periphery, and a row of pigment deposits showed that corresponding adhesions had existed about two millimeters back of the pupillary edge. Continued use of the stronger solution of atropin broke up all the adhesions, the iritis soon disappeared, the eye soon became normal and further treatment was discontinued.

This case was soon after followed by another which was very similar. A lady of 84, who had been treated by domestic remedies for what she thought was conjunctivitis, asked me to give her something to relieve the pain from which she suffered at night. Remembering my former experience, I ventured to make the diagnosis of iritis, although in this case, also, there were no signs which would indicate an involvement of the iris. Again, however, my suspicions were confirmed by finding slight adhesions, by immediate relief of all symptoms and a speedy restoration to the normal condition. Since then I have seen other cases, and always in quite old women, in which the same course was pursued, hence am always suspicious of conjunctivitis in very old people which does not yield speedily to ordinary treatment.

I shall, therefore, formulate the following method in approaching even a conjunctivitis in very old people: Of course the mucous membrane must be treated by itself; as a rule a simple borated wash with a zinc or some other astringent solution, combined with a mild ointment at night, will accomplish all that is desired, but under no circumstances should the iris be forgotten. I think it would be well from time to time, even from the beginning, to use some mild but positive mydriatic, such as euphthalmin or homatropin, and to study its effect upon the pupil. The pupil in old age is usually small and the iris sluggish, but the effect of the mydriatic should be to produce a decidedly dilated pupil, or else it should show some adhesions. If the effect is produced at once, it will be just to assume that the iris has not become involved, but if there is the least irregularity, I should not hesitate to use atropin immediately. I know, of course, the traditional fear of provoking glaucoma in the old, but I can not think that this rare accident should outweigh the advantage of keeping the iris well under control. One positive effect of the mydriatic, if the tension were effected by it, would be a decided increase in the pain, but this can be checked and perhaps overcome by eserine; whereas the neglect of the mydriatic and the persistence of the iritic exudate would perpetuate a condition very hard to overcome.

To the suspicion of iritis may be added some signs which show that the conjunctivitis is not running its regular course. Chief among these is the fact that one eye is almost always more affected than the other; the redness persists longer, the pain seems located in that eye, and although the patient says she feels better, there are still objective evidences that everything is not right. A second sign is the gradual disappearance of the mucopurulent discharge and its displacement by profuse laceration in the affected eye. I have not noticed that photophobia is so pronounced in old people as to be considered trustworthy evidence.

The explanation of the condition is rather simple. Undoubtedly the trouble begins as a catarrhal conjunctivitis after a mild cold, but the mucous membrane in the very old is not so resistive as it is in younger people, and the infection therefore strikes deeper and lasts longer. This constant irritation finally has an influence in the eye-ball itself, and the iris, although not actually infected by any micro-organism, is sufficiently irritated to throw out a little plastic exudate, which binds it to the lens. If this adhesion is not overcome, the iritis becomes fully developed. If it is at once checked, the irritation rarely goes beyond that stage and the eye is soon restored to its normal condition.

*Read before the Chicago Medical Society, May 9, 1900.

Societies.

COMING MEETING.

MICHIGAN STATE MEDICAL SOCIETY.—Mackinac Island, July 11-12, 1900.

CALIFORNIA NORTH DISTRICT MEDICAL SOCIETY.—This society held its semi-annual meeting in Woodlawn, June 12. Three new members were added and Sacramento was selected as the next place of meeting.

CROW RIVER VALLEY MEDICAL ASSOCIATION.—This Association met in Hutchinson, Minn., June 13. All the former officers were re-elected, as follows: president, Frank E. Bissel; vice-president, Kee Wakefield; secretary, James Robertson; treasurer, Frank Archibald.

SOUTH DAKOTA MEDICAL SOCIETY.—At the annual meeting of this Society, held in Aberdeen, June 14, the following officers were elected: president, C. M. Keeling, Springfield; first vice-president, C. B. Alford, Huron; second vice-president, L. M. Diefendorf, Aberdeen; secretary and treasurer, D. W. Rutgers, Yankton.

INDIAN TERRITORY MEDICAL ASSOCIATION.—This Association held its semi-annual meeting at Wagoner, June 19 and 20. The following officers were elected: president, Le Roy Long, Caddo; vice-president, D. Gardner, Lehigh; second vice-president, J. N. Fain, Wagoner; secretary and treasurer, Fred S. Clinton, Tulsa. The next meeting will be held in Muscogee, in December.

MAINE MEDICAL ASSOCIATION.—This Association met in Portland, June 13-15. The annual oration was delivered by Dr. J. C. Warren, of Boston. The officers elected were: president, E. H. Hill, Lewiston; first vice-president, H. B. Palmer, Farmington; second vice-president, J. F. Manning, Ellsworth; corresponding secretary, C. A. Peaslee, Wiscasset. The next meeting will be held in Portland, the first Wednesday, Thursday and Friday of June, 1901.

DELAWARE STATE MEDICAL SOCIETY.—At the annual meeting of this Society, held in Rehoboth, June 14, the following officers were elected: president, Williard Springer, Wilmington; first vice-president, E. S. Dwight, Smyrna; second vice-president, W. T. Haines, Seaford; secretary, John Palmer, Jr., Wilmington; assistant secretary, Joseph M. Martin, Lewes; treasurer, W. C. Pierce, Wilmington. The next meeting will be held in Lewes, June 11, 1901.

Maryland Public Health Association.

Third Annual Meeting, Baltimore, May 29 and 30, 1900.

MILK.

DR. WM. D. BOOKER condemned all artificial foods for infants as unnecessary and dangerous. He said that no physician, abreast with modern thought, employs them, for there is no substitute for mother's milk that is more convenient and practical than the milk of the cow. In some respects, we are able to assimilate the latter to the former. The chemical differences are not of vital importance, the difference in purity alone is essential; breast milk, since it passes directly from the breast to the child's mouth, is nearly pure, while cow's milk passes through several hands and the purest samples contain from 4000 to 6000 germs to the dram. The dairy-farmer should acquaint himself with the subject, so that the first supply may be pure, and then sterilization should be assisted in order to destroy the germs. The purpose of this is not to improve its digestibility or nutritious qualities, but only to promote its purity. There is not much danger in cold weather; therefore, sterilization is not so essential then. The care of the bottle during nursing is most important. As soon as the child has finished nursing, any milk that may be left should be thrown away, the bottle washed with soda water until transparent and then inverted till needed again, as the germs grow less readily on a dry than on a moist surface. The bottle should be sterilized each time before using. Neither steaming nor Pasteurizing the

milk injures it materially, but the latter is to be preferred. Neither destroys the spore-bearing germs, but these do not grow if the sterilized milk is kept on ice.

DR. WILLIAM ROYAL STOKES, city bacteriologist, called attention to the fact that milk is a favorable medium for the artificial growth of pathogenic bacteria. A cubic centimeter of milk has been found by government experts in Washington to contain from 6000 to 100,000,000 germs. The milk from cows milked in the open-air contains fewer bacteria than that from those milked in dusty stables. The evidence shows that infants can take tuberculosis from the milk of tuberculous cows, but that such milk is not so virulent as that from human tuberculous subjects. In Washington, D. C., more germs were found in some specimens of milk than in sewage water; and 3 per cent. of five thousand cows which were examined around Baltimore were found tuberculous.

MISS E. M. WHITE, of the bacteriologic department, explained the methods used in counting bacteria in milk, which has been carried on since April 1. Fifteen drops of milk are poured in on melted gelatin in a specially constructed, closed glass dish, previously sterilized. The presence of bacteria is indicated by white spots on the glass, each spot being a colony of bacteria, representing one germ. Examination for pus is made by spreading the milk over glass slides, allowing it to dry and then staining with anilin. Tubercle bacilli are sought in a similar way. Of the samples from eleven dairies thus examined the bacteria in fifteen drops of milk varied from 5100 to 382,200; all but three of the specimens contained pus cells, but none tubercle bacilli. Mechanical processes—classification and filtration—free milk from pus and other impurities, but make little difference in the bacteria. The best results are obtained from processes involving cleanliness and refrigeration.

DR. G. LEHMAN, chemist of the same department, spoke of chemicals and preservatives introduced by dealers under various names, formaldehyde being almost exclusively used. It is still a question whether in minute quantity—but still sufficient to preserve the milk—this substance is in any degree injurious.

BUBONIC PLAGUE.

DR. LEWELLYS F. BARKER delivered an illustrated lecture on this subject, giving the result of his observations during a recent visit to the plague-stricken regions of India.

OBSTACLES TO PUBLIC HEALTH LEGISLATION.

DR. CLOTWORTHY BIRNIE, of Carroll County, read a paper on this subject and maintained that public opinion must uphold laws in order to secure their enforcement, and what is most needed in Maryland is to educate the people to a knowledge of health laws and a realization of their value and necessity. Adequate appropriations by legislators and county commissioners can be secured only by training them in the knowledge of hygiene.

SOME OF THE COMMUNICABLE DISEASES OF THE SKIN.

DR. T. C. GILCHRIST concluded an article on this subject as follows: Children with bald patches, dandruff or scaly-like areas in the scalp should be excluded from school until it is shown by a physician's certificate that ringworm is not present. Also, any child who has any pustular or scaly condition of the scalp should be kept away from school until the condition is cured. Lastly, any foreign-born children, especially Italians, Russians and Hungarians, should be examined for diseases of the scalp; and if any is found the child should be excluded from school until it is proved that the disease is not contagious. Much more vigorous measures are enforced in the public schools of Boston and New York, than in those of Baltimore, and as a result, the condition of the children is much better in those cities.

THE RELATION BETWEEN HYGIENE AND PHYSIOLOGY.

DR. S. J. FORT, of Howard County, criticised severely the inefficient instruction in these subjects given in the public schools.

PREVENTIVE INOCULATION AGAINST TYPHOID FEVER.

DR. JOHN S. FULTON, secretary of the State Board of Health, described in detail the method of preparing and administering the antitoxin and its effects as at present known.

MALARIA AND ITS PREVENTION.

DR. W. S. MAYER, said that the origin of malaria has now been narrowed down to the mosquito and a particular variety only—the anopheles, which is known by certain peculiarities, viz.: by the possession of three proboscides, by the spots on the wings, and by the attitude on the wall; for instance, it inclines at an angle to the wall, not parallel to it, as the ordinary culex, and it keeps the two hind legs in front instead of buckling them up over the back of the other one. When on the ceiling, it seems to hang down perpendicularly. There is not a case in the literature where malaria has been proved to have been produced by drinking water or through the intestinal canal; nor is there proof that had air has any causative agency. The only positive proof regarding the etiology is that derived from the mosquito, and this theory meets all the requirements of the case. The anopheles is always found in malarious regions. Observations tend to prove that the insect acquires the parasite only from man, and that the importation of the germ in the human blood is a necessity to the development of the disease in any locality. Observations in Italy show that there is no relation between the rainfall and the prevalence of malaria. The conjugation and sporulation of the insect were described. The cases that occur in the spring are relapses, those in the summer and fall, new infections. Statistics show that 66 per cent. of the fall cases have such a history. To combat malaria, it is necessary to treat the cases promptly and efficiently. Physicians should impress the importance of this upon the community. Quinin should never be given in pills, which are frequently entirely insoluble. Equinin is recommended as an efficient form, and one without taste. It should be given in the flaky form, not in powder, in a dose of about one and one-half times that of ordinary quinin. Patients should be made to sleep under nets, not only on their own account but for the protection of others. The larvæ (wigglers) swim on the top of small pools and require air; and they are readily destroyed by a little coal oil poured on the water.

ELECTION OF OFFICERS.

The following officers were elected for the ensuing year: president, Howard Brattan, Elkton; vice-presidents, Thomas B. Owings, Ellicott City; A. A. Clement, Baltimore; C. Birnie, Taneytown; Lilian Walsh, Baltimore; Mrs. John T. Graham, Mt. Washington; stewards, John S. Fulton and Samuel J. Fort; treasurer, L. Gibbons Smart.

The committee on the Rohé memorial, which is to be a tablet erected in the medical hall and a section in the library, of books on hygiene, if the fund warrants it, reported collections to the amount of \$117.

Philadelphia Pathological Society.

June 14, 1900.

President, Dr. F. A. Packard, in the chair.

RAPID DIAGNOSIS OF RABIES.

DRS. M. RAVENEL AND D. J. MCCARTHY made a preliminary note on this subject and stated that the previous method of determining the existence of rabies in an animal was to introduce under the dura a part of the brain tissue of another animal suffering with the disease. Babes, however, simplified matters, when he noted the existence of chromatolysis with degeneration of certain nerve-cells. It has been proved that this appearance is not always characteristic of rabies. Following the lines laid down by others, Drs. Ravenel and McCarthy have conducted experiments upon rabbits in which rabies has been artificially produced, and it is believed that the characteristic changes noted in this disease are due to a degeneration of nerve-cells—often with two nucleoli—and proliferation of the endothelial cells of the capsules of the intervertebral ganglia. These cells are often arranged about the inner surface of the capsules in irregular whorls. The capsule also shows infiltration with leucocytes. In some respects the appearance resembles that of round-celled sarcoma. The specimens are best stained with hematoxylin and eosin, or with eosin and methylene blue. If Nissl stain is employed it is essential that the organs be less than twenty-four hours old. By this

method the diagnosis may be made within twelve hours. Dr. Ravenel further stated that one of the rabbits developed the furious form of the disease and would attempt to bite all objects near it.

CUTANEOUS TUBERCULOSIS.

He also reported three cases of cutaneous tuberculosis due to inoculation with bovine tubercle bacillus. In his opinion the idea that the bovine tubercle bacillus is not pathogenic to man is not based on a clear understanding of the facts. Such an idea was to be deprecated. Three cases were reported in which injuries had been received—two while performing autopsies—upon the hand with infection by the bovine tubercle bacillus, followed by the development of small nodules which upon examination were found to contain round, epithelioid and giant cells. In one of these cases the bacillus had been first obtained from the infected animal, which had been accidentally inoculated into man, was then passed from man through a guinea-pig and again recovered.

DR. M. B. HARTZELL thought it was not always possible to make a diagnosis of tuberculosis of the skin simply by the histologic appearances, since certain cutaneous diseases might also present similar changes.

DIAPHRAGMATIC HERNIA.

DR. A. O. J. KELLY presented a specimen obtained from a man 29 years of age who had given a history of obstinate constipation and had shown evidences of acute intestinal obstruction. An operation had been performed and a large collection of pus found in the right iliac region, which had been evacuated. Death occurred. At the autopsy it was found that there was a hernia of the omentum through an opening in the diaphragm. The edges of the opening were tightly adherent and it was evidently of long standing, probably congenital.

TUMOR OF THE BREAST.

DR. KELLY also presented two specimens taken from the patient. No accurate examination had been made, but they were probably carcinomas.

DR. ERNEST LAPLACE thought it would be a point of much interest to learn which of the tumors antedated the other.

DR. DAVID RIESMAN spoke of a tumor of the breast which within a very short time increased so rapidly that it now weighs probably thirty pounds. Bloody serum had been obtained by aspiration.

CYSTIC KIDNEY.

DR. J. HENDRIE LLOYD presented a specimen obtained from a patient who had uremic aphasia. The patient had been subject to attacks of asthma for years. Later he had suffered from complete motor aphasia, word-blindness, and hemiplegia. The only center which seemed to remain unaffected was that for hearing words. At the autopsy no alteration of the brain structure could be found, and it was believed that the symptoms were entirely functional and arose from the effects of the kidney disease. Lately he had become more guarded in diagnosis of cerebral hemorrhage in the presence of Bright's disease.

DR. F. A. PACKARD had seen a case in which hemiplegia had been present in a case of nephritis. The person had completely recovered.

ENDOCARDITIS AND CEREBRAL EMBOLISM.

DRS. J. H. LLOYD AND A. M. SEABROOK, present by invitation, reported a case in which antistreptococcal serum had been used without relief.

DR. F. H. WILLIAMS exhibited a specimen of aneurysm of the aorta.

Food Contaminated with Lead.—In the experiments made by Charles P. Worcester, regarding the metal stoppers used in bottles for preserves, aerated waters, etc., he found that an alloy of lead was present; in some instances, containing as much as 0.2 to 93.5 per cent. of that metal. Lead was found in all samples of fruit beverages and syrups examined; the largest amount found in a sample was 1.05 mg. and the minimum .05 mg. The stoppers of these bottles were tested for lead and it was found to exist in as high a proportion as 3.5 to 50.7 per cent. He condemns the use of lead as an ingredient in the manufacture of such stoppers.

THE JOURNAL OF THE
AMERICAN MEDICAL ASSOCIATION.

61 MARKET STREET, CHICAGO.

SATURDAY, JUNE 30, 1900.

OWING to the large amount of space demanded by the index, it has been found necessary to omit some of the departments from this issue, and to curtail those which appear.

THE INDEX. A REQUEST.

There is printed in this number of *THE JOURNAL* the most complete index that was ever attempted by any medical journal, covering as it does the medical literature of the United States and Canada for the past six months. Attention is called to the fact that it is entirely different from those accompanying other medical periodicals in that the index in *THE JOURNAL* covers all the original articles printed in practically all the medical journals of this country and Canada, in addition to the ordinary list. In other words, it is an index *medicus* of American medical literature, and includes the subject of nearly, or quite, every important paper published. In the Authors' Index will be found the name of nearly every man who has published an original article during the time covered, and in what journal the article appears.

To those who have attempted to compile such an index, it will be unnecessary to say that its accomplishment has required an enormous amount of work. The question has arisen whether such an index is appreciated, or whether the labor in compiling it is in any sense a useless task. Hence, one reason for calling attention to the matter here is to discover, if possible, how many readers of *THE JOURNAL* really find the index valuable and desire it kept up. It is not supposed that all or even half do thus value it, because it is only of full utility to those who are in reach of the fairly good medical libraries. We shall be satisfied if even one in twenty tells us that the index is appreciated, and in that event we shall try each half year to improve it and make it more perfect than the preceding one.

Will those of our readers who desire the complete index of current medical literature continued as a feature of each volume kindly notify *THE JOURNAL* of the fact by postal card or otherwise? It will be taken for granted that those who appreciate it and desire it continued will take the trouble to write a postal card and say so.

FREQUENCY AND CURABILITY OF TUBERCULOSIS.

It is self-evident that the most reliable information about the frequency and the curability of tuberculosis must come from the post-mortem room. The clinic is not the proper tribunal for the definite determination of these questions, because it is not possible clinically to detect all tuberculous foci or to determine their condi-

tion as regards progress or cure. It is furthermore obvious that statistics on these points, to be reliable, must be founded on suitable material carefully studied, with these problems constantly in mind. And the material may not come from hospitals with a disproportionately large number of tuberculous patients, but from those whose population is a fair representation of the community in general.

Perhaps the most painstaking and the most reliable study into the frequency and the curability of pulmonary tuberculosis is by Jens Bugge,¹ of Christiania. His work is devoted to the lungs and the peribronchial glands, and covers the minute and conscientious examination, including animal inoculation of these structures, from 200 persons over 14 days old, and belonging to less favorably situated classes of the population. His results are briefly these: Under the age of 1 year tuberculosis was not present when death was due to other causes than tuberculosis. Of the remaining 179, tuberculosis was the cause of death of 41. This percentage—22.9—corresponds quite accurately with the death-rate of tuberculosis in the city of Christiania, and we have here a good indication that the material used is a fairly representative one. There are, therefore, 138 individuals over 1 year of age who died from other causes than tuberculosis in the lungs or the peribronchial glands; of these 35 per cent. presented changes that are to be regarded as healed tuberculosis; and 33 per cent.—only one-fourth of the whole—who were free from tuberculosis of these structures.

Bugge's work is of especial value because he made an earnest effort at determining what justly may be called healed tuberculosis. He shows that when bacilli are demonstrable in the tissues, inoculation with such tissue produced tuberculosis in guinea-pigs except in one case. All tissues containing giant cells or tubercles also gave rise to tuberculosis on inoculation. Encapsulated caseous or puttylike masses in and about which bacilli, tubercles, or giant cells were not found proved at times virulent, at times non-virulent, a positive statement as to their virulence being out of the question before inoculation. Chalky masses, without caseous material, enclosed in dense tissue, were never found virulent; nor were pure fibrous indurations without tubercles, caseous material, or chalk. A tuberculous process in the lungs or peribronchial glands—probably also elsewhere—may be regarded as definitely healed only when there has resulted a more or less structureless connective tissue with or without calcareous deposits, but without cheesy or putty-like material.

It seems to us that it is of signal value to know positively that in about one-third of those dying from other causes than tuberculosis an actual cure of the tuberculous process has occurred in the real sense of the word.

1. Undersøgelser om Lungetuberkuløsens Hyppighed og Helbredelighed, Christiania, 1896.

Thus curability of tuberculosis is clearly established.

More recently, Otto Nägeli² presented a study of the same problems in tuberculosis, based on the results of 500 post-mortems in the Zurich Pathologic Institute. Nägeli takes in tuberculosis in all parts of the body. The thoroughness and skill with which the work seems to have been done naturally resulted in unearthing numerous foci that would have escaped notice in autopsies of ordinary completeness. Hence Nägeli's figures as to the frequency of non-fatal tuberculosis greatly exceed previous ones, being no less than 97 per cent. for those over 18 years of age.

The number of cases under 18 years was 88; of these, 15 were tuberculous, and 10 died from the disease. According to Nägeli's figures, latent or healed tuberculosis is rare in children as compared with adults. At puberty the disease seems a little less frequent than just before or just after. In 16 autopsies on children under 1 year tuberculosis was not found. In a series of 284 post-mortems on persons over 18, 63 died from tuberculosis—22 per cent.—nearly all the others showed latent tuberculosis, as but 6 were found wholly free from tuberculous invasion. In the fatal cases, pulmonary tuberculosis predominated—36 cases of 47, 16 cases of miliary tuberculosis being excluded.

In Nägeli's material, latent tuberculosis seems well-nigh universal in persons over 18 dying from other causes. This frequency does not depend on any special peculiarities of the material. It is probably to be found when searched for in other similar situations.

Nägeli divides the 217 cases of non-fatal tuberculosis into 74 cases of active disease, 111 healed cases, and 32 which he regards as uncertain. This division is somewhat arbitrary. He did not resort to animal inoculations, as did Bugge, but Nägeli's criteria of healed tuberculosis bear scrutiny well in the light of Bugge's demonstrations, inasmuch as he included here the cases of pleuritic apical adhesions, pleural scars with areas of slaty induration in the underlying lung, and calcareous foci. The active but latent tuberculosis was most frequent in early life, declining steadily with the advancing years. The inactive form, on the other hand, showed a steady increase with increase in age, so that after 40 practically all persons were tuberculous. At the same time the ratio of fatal tuberculosis, greatest between 18 and 30, steadily falls. These figures also contain much of comfort, because they show how well we are able to resist the disease.

In general, Nägeli shows that the disposition to tuberculosis of all kinds—as expressed by the relative frequency of fatal cases—is greatest in youth, diminishing somewhat with puberty; then it increases toward the end of the third decennium, after which it falls gradually. Relative immunity, at first slight, after the eighth

year increases in proportion to the age. The constant increase of latent—active and inactive—tuberculosis with age would indicate a constantly growing opportunity for infection. And as the large majority of all cases of tuberculosis, manifest and latent, are either primary in the apices of the lungs, or in the glands at the hilus of the lungs, it may be concluded that the majority of the human tuberculous affections are of aërogenous origin. And Nägeli's work brings again into the foreground the much greater importance in tuberculosis of that little-known factor that we call disposition, as compared with the changes or possibility of infection. After 18 or 20, infection is almost universal, but, as stated before, the increasing chance for infection is accompanied by a decreasing disposition to lethal tuberculosis. Practically this would mean that before 30 the main effort should be to diminish the disposition to tuberculosis. Everything must be done to lessen the chance for infection, but let us not neglect the other side of the problem.

ACUTE HEMORRHAGIC TRANSVERSE MYELITIS AS A COMPLICATION OF TYPHOID FEVER.

The nervous complications of typhoid fever constitute a noteworthy characteristic of that disease. Headache, delirium, coma, hyperesthesia and hyperalgesia are not uncommon manifestations at the height of the fever, while motor paralysis and paresis, irritative motor phenomena, anesthesia, hyperesthesia, neuralgia and vasomotor and trophic disorders are not rarely complications. Generally these disturbances are of peripheral origin, and only a few cases are on record in which they have been found to be of central origin. A particularly interesting case of the latter variety, in which acute and rapidly fatal hemorrhagic transverse myelitis developed in the course of an attack of typhoid fever, has been reported by Schiff.¹ The patient was a waiter, 19 years old, and on the ninth day of the disease loss of control of the sphincters of the bladder and the bowels developed. The sensorium was clear and there was no pain. On examination, absolute motor paralysis of the lower extremities of flaccid type was found, with abolition of the reflexes, and almost complete flaccid paralysis of the upper extremities. There was, besides, absolute anesthesia for all varieties of sensation in all four extremities, and on the trunk to the level of the third costal cartilage, in front, and the spinous process of the second dorsal vertebra behind. The respirations were 36 in the minute, and there was marked subjective and objective dyspnea. With each inspiration, the thorax, instead of being elevated and distended, was depressed and retracted; while the abdomen, at the same time, instead of being retracted, became greatly bulged forward. These latter phenomena were attributed to paralysis of all of the thoracic respiratory muscles except the diaphragm, and also of the abdominal muscles.

2. Virchow's Archiv, 1900, cix, 426.

1. Deutsches Archiv. f. Klin. Med., B. lxxvii, H. 1 u. 2, p. 175

From the symptoms, it was concluded that the lesion was a transverse myelitis, situated between the fourth and fifth cervical segments. Death took place on the following day, a rapidly progressive bed-sore having meanwhile formed over the sacrum. Lumbar puncture five hours before death disclosed no abnormality. On post-mortem examination the intestinal lesions of typhoid fever in the second week were found, together with chronic tuberculosis at the apices of the lungs. The inner aspect of the spinal meninges was injected over the lower portion of the cervical cord, and the cord itself, at the level of the fourth, fifth and sixth cervical nerves, was swollen and spindle-shaped, deep-red in color, and softened. An inoculation from this situation remained sterile. After the cord had been hardened, numerous recent, small, indiscriminately distributed extravasations of blood were found throughout the spinal cord; also hemorrhagic infarction of the cord in the lower portion of the fourth cervical segment, involving almost the entire transverse extent of the gray matter, enormous dilatation of the vessel, and distention with blood from the fifth to the eighth cervical segment, advanced degeneration of ganglion-cells in the anterior horns of the cervical cord, even in parts free from hyperemia and hemorrhage, extensive areas of degeneration in the posterior columns in the lower third of the fourth cervical segment. No micro-organisms of any kind could be found. The absence of fatty granular cells and round-cell accumulation, and multiplication of nuclei is attributed to the early stage of the inflammatory process. The presence of marked parenchymatous changes—cellular degeneration, swelling of axis-cylinders, acute focal degeneration and marked vascular changes—dilatation, hyperemia, increased permeability—with hemorrhage, at widely separated portions of the cord, is thought to be indicative of the effect of a common noxious agent, probably the toxins of the typhoid bacilli.

LEPROSY IN WISCONSIN.

Now that leprosy specialists and dermatologists are pointing out the risks of the introduction of leprosy into this country with our enlarged political and commercial relations, it is well to note any encouraging facts. It is well known that Scandinavian leprosy does not flourish in Minnesota, and we now have the testimony of Dr. Wingate, of the Wisconsin State Board of Health, that it is most decidedly on the wane in that State also. From an investigation recently made by him he finds, as reported in the *Milwaukee Journal*, only two cases existing within its boundaries, whereas formerly there were thirty. Leprosy is a disease dependent upon conditions all of which are not yet thoroughly explained, but its germ appears in our climate to find little suitable soil in the native-born population, at least up to date. What may be in the future is not certain, but the outlook can hardly be called bad at present. We may have more cases introduced, but the chance of any extensive dissemination of the disease, in our northern states at least, does not appear to be serious.

THE UNSANITARY FLAT.

Much is now being written in regard to the housing of the working classes and the poor, and undoubtedly much good is being done in calling attention to their needs. Dr. George M. Gould has shown, in a comparatively recent publication, that charity practically directed toward sanitary dwellings for these classes who are supposed to be of specially limited means brings its financial reward in this world and is, as a rule, a good business venture. While we are giving our benevolent attention to the sanitary housing of the poor and the artisan class, there are still others who deserve it. The dwellings of those only moderately well off in our large cities are often far from sanitary in their construction and very conducive to degeneracy and disease. Since the building of flat tenements has become a common practice, this is especially the case, as inspection in many of our towns will show. The flat itself is not a model dwelling in a sanitary sense; the piling of families three or four tiers deep can never have the health possibilities of isolated dwellings, at least for children. As it is, we see these crowded horizontally so that frequently the rear portions have only a three or four foot well for light and ventilation. There are many externally showy flat buildings on respectable if not fashionable streets where the only daylight comes in through the front window, and the separate tenements, mostly caves of gloom, are rented to clerks and others of moderate means at twenty-five to forty dollars per month, when in justice no one should be obliged to live in them without liberal compensation for damages. The deserving poor need our sympathy and help, the improvident and dissipated should be prevented from injuring themselves and others by unsanitary living, and the much worked "workers" should get full justice. We have not, however, appreciated the needs and wrongs of a class who, though equally needing the benefits of good sanitary regulations, have thus far received little or no attention. The need of keeping up a respectable external appearance enforced by their social surroundings and occupation is a burden often beyond the means of the members of this class, who, though asking no sympathy, are often fully as deserving as those who demand so much from the social reformers of the day, and in any case, their sanitary welfare should not be neglected.

Medical News.

A PRIZE of 3000 lire has been awarded to Professor Grassi, in appreciation of his researches on the subject of malaria, by the *Venice Istituto de Scienze e Lettere*.

LEPROSY IN RUSSIA.—The statement has been made that on the south shores of the Transcasian region villages exist in which the entire population is afflicted with leprosy. The disease has become worse within recent years, and active measures are being taken to prevent its spreading.

DENTISTS AT THE THIRTEENTH INTERNATIONAL MEDICAL CONGRESS.—The executive committee of the approaching International Congress of Medicine announces that dentists, who are not doctors of medicine, but are duly registered at home or abroad, are welcome as members of the Congress in the Section of Stomatology.

Application should be made at the general offices of the Congress, 21 rue de l'École de Médecine, Paris.

EN ROUTE FOR INTERNATIONAL MEDICAL CONGRESS.—The *City of Rome* sailed June 30, having on board about three hundred physicians and their families, en route to Europe and the International Medical Congress which convenes in Paris, August 2. The physicians will make a tour of England, Ireland, Scotland, Germany and Switzerland before reaching Paris. The party is under the management of F. C. Clark, of New York City; and was organized by Drs. J. W. Cokenower, J. W. Pettit and Chas. Wood Fassett, who are delegates to the International Medical Congress.

ILLINOIS.

Chicago.

THE MEDICAL department of the University of Illinois has purchased the property adjoining its hospital building and now occupied by the West Division High School, for \$186,000.

GEORGE P. DREYER, associate professor of physiology in the medical department of Johns Hopkins University, has accepted the chair of physiology in the College of Physicians and Surgeons, Chicago.

PENNSYLVANIA.

BY THE will of Miss Catharine Long, who recently died in Lancaster, \$2000 has been given for the Lancaster Hospital.

MR. JAMES GAYLEY, of Pittsburg, has presented his alma mater—Lafayette College—the sum of \$30,000 for the establishment of a chemical laboratory.

AT THE last meeting of the town council of Bridgeton, an ordinance was passed providing a penalty for the selling of impure milk. Persons guilty of such practice will hereafter be fined \$25 for the first offense, and \$50 for each subsequent offense.

A GIFT of \$5000 has been made St. Timothy's Hospital, Roxburgh, by Mr. John H. Dearnley for the purpose of endowing a free bed in memory of his sister, Miss Martha Dearnley. It is learned that the lawn fete recently held there yielded the sum of \$1000.

THE SECRETARY of agriculture has issued the annual report of the Dairy and Food Department; 197 suits have been instituted against violators of the pure food laws, of these 124 were for selling oleomargarin, 9 for violating the renovated butter law, 10 for adulterating food, and 4 for not observing the vinegar law.

CONFESSIONS ROBBERY DR. SCHULTZE.

It is stated that through remorse that another person had been arrested for a crime which he had committed, Samuel Adams, of Allentown, has acknowledged that it was he who committed the assault on Dr. Schultze a few nights ago for the purpose of robbery. A watch and a sum of money was stolen at the time the assault was committed.

Philadelphia.

THE NINE free public bath-houses maintained by the city have been renovated and are now ready for the summer season. Last year there were 3,469,596 bathers.

DR. JOHN V. SHOEMAKER has been appointed president of the municipal department of the Board of Charities and Correction in place of William H. Lambert, resigned.

The number of deaths occurring in the city during the past week was 380, a decrease of 75 over last week, and an increase of 1 over the corresponding period of last year. The principal causes of death were: apoplexy, 13; tuberculosis, 42; heart disease, 28; pneumonia, 28.

REQUESTS TO CHARITY.

The following have been made known during the past week: A gift by Mrs. Hannah W. Sterling of \$100 to the Association of Friends for the Relief of the Sick and Infirm Poor. A bequest of \$1000 by Thomas Henry for the maintenance of a free bed in the Episcopal Hospital. By the will of Sarah T. Johnson, one-half of an estate valued at \$18,000 has been given the Presbyterian Hospital and the Ladies' Aid Society

of that institution. She also leaves her room at the West Chester Presbyterian Hospital to its trustees. Through the will of John D. Moore, \$500 has been given the Hospital of the University of Pennsylvania. Robert C. Floyd made a contingent bequest of \$500 to the Masonic Home.

HOSPITAL SUED.

Suit has been entered against a certain hospital of this city for the recovery of \$20,000 damages for the loss of his son who, it is alleged, died as the result of the administration of ether. It appears that one of the assistants was an unwilling witness and the question was raised in Common Pleas Court whether or not the physician could be compelled to give such information to the attorneys for the plaintiff. Attorneys for the defendants, however, claimed that the physician was an adverse party to the suit and therefore could not be compelled to testify before the trial. Judge Beitler said he could not understand why a reputable institution like that of the defendant and its employees should guard with secrecy and silence the death of one of its patients. Attorneys for the defendants replied that neither the institution nor the employees desired to keep secret the circumstances of the death of the plaintiff's son, but they did not want to give out facts which might be used against them if they were not legally required to do so. The Court held the matter under advisement.

PARIS LETTER.

BUBONIC PLAGUE.

Considerable is written about this subject at present in the Paris medical newspapers. Two weeks ago Dr. Loche-longue, an Egyptian sanitary inspector, wrote an article on the bubonic plague and the convention of 1897, which was held to regulate the international rules for quarantine. He showed in his article that the methods carried out at present are quite ineffectual, judging from the recent discoveries as to the etiology of the disease. Ships might be infected by rats without a single passenger being ill at the time of arrival in port; and on the other hand, it could hardly be said of a town that it was free from the germs of plague, when no longer any cases were reported, as the epidemic might still be raging among the rats. New measures must be adopted to prevent the spread of the plague, which would be much favored by the opening of new lines of traffic outside the Suez Canal. The article was accompanied by a map, showing the railway lines that are to be constructed through Asia Minor and Arabia.

Dr. Netter, who plays quite a rôle in France as a hygienist, has written an article on the bubonic plague in Australia and South America. This paper was published in the *Presse Médicale*, May 20, and showed by means of a map how the plague had spread. It was first spoken of in Honolulu, New Caledonia and Manila, and has been discovered also at Sidney, Adelaide and Brisbane. Dr. Netter insisted on the necessity of having recourse to bacteriologic examinations, when the diagnosis of a case was not clear. It must be remembered that plague, even when not recognized at first, has remained rather circumscribed, as is shown by the following example: In Alexandria there were ninety-two cases and forty-five deaths in a population of 320,000. Measures are, however, to be carried out both in Paris and in Marseilles to prevent the possibility of an outbreak. The quarantine at Marseilles will be very strict, on account of the recent epidemic in Port Said and Smyrna.

DESTRUCTION OF RATS.

Rats are to be exterminated, such is the *mot d'ordre* both at Marseilles and Paris. The mayor of Marseilles has issued a notice to the effect that a premium of one cent for each rat and half a cent for each mouse will be paid on delivery of one of these animals, dead or alive. This notice was given May 15 of last month, and up to June 1, 686 premiums have been paid. This is not, however, a sufficient number, and experiments will be made to discover a means of getting rid of these pestiferous beasts by some form of disease. It is well-nigh impossible to poison them on board ship, where they are most to be feared, as the stench that would arise from their dead

bodies would be intolerable. On the other hand, it is almost impossible to get at them or to examine thoroughly the holds of ships.

SUPRARENAL CAPSULE DISEASE.

A new form of disease of the suprarenal capsules, quite distinct from Addison's disease, has just been described by Sergeant and Bernard in the *General Archives of Medicine*. This syndrome is similar to that obtained by totally suppressing these organs in different animals. The symptoms observed are those of Addison's disease, such as asthenia, vomiting, pains in the lumbar region and final collapse. One phenomenon is, however, absent, the dark color of the skin or melanoderma. Dr. Sergeant establishes three forms of this disease and classifies them in the following manner: In one variety, of which he has collected eight observations, no symptoms are noticed before death, which takes place suddenly. In performing the autopsy, the lesions affecting the suprarenal capsules are found. In a second variety, he describes the acute forms, which last from twenty-four hours to three weeks, with an average duration of three to eight days. The most salient feature in these cases is that the aspect of the patient is that of a man suffering from some rapid form of auto-intoxication or poisoning. The third variety is related to the other forms as chronic is to acute uremia. As usual, there are pains in the lumbar region, vomiting, diarrhea and syncope. The patient grows slim and anemic, asthenia sets in, and death ensues by progressive cachexia, or sometimes by the disease taking on a rapid course.

This disease generally affects young patients in the midst of apparent good health, sometimes after a slight blow or injury, or as a result of paludism. The diagnosis is almost always erroneous, and what is generally thought of is poisoning, appendicitis, acute peritonitis, or cholera. In some sub-acute cases, the diagnosis might be thought of when the progressive asthenia is the dominant symptom. The pathology observed is that of Addison's disease, tuberculosis, cancer, suppuration or hemorrhagic foci. The prevalent lesion is, however, tuberculosis. In most cases, well-nigh all trace of glandular substance had disappeared.

COCAIN AS AN ANESTHETIC.

At the meeting of the Academy of Medicine held May 29, Dr. Tuffier cited several examples of the use of cocaine as an anesthetic by injecting it into the spinal arachnoid space. The dose used was 1 cg., and the condition obtained was sufficient to allow, in one instance, the amputation of a leg, in another the performance of laparotomy, and in still another, nephrectomy.

HYPERSPLENOGALIC BILIARY CIRRHOSIS.

There has been an interesting discussion at the medical society of the hospitals over the disease known as hypersplenomegalic biliary cirrhosis, that has been minutely described by Drs. Gilbert and Fournier in the *Presse Médicale*. It is characterized more especially by the fact that the patient suffers from jaundice without having the large liver seen in the "Maladie de Hanot," or hypertrophic biliary cirrhosis. Dr. Chauffard, the great liver specialist, took the authors to task because they had declared that Popoff's article on the subject was quite distinct from their own, and that their work on the subject was anterior to his. Dr. Gilbert answered that there was no question of priority between Popoff and himself, as he had published articles on the subject in 1895 that were not cited by Chauffard.

PANACEA FOR LA GRIPPE.

During the last influenza epidemic, which took place this spring, a deputy, Dr. Borne, gave a special formula for the treatment of influenza to a great number of his colleagues at the Chamber of Deputies. The fame of it spread abroad. Dr. Borne was interviewed, and his formula was published in the newspapers. There was nothing, so far as I can remember, very special in its concoction, it being slightly antithermic, laxative and antiseptic.

The French minister of war, de Gallifet, has summarily and absolutely prohibited the sale of alcoholic liquors of any kind in all the military canteens.

Correspondence.

Typhoid Fever Among American Soldiers in 1898.

PHILADELPHIA, June 9, 1900.

To the Editor:—In Dr. Vaughan's article on typhoid fever among the American soldiers in 1898, which was published in THE JOURNAL of June 9, 1900, there is a statement which, I think, calls for some explanation on my part. He says, "The claim is made by an assistant-surgeon of one of the Pennsylvania regiments that there was not a case of typhoid fever in his command, but the records of the Philadelphia hospitals show that certain cases sent from this regiment proved to be typhoid fever." The regiment referred to was the 2d Pennsylvania, of which I had the honor to be one of the assistant-surgeons. The regiment returned to Philadelphia on Sept. 15, 1898, for the purpose of being mustered out. With the approval of its commanding officer, Col. John Biddle Porter, I wrote an account of the sanitary condition of the regiment, which I forwarded to the Charlotte, N. C., *Medical Journal* on October 12, and which appeared in the November number of that journal. I sent a reprint of my article to Dr. Vaughan as soon as I learned that he was on the committee to investigate the causes of typhoid fever among the troops. The points to which I desire to attract attention are: 1. In my article I stated distinctly that we had had a death from typhoid fever, and the record of this death will be found in our official returns. 2. Not a single case of illness of any kind whatsoever was sent from our regiment to a Philadelphia hospital during our entire camp life. 3. After our return on September 15, the men scattered in all directions and were no longer under the charge of their medical officers. In an interview with the late Dr. Shakespeare, last February, he informed me that during October and November, 1898, the records of Philadelphia hospitals showed that several men who claimed to have been members of the regiment, had been treated for typhoid fever in those institutions. 4. The man who died of typhoid fever was in that battalion of the regiment stationed at Pennsgrove, N. J., and was under the sole medical charge of the other assistant-surgeon, Dr. R. P. Robins, now captain and assistant-surgeon, U. S. V., serving with his regiment in the Philippines. That gentleman signed the death certificate, typhoid fever, and in his official return named that disease as the cause of the man's death, so that he could hardly have made the claim that there were no cases of typhoid fever in the regiment.

I write this in order that there may be no misunderstanding in regard to Dr. Vaughan's statement. It would be a great satisfaction to me if Dr. Vaughan would state definitely who made the claim that there were no cases of typhoid fever in the 2d Pennsylvania, as I certainly did not, and I do not see how the other assistant-surgeon could have done so.

FRANCIS R. PACKARD, M.D.

Deaths and Obituaries.

BENJAMIN HOWARD, M.D., College of Physicians and Surgeons, N. Y., 1858, died at Elberon, N. J., June 21. He was a native of England, and came to America quite a young man. He soon turned his attention to the study of medicine. He served in the Civil War as assistant-surgeon of the Nineteenth Regiment, N. Y. Vol. Inf., and later of the Third N. Y. Light Artillery. He was medical purveyor and medical director in the Department of the Ohio and later in the Army of the Potomac. Before the days of antiseptics, he attracted the attention of surgeons to the treatment of gunshot wounds of the chest by hermetical sealing instead of drainage. An army ambulance wagon exhibited at the Paris International Exposition, however, brought him more renown, and to this day is an accepted model, with more or less minor modifications. In 1873, his health failed and he left New York for a prolonged stay in Europe, Asia and Africa. His health somewhat regained, he took up his residence in London, England, where he became a Fellow of the Royal College of Surgeons, a writer of important medical papers, and in addition was active in

some of the more important scientific bodies. During the last years of his life, he spent most of his time in prison investigations. He visited most of the famous penal institutions of the world and secured the adoption of many reforms.

RICHARD HARTLOFF, M.D., Evansville, Ind., died June 18, aged 55 years. He was graduated from the Louisville Medical College in 1871, and afterward studied in the University of Vienna, Austria. He was a member of the Protestant Deaconess' Home and Hospital, Mississippi Valley Medical Association, Indiana State Medical Society and of the AMERICAN MEDICAL ASSOCIATION. At a meeting of the Vanderburgh County Medical Society, held June 19, the following resolutions were unanimously adopted:

WHEREAS, In the death of Dr. Richard Hartloff, the society has lost one of its most faithful and useful members, one who has departed this life in the height of his usefulness, his whole career having been one of honest, faithful and efficient application to his profession, to the world, upright and just, to his patients, skilful, kind and charitable, and to his brother physicians courteous, generous and honorable; therefore, be it

Resolved, That we extend to his family our sincere sympathy in their bereavement, and while we mourn with them, we also rejoice that Dr. Hartloff's life was pure, and no act of his has marred it.

Resolved, That this statement be spread on the minutes of the Society, and a copy sent to the family of the deceased and to the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

EDWIN WALKER,
L. D. BROSE,
E. S. ROSE,

Committee.

NELSON WATTS, M.D., died in Chico, Cal., June 14. He was born in Ohio, in 1830 and educated in the schools of the state, receiving his diploma from the Cleveland Medical College, in 1865. He practiced in Indiana, Nebraska and different places in California, before locating in Chico, in 1870, where he has since resided. He was a member of the State Medical Society and the AMERICAN MEDICAL ASSOCIATION.

BURKE PILLSBURY, M.D., Harvard, 1872, settled in Middletown, N. Y., in 1874, and was pension examining surgeon since 1877. He was of distinguished New England lineage and a direct descendant of one of the "Minute Men," who responded to the Lexington alarm in 1775. He died a few days after an operation for gall-stones, on June 18, aged 52 years.

ERNEST J. RISCH, M.D., a graduate of the University of Brannschweig, 1843, died at his home in Brooklyn, N. Y., on June 17, aged 77. He was a native of Goslau, Germany, and for years was a practicing surgeon in that country. He was a veteran of three German wars—Schleswig-Holstein, Hanover, and Denmark-Prussia. He came to South Brooklyn in 1870.

GEORGE M. BEAHES, M.D., Ann Arbor, Mich., died June 15, aged 69 years. During the Civil War he was assistant-surgeon of the First New York Cavalry and afterward surgeon of the Thirteenth New York Infantry. He was with McClellan in the Peninsula campaign and with Sherman in his march to the sea.

FREDERICK SWINOLEY, M.D., died at his home in Bucyrus, Ohio, June 14, aged 92 years. He was graduated from the Ohio Medical College in 1834 and since 1843 had practiced in Bucyrus.

W. H. FRY, M.D., died at Keyser, W. Va., June 16, of consumption, aged 44. He was a native of Preston County, in the same state, and settled in Keyser in 1833.

GEO. W. HAYMAKER, M.D., died in Charlestown, Ind., June 12. He was graduated from the Kentucky School of Medicine, Louisville, in 1857.

Miscellany.

A Modest and Munificent Giver.—A gentleman who has taken every precaution to keep his gift a secret, at least for the present, has placed to the credit of the Presbyterian Hospital of New York the sum of \$200,000.

A Medical Queen.—Queen Marie Amelie, of Portugal, is said to have completed the medical course and received the diploma entitling her to practice medicine. During the absence of the king, who has announced his intention of visiting the Paris exposition, in August, the queen will serve as regent.

Vagus in Measles.—Death in severe cases of measles is due to the effect of the measles toxin on the vagus, first irritating and then paralyzing it. This theory, advanced by Cioffi, is supported by many observations (*Rif. Med.*, 1900, 51 to 53) and explains the frequent purulent otitis by the irritation of the vagus in its meningeal branches, predisposing to simple or tubercular phlogistic affections.

Address of Chairman, Section on Stomatology.—By a typographical error, a portion of the derivation of the term "peridentitis" was omitted from this address. The sentence beginning on the fifth line from the bottom of the first column of p. 1559 of last week's JOURNAL should read: "*Peri* is a Greek term of Latin origin meaning around, about or near; *dent*, or *dens* is the Latin for tooth, and *itis* is also a Greek term of Latin origin," etc.

State Leper Home.—Louisiana has the only home for lepers in the United States. In the past two years there have been forty-five inmates under treatment, and at present there are thirty. The oldest patient is a woman of 80 years, the youngest a boy of 10. The state has appropriated \$20,000 for the purchase of lands and buildings, but nothing has as yet been done, as the sum is so inadequate that efforts are being made to have it doubled.

Hot Cloths, Followed by Fanning to Reduce Temperature.—Dr. R. S. Walker, Toledo, Ohio, read an article before the Toledo Medical Association on "Treatment of Typhoid Fever in Adults," in the course of which he explained his method of using hot cloths followed by fanning to reduce temperature. He employs a double thickness of cheese-cloth, of the length of the body, wrung out of hot water, which is laid over the body while the patient is lying on one side. Two attendants then use palm-leaf fans vigorously for at least fifteen minutes. This acts as efficiently as a cold plunge in its antipyretic effects, is much better as a diuretic, and is not so exhausting as the regular Brand treatment.

A Draconian Provision.—The Board of Health of Trenton, N. J., adopted an amendment to the Health Code, placing consumption in the same category with smallpox, diphtheria, yellow fever, and other contagious or infectious diseases. It provides fines and imprisonment for physicians who fail to report cases within thirty days after diagnosis. There is to be isolation and disinfection. After death, all clothing, bedding, and other articles likely to contain the germs are to be burned. When reporting existing or suspected cases the physician must forward sputum in receptacles which are to be furnished by the Board of Health in order that cultures may be made. Hospitals are not exempted from the general provisions.

Excursion to Aix Les Bains.—At a recent meeting of the Savoy Medical Association a committee was appointed to extend an invitation to the American physicians who will visit France during the summer. Resolutions were adopted with a view to the instruction and entertainment of all who may choose to visit this charming watering-place. The railroads and hotels will make very low rates and the entertainment will consist of a banquet, special fetes at the two grand theaters, trips up the switch-back railway, excursion on the lake, and free baths at all thermal institutes. The invitation is extended by the chairman of the committee, Dr. Thomas Linn, who is an American. It has been suggested that a party

ASSOCIATION OF BALTIMORE AND OHIO RAILWAY SURGEONS.—This Association met in Atlantic City, June 1 and 2. The following officers were elected: president, R. B. Short, Union Mills, Ind.; first vice-president, F. J. Evans, Chester, Pa.; second vice-president, J. W. Hays, Albion, Ind.; secretary and treasurer, G. A. Davis, Summit, W. Va.; assistant secretary, W. A. Bailey, Leisenring, Pa.

be made up to leave Paris July 29, returning August 1. Those wishing to join the party should send their names to Dr. Charles Wood Fasset, United States Press Pavilion, Esplanade des Invalides, Exposition Universale, Paris, France.

Superstition Among the Chinese.—The disturbances in China and the peril of foreigners render peculiarly interesting Dr. Matignon's recently published work: "*Superstition, Crime et Misère en Chine.*" Our confrère has been attached to the French legation at Peking for a number of years and has had peculiar opportunities for studying the inner life of the people. He states that the Chinese, from the highest to the lowest, are superstitious to an absolutely inconceivable extent. Every act of their life, even the most trivial, is shackled by geomancy, necromancy, sorcery, the evil-eye and other childshesses. The higher classes claim to be above these superstitions, but in private they are as credulous as the most ignorant coolie.

Strangyoides Intestinalis.—Dr. Wm. Sidney Thayer reports two cases of dysentery produced by this intestinal parasite, which is the first time it has been observed in this country. The first case occurred in a woman, a native of Austria, and was seen at the Johns Hopkins Hospital four years ago. Upon her death evidences of dysentery were apparent and also an abscess of the liver. The second case occurred recently in a newsboy (white) from Richmond, Va. There was obstinate dysentery, from which, however, after some months he recovered, gaining 22 pounds, and left the hospital for his home in Virginia. As far as can be learned he has continued well. The treatment consisted of large doses of bismuth, rectal injections of quinin, and thymol. The last seems to exercise a specific influence over the parasite. It is not known how the boy acquired the parasite, as he had not been out of the country. Dr. Thayer urged more thorough and systematic examinations of the intestinal contents. Important discoveries awaited, he thought, such investigations. Further examination will probably show that the parasite in question is not so infrequent in this country as is believed.

Yellow Fever at Quemados, Near Havana, Cuba.—Reports to the Surgeon-General of the Army from the chief surgeon, Division of Cuba, dated June 18, 1900, give the particulars of an outbreak of yellow fever at Quemados, a village about half a mile from the large camp of United States troops, known as Camp Columbia, six miles from Havana. The first case, which occurred May 16, was mild and no physician was called in, but a few days later another case, of a severe character, was discovered in the same house. Cases were reported from time to time until at the date of the report, 13 civilians, all Americans, 1 officer and 5 enlisted men on detached duty from the camp had been affected. Five of these had died, 1 sergeant and 4 civilians, up to June 18, but the telegraph has since announced the death of the officer. The non-immune population of the village consists of 140 persons, of whom 84 are white Americans. From the mode of origin of the cases and the absence of any history of recent introduction of infection it is considered fair to assume that the present outbreak is due to the presence of old germs existing in the occupied buildings. There was no yellow fever in Quemados during the summer of 1898. A strict quarantine is maintained by Columbia barracks against the village and arrangements have been made to meet a possible invasion of the military camp.

Physician and Diplomat.—According to a clipping from a Harlem, N. Y., bi-weekly, Dr. Eduardo Wilde, the new minister plenipotentiary, is the latest addition to the diplomatic social set in Washington. He was born in Buenos Ayres and was educated in the National College. After receiving his degree he was appointed physician-in-charge of the cholera lazaretto of his native city. His record at the hospital and at the college, where he was still studying, won for him from his alma mater the first prize of 2500 pesos. With these opportune earnings, he attended lectures at Paris, Leipzig, Berlin and London. He has the reputation of being a progressive sanitarian and is gratefully remembered for his fearlessness

in dealing with yellow-fever epidemics, for which he was awarded two gold medals. In 1875, he was elected to the provincial legislature from the province of Buenos Ayres; the next year he was elected to the National Congress from the same province and was later re-elected for a four-years term. In 1882, he was appointed minister of justice and public instruction, and in 1893, minister of the interior. He visited this country twice as an observer of American institutions, in an official capacity, and as a result wrote a book which is widely read in his own land. He entertains optimistic views in regard to broadening the commercial relations between the two republics.

Casualties in the Philippine Islands.—In response to a resolution of the Senate of May 22, 1900, the Secretary of War submitted a statement of the number of soldiers who have been killed, died from wounds, disease and suicide and the number wounded in action or otherwise among the regular and volunteer troops serving in the Philippine Islands, from July 31, 1898, to May 24, 1900, together with several other interesting tabulations by the Adjutant-General of the Army and a letter from the surgeon-general on the prevalence of disease among the troops during the period mentioned. The casualties among the regular troops were: Officers wounded 37, enlisted men 721. Officers killed 17, died of wounds 7, died of disease 10, died by suicide 2; total 36. Enlisted men killed 176, died of wounds 67, died of disease 658, died by suicide 19; total 920. Among the volunteer troops: Officers wounded 91, enlisted men 1115. Officers killed 18, died of wounds 6, died of disease 12, died by suicide 5; total 41. Enlisted men killed 262, died of wounds 103, died of disease 480, died by suicide 9; total 854. Aggregate: Officers wounded 128, enlisted men 1836. Officers killed 35, died of wounds 13, died of disease 22, died of suicide 7; total 70. Enlisted men killed 438, died of wounds 170, died of disease 1138, by suicide 28; total 1774.

Some comparative tables are given, one of which shows the casualties in the various actions in which General Shafter's army was engaged around Santiago, Cuba, June 22 till July 17, 1898. These aggregate 101 officers and 1344 men wounded, with 21 officers killed in action and 5 died of wounds, and 222 enlisted men killed in action and 70 died of wounds. In the South African War, from October 11, 1899, till April 28, 1900, there were 218 officers and 2062 men killed in action; 53 officers and 492 men died of wounds and 64 officers and 2028 men died of disease. During the Franco-Prussian War of 1870-71, the German Army had 85,482 wounded and 28,277 killed and died of wounds. At the battle of Gravelotte the killed numbered 4449 and the wounded 15,189.

In Surgeon-General Sternberg's letter dated May 28, 1900, he says that the percentage of sick, disabled, and invalided soldiers serving in the Philippines from August 1, 1898, till the present time varied from month to month. At the beginning of the period mentioned the sick lists, including injuries, constituted 5 to 6 per cent. of the command. The rate increased to 10 or 11 per cent. during the first occupation of Manila. During the progress of the campaign against the insurgents, February till July, 1899, the troops became exhausted by fatigue and exposure, and the sick list for some time reached as much as 25 per cent. of some of the regiments. Since then the average rate of sickness has varied from 6 to 10 per cent. of the commands.

The most prevalent diseases have been intestinal affections and malarial fevers, typhoid fever, and smallpox. Lung diseases have not been common, and rheumatism, notwithstanding the exposures of the troops, has not been in excess. Acute dysentery has been the most dangerous of the diseases, the deaths caused by it having been equal to an annual rate of 4.6 per 1000 men. Typhoid fever took second place in order of fatality, it having caused deaths equal to an annual rate of 4 per 1000 men. The mortality from smallpox was equal to 2.25, while that from malarial fever was only 1.1 per 1000.

Medical officers have been earnest in their recommendations for the welfare of the men, and commanding officers have usually acted promptly, so far as lay in their power, to carry the recommendations into effect. It has been difficult, however,

and, indeed, impracticable, to control many of the unsanitary conditions, particularly during the progress of the campaign against the insurgents. In many localities the ground was saturated with water and drainage impossible. Efforts have been made to suppress the sale of native soft drinks and spirits of local manufacture and to prevent the troops from frequenting houses of low-class natives where infectious diseases are exceedingly common. Special attention has been given to the quarters of the men and to the care of the sinks and earth closets, to the purification of the drinking water, to the supply and preparation of food, the supervision of the laundry work, and the installation of shower baths where there were no other facilities for bathing. Smallpox was controlled, after some difficulty, by isolation of the individual cases and vaccination of the whole command. The difficulty arose from the inability of the medical officers at first to procure fresh vaccin. That which was sent from this country deteriorated during the long voyage. Ultimately fresh virus was obtained by cultivation in the laboratory of the board of health of Manila.

Lastly, the comparative losses by death among the white and the colored troops is expressed by the annual rates of 31.91 and 34.51, respectively, per 1000 of strength.

Poisoning by Coal-Gas and Its Treatment.—While the term "asphyxiation" is usually applied to the morbid changes which take place as the result of poisoning by coal-gas, when fully considered, this application does not seem to be well founded. Asphyxia means suffocation; but death, due to poisoning from coal-gas is not caused by suffocation, but by the action of one of the ingredients of the coal-gas—carbon monoxid—on the hemoglobin of the blood. According to the analysis of Mr. N. Wiley Thomas, of the Bureau of Gas of Philadelphia, the formula of coal-gas is as follows: Hydrogen 32.20; methane (CH) 29; carbon monoxid (CO) 22.10; illuminants 10.01; nitrogen 3.88; carbon dioxide (CO₂) 2.25; and oxygen 0.56 per cent. Besides these ingredients, the following also enter into the composition of coal-gas; ethylene (C₂H₄); acetylene (C₂H₂); carbon disulphid (CS₂); vapors of volatile liquid hydrocarbons and hydrogen. The principal ingredient which produces the illumination is methane or marsh-gas. Carbon monoxid is an impurity, is combustible, has no odor, is very poisonous, and when it enters the system, it searches for the hemoglobin, for which it has a profound affinity and, uniting with it, produces a new compound—carbon monoxid hemoglobin—thus displacing the atom of oxygen to which the former is repellent. This displacement is poisonous through such action; hence the term "asphyxiation" is not correct. This chemical change generally takes place rapidly, but it might also occur during long periods of time, and be termed "chronic coal-gas poisoning." In such cases we would expect to find a diminution in the amount of hemoglobin. As to the proper treatment, Darrah (Philadelphia Pathological Society Nov. 9, 1899) spoke of certain experiments made on dogs, that may be of advantage in the elucidation of the subject. It was stated that when animals breathe pure oxygen and carbon monoxid, the latter is promptly taken up by the hemoglobin, to the exclusion of the oxygen, and can not be displaced by it. Animals show dizziness, low temperature, rapid and feeble pulse, while respiration is increased in frequency and depth. The animals were treated with strychnin, brandy, digitalis, inhalations of oxygen; and saline solution and peroxid of hydrogen were injected hypodermically but no good resulted. On the other hand, the introduction of new-blood, or blood containing new hemoglobin seemed to be beneficial. After blood-transfusion into the jugular vein, dogs poisoned with coal-gas, in some instances, recovered instantly. Before transfusion it seemed best to remove first a part of the blood from the animal, thus withdrawing the poisonous product. The blood used in these experiments was taken from the carotid arteries of other dogs.

Disinfection of Sewage at Havana, Cuba.—On March 2, Major Walter Reed, Surgeon, United States Army, was directed by the Secretary of War to proceed to Havana, on official business, pertaining to an investigation as to the practical use of electrozone as a disinfectant and germicide in

that city, and to report the result of his investigations to the Surgeon-General of the Army. A plant for the electrolysis of sea-water, on what is known as the Woolf system, was put into practical operation in Havana in July of last year. It consists of eight circular wooden vats, each having a capacity of 1000 gallons and provided with 52 positive and 53 negative electrodes, the former consisting of an alloy of platinum and iridium and the latter of zinc. These vats are arranged in pairs and, when in operation, the vats of each pair receive the same strength of electric current from the dynamo provided for them. The vats are filled with sea-water at 7 a.m. daily and a current having a strength of 3000 amperes with a voltage of 12-13 is passed through the water for 2½ hours. At the end of this time, 200 gallons are withdrawn from each vat and replaced by an equal quantity of fresh sea-water, and this is repeated every half-hour thereafter during the day's run of eight hours. It is claimed that the water withdrawn from the vats has an average chlorin strength of .16 per cent., equal to 100 grains of chlorin to the gallon. This is distributed in wagons for use in disinfecting sewers, street sprinkling and household disinfection. Major Reed found that, although a certain chlorin strength was supposed to be obtained, it was not reached in practice. In observations covering a period of ten days, he found that the available chlorin varied from a maximum of .142 to a minimum of .021 per cent., or from 89.9 to 12.2 gr. per gallon. Theoretically, a current of 3000 amperes should produce 20 grains of chlorin per gallon per hour, but only 12 grains per gallon was found by test. A chlorin strength of less than .15 per cent. can not be relied on for prompt disinfection, and a solution containing .25 per cent. is desirable. He concludes, therefore, that the electrolyzed sea-water, as used in Havana, does not possess sufficient strength for efficient and reliable disinfection, and that in the relatively small quantity in which it is introduced into the sewers, it can act only as a deodorizer. For street sprinkling it is valueless except in so far as it allays dust; and under these conditions, direct sunlight is more efficient as a disinfectant than any sprinkling. As a surface disinfectant for walls and floors of houses, a strong electrozone solution would be effective, but not the weak one hitherto used. For covering the surface of material recently removed from sewers while taking it away, the electrolyzed sea water is of value in effecting surface disinfection and the removal of foul odors. Major Reed's experiments show that a solution of sodium hypochlorite of equal chlorin percentage is just as effective in germicidal action as electrozone, and the same is true of chlorinated lime to which enough of hydrochloric acid has been added to free the whole of the chlorin. Comparing the cost of manufacture, he shows that a chlorinated lime solution having a strength of 146 grains of available chlorin per gallon, could have been used in Havana in quantity equal to that of the electrozone used from July 1, 1899, to March 31, 1900, at a cost of \$17,802, while on the other hand the cost of the electrozone plant, the interest on this cost and the daily expenses of management, amounted to \$87,033, as the cost of furnishing a like quantity of electrolyzed sea-water having no particular standard of strength, but certainly of a less strength than that which could have been obtained from the chlorinated lime. He, therefore, disapproves of the extension of the Havana system of disinfection to other cities in Cuba.

The Hospital Corps Soldier in Emergencies.—A letter dated April 16, 1900, Sogod, Cebu, P. I., has been received at the Surgeon-General's office, Washington, D. C., from captain T. S. Bratton, assistant-surgeon, United States Army, in which he commends the good judgment, fortitude and skill shown by Private Samuel Jones, of the Hospital Corps, in a case which is stated as follows:

I have the honor to inform you that about March 1, at this place, a native woman was badly cut by her husband with a bolo. Her right fore-arm was cut in several places, producing compound fractures; there was a deep horizontal gash from the right external angular process to the ear, the incision extending into the orbital cavity and, as described by some of the attendants, the eyeball hanging out. There were also several long deep gashes across her back.

I was in Cebu at this time on a Board, and Private Samuel

Jones, of the Hospital Corps, undertook the case. With the assistance of Private Henry Becker, also of the Hospital Corps, who administered the chloroform, he, at night, by candle-light, replaced the eyeball, which was uninjured and sewed up the incision. He also sewed up the incisions on the back. The patient would not consent at this time to have the arm cut off, and it was dressed antiseptically; but in a day or so the arm began to turn black, and Private Jones, believing that gangrene was setting in, again advised operation, which was then consented to. Private Becker again giving chloroform. Private Jones amputated above the elbow by the circular method.

When I arrived a few days later I found the patient doing very well and to-day her arm is entirely healed. There is still some discharge from the conjunctiva, but I think it will, in a few days, be all right.

At first sight it seems surprising that an enlisted soldier should have the knowledge and skill to deal with a case of this kind; but those who are familiar with the course of instruction given to the members of the Hospital Corps at the army schools and with the experience many of these men have gained in the field hospitals in the Philippines, feel confident that the educated United States Army hospital orderly will seldom fail to meet the emergency.

Essential Progressive Pernicious Anemia in Childhood.—Theodor, in the *Wiener Med. Woch.*, 1900, No. 13, p. 620, has reported the case of a boy, 11 years old, who had always been well except for an attack of measles. About 1½ years before coming under observation it was noticed that he was extremely pale, that he became fatigued with undue readiness, that spots appeared before the eyes and that he ate but little. The feet were swollen from time to time, and vomiting set in, together with abdominal pain. The face presented a waxy pallor. The spleen, liver and lymphatic glands were not enlarged. The condition of the patient grew gradually worse, and death took place in the course of a few weeks, with symptoms of pulmonary edema and profuse, bloody diarrhea. The blood exhibited both degenerative and regenerative changes. The hemoglobin was greatly diminished in the majority of the red-blood corpuscles. Poikilocytosis was marked, and numerous megalocytes were present. Anemic or polychromatic degeneration was not uncommon, especially in macrocytes and megaloblasts. The blood-plates were considerably increased in number. Erythroblasts and nucleated red blood-corpuscles were present, the latter in enormous numbers shortly before death.

Some Points in the Diagnosis and Treatment of Pulmonary Tuberculosis.—In an address delivered recently in the Charité of Berlin, Senator (*Berliner Klin. Woch.*, 1900, Nos. 15 and 16) pointed out that while the presence of tubercle bacilli in the sputum is conclusive as to the existence of pulmonary tuberculosis, the diagnosis often can and must be made without the aid of this demonstration. Among the other symptoms, two are deserving of special consideration, namely, hemoptysis and so-called apical catarrh. Hemoptysis may be attributed to tuberculosis of the lungs when no other cause for its occurrence can be made out. It is, of course, important to differentiate accurately between hemoptysis and hematemesis; and while this is often easy, it is sometimes extremely difficult, if not impossible. The difficulty will naturally be greatly increased should the two conditions coexist.

When it is decided that hemoptysis has occurred, the possibility of its dependence upon traumatism, external or internal, must be taken into consideration. Among other causes of hemoptysis are circulatory disorders, inflammatory processes, the presence of neoplasms in the lungs, aneurysm, especially of the thoracic aorta, the hemorrhagic diathesis and the presence of parasites in the respiratory tract. So-called vicarious hemorrhage will, in the majority of cases be found to depend upon pulmonary tuberculosis. The greatest difficulty in diagnosis arises when conditions, other than tuberculosis, that give rise to infiltration and ulceration, are present; as for instance, syphilis or parasites.

The discrimination depends upon repeated examinations of the sputum, and possibly, exploratory puncture. In the presence of neoplasms the dulness is disproportionately great, as

compared with the auscultatory; while in the presence of tuberculosis the conditions are often reversed. With the former, the chest may be enlarged, rather than contracted, as is found in the latter condition. Exploratory puncture would be decisive. The differentiation of inhalation-pneumonia and syphilitic pneumonia may be extremely difficult, even if possible. With the latter, the history and the presence of other lesions and the fact that syphilitic lesions generally begin at the hilus, and the tuberculosis at the apex, are especially important. Further, the nutrition is better preserved in syphilis, fever is generally absent and hemoptysis is rare. Accuracy in diagnosis can scarcely be expected when tuberculosis is present in association with one or another of the diseases with which it may be confounded. Here, a careful study of the history and of the course of the case may afford the basis for a correct conclusion. In the treatment of hemoptysis, whether large or small in amount, absolute mental and physical rest should be observed. Sulphuric acid may be administered. The diet should be simple and unirritating, and rather scanty. An ice-bag may be applied to the chest. Ergot and ergotin are much employed, but their usefulness it at least open to doubt. Hydrastis, hamamelis, stypticin, and lead acetate are more satisfactory. Gelatin may be employed, although it can not be given subcutaneously but must be administered in larger doses by the mouth. A solution of from 4 to 6 grams in 6 ounces of water, with the addition of sugar, oleo-saccharin, or fruit-juice, may be taken in half-ounce doses. Morphine is at least as useful as the so-called hemostatics, if not more so, as it quiets the patient, lessens the cough and favors sleep. Dionin may be employed instead of morphine. If the heart's action is excessive and can not be controlled by the ice-bag, digitalis may also be given. Three other procedures are applicable in the presence of obstinate and persistent hemoptysis: 1, ligation of the extremities; 2, the inhalation of astringent remedies, such as tannic acid, ferric chlorid and alum, and 3, the use of alum-whey, although not too much must be expected from any of these.

In the presence of slight evening fever, the patient should take only a spare evening meal, should avoid wine, strong tea and coffee, should retire early, use a light bed covering, and receive cool sponging. If fever occurs at a given time each day, antithermic medicaments may be employed, the best of which are phenacetin, lactophenin, citrophen and pyramidon. The addition of quinin may prove useful. If fever persists throughout the day, pyramidon may be administered in small doses, of 1 to 1½ grains, in sugar-water, hourly. In addition, or instead, repeated sponging may be practiced. Sponging with spirit of camphor, fifty parts and menthol, two parts, is cooling and refreshing. The external application of guaiacol, by means of a brush or with friction, is more efficacious, from 7½ to 22 minims being cautiously applied. If night-sweats are troublesome applications of cool water or vinegar-water, or aromatic fluids, or inunctions of fat or bacon, may be employed. Painting the skin with formol is more efficacious, care being taken to prevent inhalation of the vapor. Belladonna; atropin; agaricin; camphoric acid, 15 grains in capsule; sodium tellurate, from 1/3 to ¼ gr.; picrotoxin, 1/30 gr.; and sulphonal, from 15 to 30 gr. have been employed. Recently cotin has been recommended in doses of from 1/3 to ½ gr.

CHANGE OF ADDRESS.

- Dr. J. H. Johnson, from 316½ Spring St. to 357 S. Spring St., Los Angeles, Cal.
 Dr. U. Roberts, from 3712 Williams St., to 53 Clarkson St., Denver, Colo.
 Dr. J. W. Smith, from Cripple Creek to Creston, Colo.
 Dr. J. A. Butler, from Washington, D.C., to 251 Winter Place, Jacksonville, Fla.
 Dr. A. E. Kay, from 1060 Warren St., to 953 W. Lake St., Chicago.
 Dr. P. A. Loomis, from 552 Jackson to 330 Warren Ave., Chicago.
 Dr. H. Mertens, from Charlottenburg, Berlin, Germany, to 308 Jackson Boulevard, care Mrs. Cook, Chicago.
 Dr. S. T. Richman, from 5729 to 5709 Wentworth Ave., Chicago.
 Dr. R. Stewart, from 3500 to 2459 State St., Chicago.
 Dr. T. E. Wetzel, from Salt Lake City to Council, Idaho.
 Dr. M. E. B. Thompson, from 902 Race St., Cincinnati, Ohio, to 2954 Cottage Grove Ave., Chicago.
 Dr. R. M. Murphy, from Akron, Ohio to Elkhart, Ind.

Dr. J. D. Brownson, from Elkader to Monona, Iowa.
 Dr. E. C. Hackett, from 339 S. Lincoln St., Chicago, to 121 W. 14th St., Dubuque, Iowa.
 Dr. W. H. Winterbottom, from Chicago to Salina, Kans.
 Dr. Joe And, from 827 6th St. to 722 W. Chestnut St., Louisville, Ky.
 Dr. J. F. Burchett from Wesleyville to Mouth of Laurel, Ky.
 Dr. G. M. Warner, from 904 2d St. to S14 3d St., Louisville, Ky.
 Dr. H. N. Blum from 1200 Milam St. to -404 Magazine St., New Orleans, La.
 Dr. W. H. Stearns, from New York City to Emmitsburg, Md.
 Dr. E. E. Doble, from Barlow, Fla., to 52 Cross St., W. Quincy, Mass.
 Dr. G. J. Gordon, from Philadelphia, Pa., to 1315 N. Washington Ave., Minneapolis, Minn.
 Dr. W. J. Swartz, from Minneapolis to 93 Cambridge Ave., St. Paul, Minn.
 Dr. J. M. Tirrell, from 617 15th Ave. S. E., to 526 W. 28th St., Minneapolis, Minn.
 Dr. J. Bursma, from Sand Lake to Altoona, Mich.
 Dr. W. B. Holden, from 28 33d St., Chicago, to 42 Hanover St., Battle Creek, Mich.
 Dr. J. Murphy, from Kenosha, Wis., to Bangor, Mich.
 Dr. L. A. M. Riemsens, from 640 Congress St., Chicago, to 284 Maple St., Holland, Mich.
 Dr. E. B. Hulst, from St. Louis to Garret, Mo.
 Dr. R. C. Collins, from Omaha to Heidelberg, Neb.
 Dr. R. B. Johnson, from 644 W. Harrison St., Chicago, to Norfolk, Neb.
 Dr. J. L. Magill, from Seneca, Kans., to Gilead, Neb.
 Dr. C. Major, from Denison, Iowa, to 421 S. 11th St., Omaha, Neb.
 Dr. O. W. Goss, from Lakeport to Laconia, N. H.
 Dr. C. Cone, from 1616 Eutaw Place, Baltimore, Md., to 70 Park Ave., Asheville, N. C.
 Dr. H. T. Summersgill, from Charlottesville, Va., to Wilmington, N. C.
 Dr. W. L. Taylor, from 50 E. Range St., Charlottesville, Va., to Townsville, N. C.
 Dr. F. L. Moyné, from Melvale, Md., to The Leighton, Point Pleasant, N. J.
 Dr. E. L. Preston, from 31 to 56 Meigs St., Rochester, N. Y.
 Dr. A. Brinkman, from 176 Bergen, Brooklyn, to Central Valley, N. Y.
 Dr. W. W. Palmer, from Bellevue Hospital to 451 W. End Ave., New York City.
 Dr. P. J. McCaffrey, from 68 Luther St. to 1506 Superior St., Cleveland, Ohio.
 Dr. E. W. Woodford, from 273 Hanover to 373 Jennings Ave., Cleveland, Ohio.
 Dr. J. A. McKenna, from 1403 N. 17th St., Philadelphia to Lansdowne, Pa.
 Dr. C. A. Smith, from The Grand, Atlanta, Ga., to 1003 Spruce St., Philadelphia.
 Dr. J. M. Doherty, from Baltimore, Md., to 403 Atwell Ave., Providence, R. I.
 Dr. E. W. Carpenter, from Charleston to Hyman, S. C.
 Dr. B. F. Sloan, from 12 Meeting St., Charleston to Ninety-Six, S. C.
 Dr. L. C. Stephens, from Blockville to Greenville, S. C.
 Dr. G. W. Drake from Hollins, Va. to Montague, Tenn.
 Dr. J. P. Lokey, from Galveston to Daugherty, Texas.
 Dr. C. W. Allen, from Charlottesville to Box 38, Amherst, Va.
 Dr. R. E. Jones, from Charlottesville to 108 W. Bute St., Norfolk, Va.
 Dr. B. C. Keister, from South Boston to Roanoke, Va.
 Dr. P. D. Lipscomb, from Charlottesville to Crozet, Va.
 Dr. F. E. Sears, from Charlottesville to Mazy, Va.
 Dr. N. S. Whitmore, from Charlottesville to Mt. Sidney, Va.
 Dr. T. H. Wright, from Charlottesville to 115 Middle St., Portsmouth, Va.
 Dr. E. A. Hill, from West Union to Wolf Summit, W. Va.
 Dr. W. H. Workman, from O'Keefe to McDowell, W. Va.
 Dr. W. V. Bryant, from 460 Adams St., Chicago to 11 E. Gilman St., Madison, Wis.
 Dr. F. V. Watson, from Baldwin to Roberts, Wis.
 Dr. H. A. Reinhard, from 460 W. Adams St., Chicago, to 2519 Cedar St., Milwaukee, Wis.
 Dr. R. E. Green, from 460 W. Adams St., Chicago to St. Marys Hospital, Milwaukee, Wis.
 Dr. J. W. Ehrman, from 155 E. 25th St., Chicago to Theresa, Wis.
 Dr. E. E. Maxey, from Baltimore, Md. to Caldwell, Idaho.

The Public Service.

NAVY CHANGES.

Changea in the Medical Corps of the U. S. Navy, for the week ending June 16, 1900.
 Surgeon T. A. Berryhill, ordered to the naval laboratory and department of instruction, Brooklyn, N. Y., June 14.
 P. A. Surgeon F. C. Cook, ordered to temporary duty at naval hospital, Norfolk, Va.
 Medical Inspector C. E. H. Harmon, detached from the Oregon upon reporting of relief, and ordered to the naval hospital, Yokohama, Japan, as the relief of Surgeon P. Anderson.
 Surgeon Frank Anderson, detached from the naval hospital, Yokohama, Japan, upon reporting of his relief and ordered home to wait orders.
 Surgeon P. Leach, detached from the Yosemite upon reporting of relief, and ordered to the Oregon.
 Surgeon P. A. Hiesler, detached from the naval hospital, Chelsea, Mass., upon reporting of relief, and ordered to the Yosemite as the relief of Surgeon P. Leach, sailing from San Francisco via Doris June 20.
 V. A. Surgeon G. D. Brownell, detached from the naval training station, Newport, R. I., upon reporting of his relief, and ordered to naval hospital, Chelsea, Mass.
 Asst. Surgeon C. H. DeLaney, detached from the naval hospital, Washington, D. C., and ordered to the naval training station, Newport, R. I.

P. A. Surgeon J. F. Leys, ordered to temporary duty on the Franklin.

Surgeon G. M. Pickrell, detached from the naval station, Cavite, P. I., and to naval hospital, Yokohama, Japan.

APPOINTMENT.

Charles N. Fiske, to be an assistant-surgeon from May 15, 1900.

DEATH.

P. A. Surgeon Horace B. Scott, retired, May 29, 1900.

MARINE-HOSPITAL CHANGES.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital Service for the seven days ending June 14, 1900.

Surgeon S. D. Brooks, granted leave of absence for 3 days from June 25.

Surgeon I. M. Carrington, directed to proceed to Charlestown, W. Va., for special temporary duty.

Surgeon W. F. McIntosh, granted leave of absence for 28 days from June 19.

Surgeon T. B. Perry, relieved from duty at Baltimore, Md., and from special temporary duty at Atlanta, Ga., and directed to proceed to Mobile, Ala., and report to medical officer in command for temporary duty and assignment to quarters, assuming temporary charge during absence of medical officer.

P. A. Surgeon M. J. Rosenau, directed to proceed to Reedy Island quarantine for special temporary duty.

Asst. Surgeon Tallafiero Clark, granted leave of absence for 30 days from June 13.

Asst. Surgeon W. C. Billings, directed to proceed to Charlestown, W. Va., for special temporary duty.

Asst. Surgeon Dunlop Moore, relieved from duty at Portland, Ore.; directed to proceed to Dutch Harbor, Alaska, and assume command of the service at that port.

Asst. Surgeon D. H. Currie, directed to proceed to Charlestown, W. Va., for special temporary duty.

Acting Asst. Surgeon P. B. Adams, granted leave of absence for 3 days from June 12.

Acting Asst. Surgeon Alta F. Cook, granted leave of absence for 10 days from June 12.

Acting Asst. Surgeon M. V. Safford, granted leave of absence for 14 days from June 26.

Acting Asst. Surgeon W. C. Todd, granted leave of absence for 10 days from June 3.

Hospital Steward W. F. Schlaar, directed to proceed to New York City, and report to Surgeon L. L. Williams, Immigration Station, for special temporary duty.

Hospital Steward G. W. Iltis, relieved from duty at Cleveland, Ohio, and directed to proceed to San Francisco, Cal., and report to medical officer in command for duty and assignment to quarters.

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

Philadelphia Medical Journal, June 16.

- 1.—Angina Pectoris. Clifford Albutt.
- 2.—*Experimental Study of Origin of Epidemic of Tetanus following July 4, 1899; Report of Case with Recovery. H. Gideon Wells.
- 3.—*Necessity for State Aid in Treatment of Consumptive Poor. Howard S. Anders.
- 4.—*Case of Recovery Ataxia with Generalized, Bilateral, Choreiform and Athetoid Movements. Bernard Ottlinger.
- 5.—Contribution to the Study of Exophthalmic Goiter. Alfred Gordon.

New York Medical Journal, June 16.

- 6.—*Technique of Modern Uranoplasty. James F. McKernon.
- 7.—Perimetric Diagnosis (to be continued). J. W. Sherer.
- 8.—*Typhoid Infection of Uterus. August J. Lartigau.
- 9.—*Hernia Abdominalis. H. A. Duenling.
- 10.—*Case of Tetanus Treated with Antitetanic Serum. James F. Clarke.
- 11.—*Juvenile Hysteria and Neuresthenia. Charles L. DeMerritt.
- 12.—Realism in Medicine. A. T. Cabot.
- 13.—Closing Statement for Remonstrants to Massachusetts House Bill No. 917, Entitled "An Act for the Further Prevention of Cruelty to Animals," before Joint Committee on Probate and Insolvency. Harold C. Ernst.
- 14.—*Mechanics of Lateral Curvature of Spine. Robert W. Lovett.
- 15.—*Malaria and Mosquitoes. Irving C. Rosse.

Cincinnati Lancet-Clinic, June 16.

- 16.—*Theory of Production of Tuberculosis. H. H. Spiers.
- 17.—*Fistula. Geo. B. Evans.
- 18.—*Prophylaxis and Control of Leprosy in this Country. Prince A. Morrow.
- 19.—Periods in Gynecology. Henry J. Garrigues.
- 20.—*Case of Confinement Following Supposed Double Ovariectomy and Complicated by Intestinal Hernia Through Old Laparotomy Wound. C. Henry Leonard.

Medical Record (N. Y.), June 16.

- 21.—*Occurrence of Mould in Stomach and its Probable Significance. Max Einhorn.
- 22.—*Diffuse Scrophulous Peritonitis and Elevated Head and Trunk Posture. A Report of Three Additional Consecutive Cases of Recovery. George R. Fowler.
- 23.—*Disease of Thoracic Division of Sympathetic Chain. Joseph Frankel.

Medicine (Detroit, Mich.), June.

- 24.—*Rumination and Periodic and Habitual Vomiting. Fenton B. Turek.

- 25.—*Maternal Impressions. Jas. G. Kiernan.
- 26.—*Repair of Old Traumatic Nasal Deformities. J. Holmer Coulter.
- 27.—*Ether Anesthesia from a Medical Standpoint. Louis F. Bishop.
- 28.—*Talmudic and Jewish Medicine. Lawrence Irwell.
- Medical Review (St. Louis, Mo.), June.
- 29.—*President's Address. W. W. Keen.
- 30.—*Conclusion Reached after a Study of Typhoid Fever Among American Soldiers in 1898. Victor C. Vaughan.
- Southern Medical Journal (La Grange, N. C.), May.
- 31.— Acute Enterocolitis: Treatment. E. T. Dickinson.
- 32.— Clinical Report of Ten Cases of Erysipelas. J. W. P. Smithwick.
- 33.— Neurotic Dysmenorrhœa. J. W. P. Smithwick.
- 34.— Malaria and the Germ. S. Scroggs.
- Cleveland Medical Gazette, June.
- 35.—*Progress of Some of the Present Demands of School Hygiene in the Cleveland Public Schools. Leigh A. Baker.
- 36.—*Ligatures and Sutures in Abdominal Surgery. Hunter Robb.
- 37.— City Mortality of 1899. H. E. Handerson.
- 38.— Podalic Version vs. Forceps Delivery. D. S. Hanson.
- Louisville Monthly Journal of Medicine and Surgery, June.
- 39.— Chronic Appendicitis: Operation Followed by Intestinal Obstruction, Necessitating Secondary Operative Intervention. A. Morgan Cartledge.
- 40.— Rational Therapeutics of Typhoid Fever. R. Alexander Bate.
- 41.— Report of Surgery (continued). H. Horace Grant.
- 42.— Bacteriology and Its Relation to Public Health. Chas. T. McClintock.
- 43.— Some Observations on Lithemia (concluded). Arch Dixon, Jr.
- 44.— Typhoid Fever. J. S. Hardy.
- 45.— Thiosulfamine. Thomas S. Lewis.
- 46.— Report of a Few Clinical Cases. G. F. Payne.
- 47.— Clinical Report of Two Cases of Poliomyelitis Anterior Acuta. O. A. Kennedy.
- American Journal of Surgery and Gynecology (St. Louis, Mo.), May.
- 48.— Appendicitis: A Clinical Report. Edwin Walker.
- 49.— Newer Cystoscope with Supplemental Device for Urethral Catheterization. J. Rilus Eastman.
- 50.— Surgical Correction of Talipes Equino-varus. Wm. V. Morgan.
- 51.—*New Operation for Permanently Restoring a Dislocated Kidney to Its Normal Situation. Frank C. Ferguson.
- 52.— Blood-Letting, Followed by Intravenous Transfusion of Normal Saline Solution in Treatment of Tozemia, with report of Two Cases. Miles F. Porter.
- 53.—*Appendicitis at Distance from the Surgical Centers. W. H. Link.
- 54.— General Remarks on Vaginal Hysterectomy. Byron Robinson
- 55.— Report of a Uterine Fibroid of Large Size Successfully Removed. R. E. Haughton.
- The American Practitioner and News (Louisville, Ky.), May 15.
- 56.— Address before Kentucky State Medical Society. William Bailey.
- 57.— Remarks on X-Ray "Baros" with Report of Cases Seen. Thomas L. Butler.
- 58.— Conservative Surgery: With Report of Case. J. C. Walton.
- Maryland Medical Journal (Baltimore), June.
- 59.—*Certain Changes in Vessels, and Vascular Coats of Eye which are of Diagnostic and Prognostic Value in General Disease. G. E. de Schweinitz.
- 60.— Case of Chronic Sarcoma. Hiram Woods, Jr., and J. J. Carroll.
- 61.— Septic Thrombosis of Lateral Sinus. Report of Case, with Recovery after Operation. Preliminary Report. Harry Friedenwald.
- Illinois Medical Journal, June.
- 62.—*Tendencies of Modern Medicine. Harold N. Moyer.
- 63.—*Selected Topics in Connection with Pathology of Delivery. J. Clarence Webster.
- 64.—*Application of Fungus. J. E. Allaben.
- 65.— Technique of Version. J. F. Percy.
- 66.—*Cesarean Section and Porro's Operation. Charles B. Reed.
- 67.—*Symplysiotomy. Geo. N. Kreider.
- 68.— Report of the Fourth Illinois Volunteer Infantry in War with Spain. T. M'Cord.
- New England Medical Monthly (Danbury, Conn.), June.
- 69.— Report of a Rare Case. Frank P. Clark.
- 70.— Pathology of Lobar Pneumonia as a Basis for Treatment. Andrew H. Smith.

AMERICAN.

2. Tetanus.—Wells reports a case of tetanus, occurring during the epidemic of that disease in July of last year. The patient was treated with tetanus antitoxin, a few doses of carbolic acid being given toward the close of the disease, but it was impossible to determine the value of these measures. On admission of the patient to the Cook County Hospital, excision of the wound, including all the tissue within one-half inch of its surface, was practiced under surgical antiseptics, and Wells credits the mildness of the attack largely to this measure. Culture and inoculation experiments were made from this case, but the tetanus bacillus was not found, though some anaerobic forms, which caused confusion, were present. Some studies were made of blank cartridges to see if the tetanus bacillus could be found on them, but with negative results.

3. Care of the Consumptive Poor.—Anders' paper is a

plea for state aid in the care of indigent victims of tuberculosis. He reviews the subject historically and shows how little has as yet been done. The needy consumptive has the same claim to state aid as the blind, feeble-minded, etc., and he believes that every state in the Union should have a tuberculosis bureau, and that there should be a national bureau at Washington.

4. Hereditary Ataxia.—Oettinger describes a case characterized by slight mental defect, muscular paresis with undeveloped musculature and partial reaction of degeneration, ataxia of cerebellar type and generalized bilateral, choreiform movements which at times became athetoid. While the case is called one of hereditary ataxia, the patient does not appear to have had direct or collateral hereditary relations, the father, though intemperate, being said to be in good health, and the mother healthy. The other living children are all apparently well. The general subject of the disease is discussed with its pathologic theories and findings. The author believes that the cerebrum—including the cortex—the cerebellum and the spinal cord are all involved and that the prognosis is bad. The voluntary movements received benefit from small doses of bromid, and gain in weight was also noticeable.

6. Uranoplasty.—The operation described by McKernon consists in a preliminary tracheotomy, the introduction of the tube through which the anesthetic is given, the palatal operation succeeding this without interference with respiration, and treatment as in case of any other wound by packing or dressing. The tracheotomy tube is left in for eight or ten days, and nourishment is given entirely by the rectum. Preliminary to the operation he corrects any conditions of lymphoid hypertrophy in the pharynx or vault, enlarged tonsils, etc., thus preventing trouble from hemorrhage during the operation. If the inferior or middle turbinated bones encroach on, or fall into, the cleft, their pendent portions are also removed, some time prior to the uranoplasty. The method of operating is described in full and four cases are reported. He calls attention to the closure of the hard and soft palate, and also any lip operation which may be required at one sitting, provided there is no contraindication in the patient's condition. The most favorable time for the closure of these clefts is during the first two to four years of life, as there are then better prospects of normal speech. The removal of the sutures must be governed by local conditions. The advantages of this method are: complete restoration of the speech function; the possibility of eating without regurgitation of food; relief of the necessity of facial contortion while speaking; improvement of condition of the face and nose, and of deafness when existing, and general improvement in the patient's condition.

8. Typhoid Infection of Uterus.—Lartigau reports two cases of typhoid infection of the uterus, thoroughly examined bacteriologically, which, unlike previously published cases, occurred in non-puerperal women. One occurred in the course of typhoid fever and the other as an uncommon focus in a case where the chief interest was centered in the absence of any anatomic lesions of the intestines. In both, the source of infection lacks obvious demonstrable evidence, but he thinks it not improbable that the source of both was from within. In the second case, the presence of typhoid bacilli in the urine is important.

9. Abdominal Hernia.—Duemling discusses the methods of formation of abdominal hernia and its treatment, and concludes with the following deductions: 1. A hernia is the escape of a viscus from the abdominal cavity covered with the structures peculiar to its point of exit. 2. The folds and depressions of the peritoneum, occasioned by the passage of various structures under it, create weak points in the belly wall. 3. The success of a radical cure depends on the restoration of the muscular and fibrous tissues to their pristine relationship and elasticity. 4. The production of scar tissue, artificial or accidental, lessens materially the possibility of a permanent cure. 5. Destruction of the inguinal canal and suture of the external abdominal ring do not prevent recurrence. 6. Destruction of the inguinal canal and of the internal abdominal ring, or its fortification, offer the largest percentage of cures.

10. **Tetanus.**—The case here reported as treated with antitoxin, seemed unusual to Clarke because it occurred in a thoroughly drained and antiseptically treated wound. The use of the antitoxin appeared to relieve the general convulsions and relaxed the spasm of the temporal muscles, but death occurred unexpectedly, the pulse failing before the respiration. He considers it unfortunate that the serum was not obtained more promptly and believes that its delay may have contributed to the fatal result.

11. **Juvenile Hysteria.**—De Merritt calls attention to the condition of hysteria in infancy, and says that the majority of adult cases have an insidious beginning in childhood, through the bad effects of environment, and the methods of school and home training, etc. He enumerates the symptoms which he thinks are commonly ignored, viz.: nocturnal terrors, marked insomnia, irritability, tendency to lie without reason, masturbation, fits of crying and passion, feigned illness, undue love of sympathy; all of which may be detected in the juvenile sufferer and differentiated from the unruly disposition of a healthy child. He thinks that drugs play a secondary part in the treatment, tonics and blood restorers being useful, and sedatives helpful occasionally in tiding over especially irritable periods. He doubts the wisdom of ordering cessation of study in slight cases, as it deprives the child of the companionship and social friction with other children, which have a curative effect.

14. **Lateral Curvature of Spine.**—This subject is summed up by Lovett as follows: Torsion and side flexion of the spine are parts of one compound movement and neither exists to any extent alone. Lateral deviation of any part of the spinal column is therefore necessarily associated with torsion (rotation) at the seat of the deviation. In flexed positions bending is associated with torsion in one direction, in extended positions by torsion in the opposite direction. In this it follows simply the mechanical law governing flexible rods, which rotate in general in the same way in corresponding positions. From the kind of torsion observed in scoliosis it is obvious that the deformity originates in the flexed position of the spine. The correction of the rotation would therefore seem to be logically made by throwing the spine into extended positions and in taking side bendings from extended positions. Sitting in the flexed position by school children is likely to be harmful, and sitting in a twisted position of necessity induces lateral deviation temporarily. The immediate cause of lateral deviation is, as a rule, to be found in some asymmetry of development or posture which leads to an oblique direction of superincumbent weight, causing the spine to deviate from the middle line.

15. **Malaria and Mosquitoes.**—Rosse is skeptical as to the part played by mosquitoes in malaria, and gives his experience in various malaria-infected regions in support of his views.

16. **Tuberculosis.**—Spiers thinks that consumption is a constitutional and not a local disorder, and that it depends largely on imperfect aeration of the blood.

17. **Fistula.**—After a historical sketch, Evans gives the opinion that there is no cure for fistula except by cutting. Where he has a patient showing a well-established complete fistula, he carefully dissects it with a probe-pointed director, looking carefully for a branch or branches. If the director fails to enter the rectum, he pushes it through and then hunts for an internal opening. The tract is then thoroughly cleaned out with a curette and loosely packed with gauze, which is removed every day, if necessary, until the wound is healed. If the case is one in which there is a complete fistula on either side of the gut, he is careful to cut the sphincter but once, and then makes the tract on the other side quite large, so that he may be able to pack the second tract with ease and heal the wound from the bottom. In superficial fistula, he follows the plan advised by Kelsey, viz., after the second or third day, to discard all packing with gauze and simply keep the rectum clean and insert the finger into the rectum. The relation of fistula to tuberculosis is discussed. He believes that in these cases much can be done by palliative treatment and a cure often produced. He says to let acute phthisical cases, especially those with bad cough, alone, or at least let the work be

simply palliative; but in all chronic cases under favorable circumstances, to attempt a cure. After the operation, he advises all the fresh air and sunlight possible, a liberal supply of milk, cream and tincture ferri chlor., and driving in the country, the patient being well protected against cold.

18. **Leprosy.**—Morrow calls attention to the increase of leprosy and the probable risk of greater increase through our extensive commercial relations with leper-producing countries. He thinks that it will be necessary for the general government to take charge of this disease, which he believes is slowly gaining ground in this country. The popular fear of the disease he considers unwarranted; he does not believe that every leper should be seized and confined, but that colonies should be formed where the patients can be made comfortable, and self-supporting, if possible, and be under the care of a qualified expert. If treatment is begun early he thinks that there might even be hope of cure.

21. **Mould in the Stomach.**—Finhorn describes a number of cases where mould was found in the stomach. He finds the fungus particularly in two groups of gastric affections; in cases of intense hyperchlorhydria occasionally with hypersecretion and vomiting, and in gastralgia with normal or reduced gastric secretion. Improvement attended washing out the mould with gastric lavage, followed by spraying of .0001 to .0002 solution of nitrate of silver, but he can not say with certainty that this treatment was the cause. Still he thinks the presence of mould in large quantities in the stomach is important from a therapeutic point of view, and the best method of getting rid of it is by gastric lavage in the fasting state, followed by a nitrate of silver spray.

22. **Diffuse Septic Peritonitis.**—This paper is presented as an addendum to the report of nine consecutive cases of recovery of diffuse septic peritonitis, published in the *Medical Record* for April 14, the three here given making twelve consecutive cases in which recovery has taken place under the following combined treatment; by cleansing the neighborhood of the original focus with hydrogen peroxid, thorough flushing of the abdomen with decinormal saline solution at 110 F., deep pelvic drainage and the elevated head and trunk posture to facilitate the passage of fluids from the intestinal and diaphragmatic areas to the pelvic portion of the peritoneum. The special object to be accomplished by this posture, the removal of the fluids from the dangerous areas mentioned to the comparatively safe region of the pelvis, is given in his previous article. In spite of the fact that this elevated posture apparently throws more work on the heart in the desperate cases, Fowler does not find this a valid objection to its employment. In case the patient fails to respond to stimulation employed after operation, there would be no objection to placing the bed in a horizontal position or even elevating the foot of the bed during the first few hours, provided the peritoneal cavity has been cleansed. Unless persistent and progressive failure of circulation is observed, in spite of the strychnin and caffeine combined with whisky, and saline enemata, it is better to place the patient in the elevated head and trunk posture from the commencement, since this secures early cessation of vomiting and the prompt expulsion of flatus.

23. **Disease of the Thoracic Sympathetic.**—Fraenkel describes a case of a woman 37 of age in whom the symptoms were strongly hysterical and the diagnosis obscure. While there was a suspicion of sympathetic involvement, it could not be determined. Her death took place very unexpectedly and the post-mortem showed a pus collection around the first four of the thoracic sympathetic ganglia of the left side and the intervening trunk, and the inferior cervical ganglion of the right side. The diagnosis was subpleural abscess, involving the left second and third thoracic sympathetic ganglia and a thin capsule of pus enveloping the right inferior cervical ganglion; localized apical acute fibrinous pleurisy, and pulmonary edema. The symptoms are such as might occur in what has been considered hysteria, and whether death can result from this condition is one of the questions yet in debate. He does not believe that any organic disease of the brain or cord can be invoked, and suggests the following questions: 1. Are the last scenes of the clinical picture necessarily a con-

tinuation of the first act, or mere expressions of the accidental localization of the given anatomical lesion, and in no connection with the original symptoms for which the patient sought relief? 2. Supposing the above clinical picture to be a continuous one, is there any causal relationship between the clinical symptoms and the gross anatomical findings? In the present state of our knowledge of the anatomy and pathogenesis of hysteria, and the anatomy and physiology of the sympathetic, it would seem very dangerous to attempt to answer these questions without thorough and extensive study, which, however, must be postponed for another occasion. For the present, it is best to accept the verdict of the Roman judges, "n. l." *non liquet*.

24. Rumination and Periodic Vomiting.—The chief characteristics of the symptom of rumination are given by Turck as: A subconscious habit which closely simulates volitional movement; a pathologic condition acting in connection with the pneumogastric nerve in a reflex way; the power of suppressing the act at the expense of some distress. The habit exists in persons of neuropathic constitution, the suppression by will-power being often followed by increased activity of the habit, and, in some cases, headache and hicough. It is often associated with gastro-intestinal disorders and diseases of the liver, kidneys and pelvic organs. In cases that came under his observation, diseases of one or more of the abdominal organs antedated the rumination habit, but it was not always possible to say how far they were responsible for the condition. In every case peripheral irritation of the vagus should be looked for and corrected by local and general treatment, it being not unfrequently dependent on splenic congestion in connection with some of these disorders. Among the cases reported is one of intermittent regurgitation and periodic spasm with chronic gastritis that was relieved by intragastric electrization, disinfection of the stomach and stomach gymnastics. There was also one of constant regurgitation with gastritis, and one of rumination with atrophy of gastric glands combined with prolapse and slight dilatation. Periodic and habitual vomiting is also discussed and two cases are reported. In the first, marked splenic congestion was the earliest symptom, followed by abdominal pain of increasing intensity, and finally all the symptoms of profound shock. It fell under the head of the periodic vomiting of Leyden, which is characterized by regular recurrence of hematemesis during apparent health. Morphine alone relieved the condition. The second case was a rather peculiar one, dating back 2½ years, and occurring at intervals of about three weeks, as a rule, though longer periods have elapsed between attacks. There was no pain or shock, but little nausea, and the appetite during the attacks was variable. The diagnosis was interstitial atrophic gastritis with interstitial hepatitis and chronic nephritis, the vomiting being dependent upon these conditions. The urine showed traces of albumin. In this case, there was much improvement under regulated diet, with hot sitz baths, gastric lavage at the temperature of 113 F., and the stimulation of the stomach by the gyromele and electricity, and mild laxatives. The patient has gained twelve pounds under this treatment, and there is general systemic improvement, and the attacks of vomiting have become less frequent.

25. Maternal Impressions.—Kiernan discusses the popular belief in regard to this subject and concludes that maternal shock has an influence on the fetus beyond a doubt, but its method of action and its results must be determined by an analysis of the various existing conditions. The influence of mental shocks must be taken into account though they can not produce the photographic consequences popularly ascribed to them. The nutrition of the mother also may act on the fetus, but the facts which can be thus explained give no support to the view of maternal impressions as popularly entertained.

26. Nasal Deformities.—Coulter illustrates cases of pronounced nasal deformities relieved by operation, the details of which he describes.

27. Ether Anesthesia.—Anesthetization is divided into three stages by Bishop. During the first the patient, physicians, friends and nurses are all participants. In the second,

the patient is comatose, the friends are gone away, the nurses and surgeons are abstracted with their work and the anesthetizer is completely in command of the field. During the third stage, the physician has departed, the patient is recovering from the anesthesia, and the sympathizing friends have returned. During the first stage, there is much to be done; the anesthetizer should examine the patient's heart to learn about the previous anesthetics, inquire about false teeth, etc., and prepare the patient without causing any fright. A very useful method is to saturate the cone thoroughly with ether and then assure the patient that you will not commence to administer it until he has become accustomed to the odor. Hold the cone about ten inches above the face and keep it thoroughly saturated; the ether vapor, being heavier and colder than the air, will fall directly upon the patient's face and he will stand the sensation better than if it be closely applied. In this way he gradually becomes accustomed to it, and is somewhat under the effects of the anesthetic so that it may be lowered. In a nervous patient, it is sometimes helpful to let him hold the cone himself. As to the quantity to be given, no general rule can be stated, but commonly too much is used. There is one danger that has never been sufficiently emphasized, that is having the patient too profoundly anesthetized at some period of the operation. Bishop thinks that the bad effects on the body and kidneys may be accounted for in this way, and that a careless operator may easily make this mistake. The anesthetizer must examine from moment to moment the vital condition of the patient and not be intimidated by the surgeon into acting contrary to his best judgment. A surgeon should not ask an unqualified anesthetizer to administer an anesthetic and should not interfere while it is being done. The routine practice of doing something to keep the tongue out of the throat is entirely unnecessary, as it rarely gives any trouble; but if it falls back, it is generally sufficient to elevate the angles of the jaw in the usual way. In rare cases, a further method is to use tongue forceps. Much of the obstruction caused by the mucus in the throat can be avoided by turning the head on the side, but this will never become dangerous unless the anesthesia has been made too profound. During the stage of recovery, the chief annoyance is the nausea, and Bishop thinks that this may be due to too deep anesthetization. It certainly is a nervous phenomenon.

28. Talmudic Medicine.—Irwell's article is an interesting historic sketch of Jewish medicine in the early and middle ages, being as he says, an attempt to give facts that do not appear to have found their way into print in our language.

29.—See THE JOURNAL of June 9, p. 1445.

30.—*Ibid.*, p. 1451.

35. School Hygiene.—The results of the inspection of the children in the schools of Cleveland are given by Baker in detail. They include many cases of partial deafness, curvature of the spine and neurasthenic symptoms, to which special attention has been called. The personal hygiene of pupils and the hygiene of instruction has also received attention. He believes that children do just as well if they have five minutes of good wholesome exercise at the close of a long recitation and that the physical development of the pupils will more than pay for the time and trouble. The questions that are discussed are the physical education, buildings, ventilation, sewage, etc., and he points out the needs of the school system from a sanitary and hygienic point of view.

36. Ligatures and Sutures.—Robb thinks that the cumol method is the best one for sterilization, if it is to be done by the surgeon. He has had good results with catgut contained in sealed glass tubes prepared by Kiliani, Van Horn, and St. John Leavans, of New York. The only criticism of the chromicized catgut is that in some of the larger sizes it does not become absorbed, but gradually works its way to the surface and is cast off. Lately, he has abandoned the use of the chromicized catgut and employs the silver wire for bringing together the fascia in closing the abdomen. It is a great mistake, he says, to buy large quantities of catgut on reels, as it is far preferable to use the sealed tubes with small quantities in each. Chinese silk twist is easily sterilized

in the Arnold steam sterilizer, the autoclave, or by means of boiling water. He has four sizes, according to the use required: No. 3, quite fine, for intestinal sutures and for carriers for the needles; No. 4, where greater strength is required, as in suspension of the uterine and the ligation of small pedicles; No. 6, for tying off the majority of ovarian pedicles; No. 7, very heavy, for hysterectomy or when large masses of tissue have to be ligated. Silver wire is used as buried sutures in uniting the abdominal fascia, the metal exercising a direct germicidal effect. The wire remains buried in the tissue, rarely causing any trouble provided the ends are turned down so as not to scratch the skin. It can be easily and thoroughly sterilized and in only one instance has he had to remove a silver wire ligature.

51. **Dislocated Kidney.**—The operation here described by Ferguson is as follows: 1. After due preparation and anesthesia the surgeon proceeds to make an incision into the peritoneal cavity, commencing just below the twelfth rib, just external to the rectus muscle, and extending downward to a point opposite the umbilicus. After all bleeding has ceased the right hand is introduced into the peritoneal cavity. Having verified the diagnosis, he then palpates the gall-bladder, the appendix, the opposite kidney, and, if the patient is a woman, the ovaries and tubes. 2. The wound is then packed with sterilized gauze to prevent the escape of the intestines, the patient is turned on the side and the usual incision for nephropexy made below the twelfth rib down to the peritoneum. 3. The gauze is then removed from the abdominal incision, and the surgeon, standing with his face toward the feet of the patient, introduces the left hand into the abdominal cavity and pushes the kidney into its normal situation. An assistant with a tenaculum or other suitable instrument grasps the kidney through the wound in the loin, and holds the organ steady and firmly *in situ*. The surgeon with his finger pushes the peritoneum beneath the inferior portion of the kidney into the wound, where it is secured by a row of chromicized catgut sutures, which are carried successively through the muscles, the peritoneum, and capsule of the kidney and out through the posterior wound. These interrupted sutures are continued up each side of the kidney as far as the ureter and tied securely. The wounds are then closed, the usual dressing applied and the operation is complete. It will be observed that a pocket has been made of the parietal peritoneum in which the kidney securely rests and from which it can not be easily dislodged.

57. **X-Ray Burns.**—X-ray burns belong to the category of things which should never occur except as an intentional therapeutic agent. Butler reviews the different opinions in regard to the mechanism of these burns and reports a number of cases that have come under his observation, two of which occurred in his own practice. In his case, he says he has no excuse to offer, as they were very difficult subjects and the tube was placed too near the patients. Since these occurred he has had many cases of exposure, but no accidents. Most of those here reported occurred among the employees of electrical firms, though one was of his own experience. He believes that proper treatment hastens recovery from these wounds very considerably. Those of the first degree are benefited by the continued application of ointments, especially those having a lanolin base. Various ointments and drying powders increase the amount and thickness of necrotic membrane in burns of third degree. Hot, moist, mildly antiseptic dressings used early in burns of second and third degree help to limit the extent of ulceration, and when used late help to hasten the process of repair. Skin-grafting at the proper time is indicated, contrary to the teachings of some.

59. **Ocular Changes and Their Diagnostic Relation.**—De Schweinitz summarizes his paper as follows: "1. Flitting conjunctivo-episcleral congestions may be the only symptoms of masked gout. 2. Such congestions may be the prodromes of later gouty manifestations in the eye or elsewhere in the body, but also—and most importantly—may be the forerunners, associates or alternates of retinal vessel changes, which, in their, turn, are the indications of general arteriosclerosis of serious prognostic import. 3. The same conclu-

sion applies to recurring subconjunctival and recurring subcutaneous palpebral hemorrhages, which seem, however, to be related especially to the chronic form of nephritis, exactly as is the classical retinitis. 4. Inflammation, hemorrhage, and edema, with exudation, are not necessarily the ophthalmoscopic signs of general arterial disease or of its special localization in certain organs, for example, the kidney. It may be manifested with perhaps equal frequency by alterations in the walls of the retinal arteries and changes in the course and caliber of the veins, together with signs of mechanical pressure where veins and arteries cross. 5. These retinal-vessel changes may be present when ordinary physical examination does not reveal the signs of the endarterial change in the surface vessels of the body generally."

62.—See abstract in THE JOURNAL of June 2, p. 1412.

63.—*Ibid.*, p. 1413.

64.—*Ibid.*, June 2, p. 1414.

65.—*Ibid.*

66.—*Ibid.*, p. 1415.

67.—*Ibid.*, p. 1414.

FOREIGN.

Revue de Gynecologie (Paris), January-April.

Suspension of Fibromatous Uterus During Hysterectomy. A. REVERDIN.—Suspension of the uterus to lift and thus do away with the weight of the tumor in the course of hysterectomy is recommended by Reverdin as an indispensable aid in operating. A pulley is fastened to the ceiling, over the table, and an assistant holds one end of the cord passing through it, while a forceps or double corkscrew arrangement is suspended from the other end. When a large solid tumor is exposed, it is firmly grasped with the forceps, and the assistant, by gentle, gradual, continuous traction, lifts and holds it as desired, so that the operator has to attend only to freeing the adhesions. The traction brings the organs well into the field and facilitates the task of removal and suturing; and there seems to be less tendency to hemorrhage, possibly owing to the traction on the vessels. The necessity of handling the tumor or the adjacent regions is very much reduced, thus diminishing the danger of infection and materially shortening the time required for the operation. The ease with which the fibromatous mass is tipped from side to side is also a great advantage. A sheet moistened with a disinfectant is hung over a horizontal frame above the pulley, to prevent any dust from dropping on the patient. Reverdin uses suspension in applying casts, in resecting the rectum, in various operations on the peritoneum, vulva and uterus, and even in applying dressings, and affirms that he can not do without it now. His operating-table is a light frame with three wide, removable slides for the top. The head of the table rests on a metal stand, which forms part of the chair for the anesthetist. The foot of the table is placed on a stand, or is suspended from the ceiling by a chain and safety clamp, which allows it to be raised at any angle. The patient's feet rest in folding metal supports, which are suspended from a band across the shoulders of the attendant who carries the foot of the table, and is thus between the patient's feet. After the operation the table is lifted and placed on the bed, the slides are slipped out from beneath and the frame lifted off separately, leaving the patient in bed without having been moved.

Dangers of Incomplete Hemostasis. P. REBREYEND.—One of the chief questions discussed at the recent congress of gynecology at Amsterdam was the relative value of antiseptics and of perfection in technique as demonstrated in the results of gynecologic operations. Rebrevend observes that although failures in antiseptics may be the most threatening at first, faults in technique are what transform the menace into a catastrophe. Among these faults he says that there is none more serious than incomplete hemostasis, especially in operating on the peritoneum. He describes five instructive cases in which only the vessels that bled were tied, and a slight oozing of blood and accumulation of clots—not more than 200 gr.—caused serious disturbances, that resulted in death in three of the cases.

Treatment of a Fistulous Opening Between the Colon and Vagina. N. DELORE.—A patient was cured of a colovag-

anal anus by incising the rectovaginal septum and carrying the incision up to the seat of the fistula near the sigmoid flexure. The adherent portion of the colon was then detached and mobilized, and the anterior wall pulled down and fastened to the anus. The anterior wall of the rectum was correspondingly incised and united with the stretched anterior wall of the colon, thus forming a new and larger rectal cavity. The portion of the rectum above, intervening between the part forming the new rectal cavity and the colon, was excluded from the intestinal circulation and left as an arched tube, opening into the upper posterior portion of the rectal cavity by two mouths close together.

Revue de Médecine (Paris), May 10.

Functions of Thyroid Gland. G. GAUTHIER.—The thyroid secretion, vitiated by an old or recent glandular lesion, is the true cause of the symptoms constituting what we call Basedow's disease. Everything tends to indicate that the vitiated, and hence injurious, substance affects first and chiefly the region of the medulla and pons, as most of the symptoms suggest a bulbar origin; but in addition to this action on the nerve-centers, the modified thyroid secretion also profoundly affects the organic interchanges. The phenomena caused by exaggeration of metabolism, such as fever, emaciation and nutritional disturbances, are the direct consequences of the chemical and medicinal action of the abnormal, toxic, thyroid secretion. Gauthier establishes, among other points, that normal thyroid products in the blood favor the mammary secretion and reduce utero-ovarian activity. He also affirms that there is a direct relation of cause and effect between the functional behavior of the thyroid body and that of the nervous system. The thyroid does not have merely symptomatic or reflex action, like that of the ovary and uterus, for instance, but has a direct and close influence on the development of the nerve-cells, and later, on their nutrition. All the pathologic conditions known as "nutritional" can be traced to defective action of the gland, and thyroid treatment may prove effective in curing them.

Berliner Klinische Wochenschrift, May 14 to 28.

Hemolysis. P. EHRLICH AND J. MORGENROTH.—The recent research in regard to hemolysis, reported in this article, indicates the existence of a new factor in pathology, an internal regulating process which prevents injury from the absorption of morbid products. The introduction of the red corpuscles from one living being into another results in the formation of a substance—hemolysin—which dissolves the corpuscles of the species from which they were first derived. This destructive process is not limited to the corpuscles, but has been observed when various substances, spermatozoa, ciliated epithelium, etc., have been introduced into the organism of another species. Ehrlich calls the lysin produced after introduction of the blood-corpuscles from another species, "heterolysin," to distinguish it from "isolysin," or the lysin fabricated after introduction of corpuscles belonging to the same species. His experiments were with isolysins. About 900 c.c. of diluted blood from three goats were injected into the peritoneum of another goat, resulting in the formation of an isolysin which readily dissolved the corpuscles in the blood of a number of other goats, attaining its maximum power by the seventh day. It had no hemolytic power on the corpuscles in the blood of the same animal, and, therefore, was not an "autolysin." Numerous other experiments were made, always with negative results; it was impossible to obtain an autolysin in any case. The conditions in these experiments were practically the same as when a hemorrhage into a cavity is absorbed by the organism, which, we know, is not followed by hemolysis of the corpuscles in the rest of the blood. No autolysin is formed unless in most exceptional circumstances. According to Ehrlich's theory regarding hemolysis and the almost identical process of bacteriolysis or immunization, each cell consists of a number of groups, each group susceptible to a different stimulus. These hypothetical elements are the basis of his *Seitenketten* theory—a term he has borrowed from organic chemistry. In the process of immunization, the introduction of the foreign substance results in the fabrication of the immune, or between-body, which fastens the end-body—

normally in the blood—to a certain group in the cells, for which he now proposes the term "receptors." If either of these factors are missing, lysis does not occur. When the receptors are present their combination with the blood results in the production of an antitoxin. Consequently, he assumes that the absence of an antitoxin indicates the absence of the specific receptors. Hemolysins produce normally an anti-hemolysin, and in these experiments on goats, the isolysins produced an anti-isolysin; that it was never possible to produce an anti-autolysin. This he accepts as proof of the absence of the specific receptors. The hemolysins also varied in their effects; one or two goats proved refractory to some and susceptible to others, and also susceptible to hemolysins derived from the pig, goose and rabbit. The impossibility of inducing the production of an autolysin suggests the practical conclusion that the secretions and excretions of a diseased organism are not necessarily toxic for that organism. Disturbances in the internal regulating processes, however, may bring this about. "We must take into account, henceforth, the disturbances in the internal regulation as a factor in pathology, and devote attention to it as much as to the influence of directly injurious exogenous or endogenous substances."

Derivation of Oxalic Acid. E. SALKOWSKI.—The writer's experimental research on dogs seems to prove that oxalic acid as well as uric acid is a product of metabolism, and that it is derived from nuclein, especially nuclein-albumin. Persons with a tendency to excessive excretion of oxalic acid or to the formation of concretions of calcium oxalate in the bladder, should avoid food containing much nuclein. The acid was detected in a few specimens of beef bile; if it occurs also in human bile, ingestion of calcareous mineral waters might prevent or diminish absorption of the acid from the intestines. The occurrence of alimentary oxaluria was also established, and this again imposes the necessity of avoiding food containing oxalic acid, which has been found in small amounts in meats, in liver, and in certain wines. Even small quantities, accumulating in the course of time in especially predisposed persons, may have troublesome consequences.

Direct Bronchoscopy for Cancer of the Lungs. G. KILLIAN.—A carcinoma in a small bronchus, impossible to locate by percussion or auscultation, was discovered by direct bronchoscopy in a man 63 years of age. The neoplasm was not seen, but the bronchus leading to it was pointed out as the probable site; and this was confirmed by the autopsy. Killian has claimed for a long time that chronic focal affections of the lungs can be readily diagnosed by direct bronchoscopy. In the case reported, the shadows in radiographs were too faint to afford much information.

Wiener Medicinische Presse, May 13.

To Facilitate Cure of the Morphin Habit. W. DEUTSCH.—A great step has been gained toward its complete suppression if a patient can be induced to take the morphin by the mouth instead of by subcutaneous injection, but many have an invincible aversion to this. Deutsch has found that the same result can be attained by substituting anal for subcutaneous injection. He describes two cases in which he obtained a rapid, voluntary cure by inducing the patients to use rectal injections of a more concentrated solution, which they found convenient and effective, but from which they easily weaned themselves later.

Wiener Medicinische Wochenschrift, May 5.

Hyperemesis of Pregnancy. E. DIRMOSER.—When chemical tests do not indicate serious involvement of internal organs, Dirmoser has been unfailingly successful in arresting the incoercible vomiting of pregnancy by a treatment consisting of absolute rest for the stomach, and efforts to transform the antiperistaltic movements into normal peristalsis. The stomach is washed out with a solution of boric acid or sodium bicarbonate and the nerves soothed with an injection of 1 cc. morphin and 10 cc. antipyrin in the epigastric region. The intestines are cleansed with Hegar's clysmata, and the patient is fed with nutritive enemata. A cold wet pack or cooling appliance is placed over the stomach, and, if gases form, a little charcoal may be administered. Twenty-four hours after the vomiting has subsided tea may be given occasionally. Abor-

tion should never be induced until this treatment has been given a thorough trial.

Gazzetta degli Ospedale (Milan), May 27 and June 3.

Bone Marrow in Disease. G. O. ZEN.—This communication from Salvio's institute of general pathology at Padua is based on the study of the femur in sixty-four observations. The presence of nucleated red corpuscles was accepted as evidence that the bone marrow was accomplishing its blood-producing function. In health or after rapidly fatal infectious diseases, the marrow of the long bones was found fatty and inert from a functional point of view. In infectious diseases with a protracted course, like typhoid, the blood-producing function was aroused and manifest by the end of the second week. This function was also constant in chronic infectious diseases, like tuberculosis. The marrow was found gelatinous in morbid conditions leading to cachexia and marasmus. Age has no influence on the arousing of the blood-producing function in the long bones, which seems to commence always in the upper portion and to extend downward.

Pathogenic Action of Ascarides Lumbricoides. P. DEMATTEIS.—Worms obtained from a number of children between the ages of 3 and 14 years were examined and cultures made from the contents of the isolated intestines of the worms, showing that they contained the streptococcus pure, or a combination of bacilli: the coli, acidi lactis, erithrogenes, subtilis, mesentericus, pseudotyphoid, fluorescens, staphylococci, sarcina rossa and alba, etc., in variable proportions. Dematteis concludes that these germs may be inoculated into the mucous membranes by the mouth of the worms, producing various pathologic phenomena. The worms in their migrations may also carry these germs into portions of the body normally free from microbes. They may also prove pathogenic when evacuated by the worms in susceptible regions; and this, aided by the mechanical and toxic irritation of the invading ascaris, is probably the explanation of the abscesses in the liver in which a worm has been noted. Certain irregular forms of fever may be due to inoculations produced by ascarides which are recurring, to a certain extent, their old pathogenic importance.

Forensic Importance of Glycogen in the Liver. D. O. MODICA.—Careful study of forty-six cadavers, at various intervals after death, showed the presence of sugar in more than 60 per cent. of the pathologic cases, ranging from a trifle less than .5 to 1 per cent. Glycogen does not always become transformed into dextrose immediately after death, but may persist unchanged for two days or even longer, if the cadaver is kept at a low temperature. The amount of dextrose in the liver after death depends on physiologic and pathologic individual conditions; it can not, therefore, be a criterion to decide whether death was due to traumatic or pathologic causes.

Action of Poisons on Electric Excitability. D. P. VINCENTO.—After studying the modifications of the direct and indirect electric excitability of frogs, in respect to the voluntary muscles, Vincenzo concludes that the elastic muscular substance possesses an excitability of its own, independent of the nervous system, and that this can be influenced by various poisons, some of which first exaggerate and then depress it—veratrin, caffeine, quinin and spartein—while others diminish without first increasing it—cocain, strophanthus and digitalis. Some poisons of the first group, although they primarily affect the striped muscle fibers by modifying their excitability, in larger doses extend the paralyzing influence to the motor nerves in these muscles, and produce an effect similar to the primary manifestations of curare.

Seroantitoxic Effect of Alcohol in Tuberculosis. MIRCOLI.—Recent research by Büchner and others seems to indicate that alcohol confers an antitoxic power on human serum, similar to, but less intense than Maragliano's anti-tuberculosis serum. Mircoli advises utilizing this power of alcohol to neutralize toxins in the treatment of tuberculosis, carefully avoiding an amount of alcohol that would damage the organism and excluding from treatment cases of mixed infection. Study of the relations between alcoholism and tuberculosis has convinced him that the prolonged use of small amounts of alcohol can not fail to have a favorable effect on the disease.

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*Use of the index will be facilitated by bearing in mind that subjects are frequently given under two or more headings, e. g., brain, cerebral, tumors, etc.; heart and cardiac; cirrhosis, liver and hepatic; child, children and infant; gland, thyroid, etc. Often, too, writers treat of the eye, ear, nose and throat under one head, etc., and the titles do not always permit of indexing under the several headings. The "General Index" contains only titles of articles, editorials, society reports, and miscellaneous matter appearing in the Journal, the book notices, deaths, discussions, authors, and titles of articles mentioned in the "Current Medical Literature" department being indexed and arranged under their separate headings instead of in the body of the "General Index." The * preceding the page reference in the "Index of Authors" indicates that the article appeared in full in the Journal. In the case of titles included in the Index of Titles, only those of articles given in abstract in the "Current Medical Literature" department from week to week appear also in the "General Index." Societies are indexed under Association, College, Conference, Congress and Society.*

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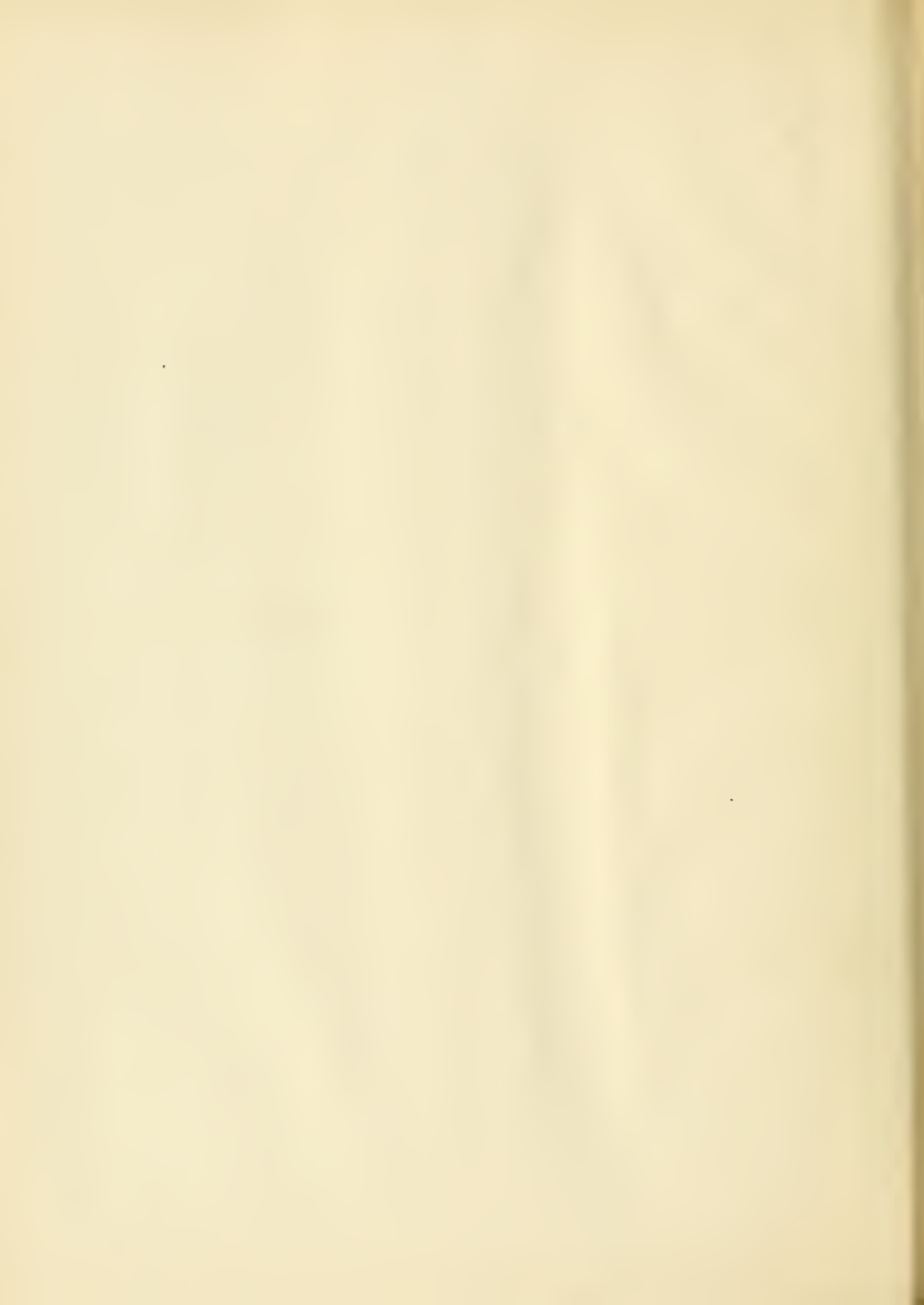
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